



IUVESTA

19th General Meeting

BEXCO Busan, Korea

Wednesday, August 24th, 2016

(For Submission)

<http://www.iuvsta.org>

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General Assembly of IUVSTA
Comprising the 19th Ordinary General Meeting
and the
Extraordinary General Meeting of 2016

BEXCO Busan, Busan, Korea
Room #: 217 + 218 (2F, Exhibition Hall)

Wednesday, 24th August 2016 at 13.00 hrs

AGENDAS
General Meeting 19

Attendance and Constitution of General Meeting 19	C. Eisenmenger-Sittner
Welcome by the President	M. Anderle
Remembrances	M. Anderle
Alterations to Membership	C. Eisenmenger-Sittner
Admission to membership of Bulgaria (1 Share)	
Admission to membership of the Philippines (1 Share)	
Approval of Minutes of GM 18 R J Reid	C. Eisenmenger-Sittner
Amendments to the Statutes and By-Laws	C. Eisenmenger-Sittner
There are no proposed changes to the Statutes and By-Laws	
Approval of the Accounts for Financial Year 2015	F Reniers
Approval of the Budget for Financial Year 2016	
<i>Transfer of Presidency from M Anderle (Italy) to L. Montelius (Sweden)</i>	
Elections for the Triennium 2016-2019	L Montelius
The Executive Council nominee for President Elect is Anouk Galtayries (France)	
The Past President will be Prof M. Anderle (Italy)	
The President nominates the following Officers:	
Scientific Director David Ruzic (USA)	
Scientific Secretary Dr Andrej Vince (Slovakia)	
Secretary General Prof Christoph Eisenmenger-Sittner (Austria)	
Treasurer Prof François Reniers (Belgium)	
Ratification of the framework budget for the Financial Years 2017 to 2019	F Reniers
Approval of subscription rates for each of the three Financial Years 2017, 2018 and 2019	F Reniers
Ratification of National Committee Councillors & Alternates	C Eisenmenger-Sittner
Recognition of retiring Officers and ECM members	M. Anderle
Any Other Business	Floor
Adjournment of General Meeting 18	L Montelius

2016 Extraordinary General Meeting

Constitution of the 2016 Extraordinary General Meeting	L Montelius
Report of the Past President	M. Anderle
Reports of the Previous Executive Council	
Secretary General	C Eisenmenger-Sittner
Committee Reports	M. Anderle
Scientific and Technical Director	D. Ruzic
Division reports	D. Ruzic
Treasurer & Finance Committee	F Reniers
Inaugural Statement of the President	L Montelius
Motion to Adjourn	Floor

**Member Delegates to the 18th General Meeting
(as notified August 2016)**

Argentina		Germany	
Head of Delegation	Represented by Croatia	Head of Delegation	Ute Bergner Christian Day Sven Ulrich
Australia		Great Britain	
Head of Delegation	Anton P.J. Stampfl	Head of Delegation	David Sykes Timo Gans Steven Schofield
Austria		Hungary	
Head of Delegation	Manfred Leisch Christoph Eisenmenger-Sittner	Head of Delegation	László Óvári
Belgium		India	
Head of Delegation	Diederik Depla	Head of Delegation	Represented by Austria
Brazil		Iran	
Head of Delegation	Pedro A. P. Nascente Rogerio P. Mota Marcelo J. Ferreira	Head of Delegation	Represented by Austria
Croatia		Israel	
Head of Delegation	Nikola Radić Slobodan Milosevic Maja Buljan	Head of Delegation	Sidney Cohen Hagai Cohen or represented by USA
Czech Republic		Italy	
Head of Delegation	Pavel Hedbávný Bohuslav Rezek Antonín Fejfar	Head of Delegation	Paolo Manini Mario Rocca
Finland		Japan	
Head of Delegation	Represented by Lars Montelius	Head of Delegation	Yoshio Saito Katsuyuki Fukutani Yasunori Tanimoto
France		Korea	
Head of Delegation	Anouk Galtayries Maria Carmen Asensio	Head of Delegation	Hee Jea Kang Eun Ha Choi Jin-Hyi Boo

GM-19-03-02

Mexico

Head of Delegation Emmanuel Haro-Poniatowski
Francisco Aguirre-Tostado
Juan Hernández-Rosas

Netherlands

Head of Delegation Sander Otte

Pakistan

Head of Delegation Javaid Ahsan Bhatti
Muhammad Zafarullah Khan
Suleman Qaiser

P. R. China

Head of Delegation Ningsheng Xu
Hongjun Gao
Haiming Guo

Poland

Head of Delegation Represented by Austria

Portugal

Head of Delegation Carlos Tavares
Orlando Teodoro

Russian Federation

Head of Delegation Sergey B. Nesterov
Gennady G. Bondarenko
Evgeny A. Deulin

GM-19-03-02

Slovakia

Head of Delegation Robert Redhammer
Andrej Vincze
Jaroslav Bruncko

Slovenia

Head of Delegation Miran Mozetič
Janez Kovač
Alenka Vesel

Spain

Head of Delegation José A. Martín-Gago
Amadeo Vázquez de Parga

Sweden

Head of Delegation Lars Westerberg
Ulf Helmersson
Lars Johansson

Switzerland

Head of Delegation Martin Wuest

USA

Head of Delegation Joe Greene
Gregory Exarhos

Provisional Members

Bulgaria

Head of Delegation Latchezar Avramov
Milena Damyanova
Ivan Petrov

Philippines

Head of Delegation Joe Greene

Member votes, based on subscribed shares.**Quorum:** Two-thirds of members present or represented.

30(32) members; quorum – 21 members

Shares	National Member	GM Votes
1	Argentina	1
1	Australia	1
3	Austria	2
3	Belgium	2
2	Brazil	2
	Bulgaria*	
1	Croatia	1
2	Czech Republic	2
2	Finland	2
9	France	4
15	Germany	5
8	Great Britain	4
3	Hungary	2
2	India	2
2	Iran	2
2	Israel	2
5	Italy	3
13	Japan	5
7	Korea	4
2	Mexico	2
5	Netherlands	3
2	Pakistan	2
	Philippines*	
10	P.R. China	5
3	Poland	2
2	Portugal	2
10	Russia	5
1	Slovakia	1
1	Slovenia	1
3	Spain	2
3	Sweden	2
3	Switzerland	2
20	USA	5

* If admitted to membership by the GM



General Assembly of IUVSTA

Comprising

**The 18th Ordinary General Meeting
and
The Extraordinary General Meeting 2013**

**Palais des Congrès,
Paris, France.**

11th September, 2013

<http://www.iuvsta.org>

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**Minutes of the 18th Ordinary General Meeting of the IUVSTA
and the Extraordinary General Meeting 2013
Palais des Congrès, Paris, France.
Wednesday September 11, 2013.**

1 Opening

The President, Prof Jean-Jacques Pireaux, formally opened the meeting at 13.40.

2 Attendance

Officers:	President	Prof J-J Pireaux
	President Elect	Prof M Anderle
	Past President	Prof J W Rogers Jr.
	Secretary General	Dr R J Reid
	Treasurer	Prof François Reniers
	Scientific Director	Prof David Ruzic
	Scientific Secretary	Prof C Eisenmenger-Sitner

National Delegations:

(Argentina	Alfredo Juan, Julio Ferron, Edith Goldberg)
Australia	Rod Boswell, Bruce King
Austria	Christoph Eisenmenger-Sittner, Manfred Leisch, Peter Varga
Belgium	François Reniers
Brazil	Perdo Nascente
Croatia	Nikola Radic, Petar Pervan, Maja Buljan
Czech Republic	Karel Masek, Pavel Hedbanvy
France	Daniel Verniere, Maria Carmen Asensio, Anouk Galtayries
Germany	Frank Richter, Michael Kopnarski, Christian Day
Great Britain	Martin McCoustra, Alex Shard, David Sykes
Hungary	Laszlo Kover, Andras Berko, Gyorgy Radnoczi
India	Represented by Great Britain
Iran	Represented by Pakistan
Israel	Sidney Cohen, Ron Naaman
Italy	Espedito Vassalio, Paolo Manini, Francesco Ghezzi
Japan	Katsuyuki Fukutani, Yoshio Saito, Hideaki Kasai
Korea	Jin-hyo Boo, Guen Yong Yeom
Mexico	Sandra Rodil
Pakistan	Javaid Ahsan Bhatti, M Zafarrullah Khan, Tariq Sattar
P R China	Haiming Guo, Fei Zeng
Poland	Leszek Markowski
Portugal	Orlando Teodoro, Ana Cristina Silva, Reinhard Schwarz
Slovakia	Robert Redhammer, Jaroslav Kovac, Andrej Vincze
Slovenia	Miran Mozetic, Monika Jenko, Janez Kovac
Spain	Jose Martin-Gago, F L Tabares, Alesandro Guitierrez
Sweden	Ulf Jansson, Lars Montelius, Nils Brenning
Switzerland	Martin Wuest
USA	Joe Greene, Gregory Exarhos, Bill Rogers

Observers: Ivan Petrov (Surface Engineering Division, Chair), M G Barthes (IVC19, Former President), Ann Sykes, Alexandra Jung.

Recording Secretary: Dr D E Sykes

Dr Reid, the Secretary General announced that the quorum for the Ordinary Meeting was fifteen and for the Extraordinary Meeting twenty; there were delegations from twenty four member societies present in the room and two further societies represented by other societies and so the meetings were quorate. He explained that the meeting would be in two parts, following the procedure agreed in Beijing at GM17 and implemented in Namur at EGM 2011.

3 President's Welcome

The President, Prof J-J Pireaux, welcomed delegates to the meeting and thanked the French Vacuum Society for their hospitality. He explained that the Ordinary General Meetings approve the accounts and set the budget and, every three years, would elect the officers of the Union. Every three years following the OGM there is an Extraordinary General Meeting to review the activities of the Union over the previous triennium.

4 Remembrances

The President informed the meeting that he had been informed of the death of Akio Yoshimori who had been very active in the work of the Union, he read his obituary, (ECM-116-05-01). The meeting observed a silence of one minute.

5 Alterations to Membership

Dr Reid informed the meeting that three societies had requested changes to the number of shares they held; China wished to increase its number of shares from three to ten, Korea wished to increase their number of shares from five to seven whilst Australia wished to reduce its holding from two to one share. Dr Reid explained that these changes required the consent of the General Meeting and a secret ballot was necessary as the changes would impact on the relative voting strength of the three Societies; there would be three votes, one for each Society, but they would be taken in parallel. François Reniers sought clarification asking that although this vote changed the voting strengths for the next triennium, was it also pertinent to GM18; he was informed that this was the case. Ann Sykes (UK) and Alexandra Jung (Austria) were appointed as tellers. The results of the three ballots were: vote 1 (China) fifty six in favour, four against and one abstention; vote 2 (Korea) fifty seven in favour, one against and no abstentions; vote 3 (Australia) forty four votes in favour, nine against and one abstention. The changes to the voting strengths were thereby approved.

6 Admission of the Argentine Vacuum Society to Membership

The delegates from Argentina who had been observing the proceedings withdrew from the meeting. Dr Reid explained that all the paperwork was in order and that ECM116 had recommended unanimously that the Argentine Vacuum Society be admitted to membership of the Union. A secret ballot was held, (Ann Sykes (UK) and Alexandra Jung (Austria) as tellers). There were sixty four votes in favour of the motion that the Argentine Vacuum Society be admitted to the Union, none against and no abstentions. The Argentinian delegates were welcomed back into the meeting as full members of the Union.

7 Minutes of GM-17**[GM-17-01-01]**

Dr Reid reported that the minutes of GM17, [GM-17-01-01], were on the web site and in the book of reports. He had not been informed of any necessary changes to the minutes and these were approved as a true report of the meeting.

8 Amendments to the Statutes and By-Laws

The Secretary General explained that the Statutes Committee had recommended small changes to the By-Laws concerning the operation Scientific Divisions (paper GM-18-20G-01). As a consequence of the improvements in communications it was possible for all members of the divisional Colleges to participate in the work of the Divisions rather than a committee of seven. Once again, the changes needed to be approved by a secret ballot and Ann Sykes (UK) and Alexandra Jung (Austria) were appointed tellers. David Ruzic commented that, in the past, the Divisional Colleges would elect a committee and the committee would elect the officers, under the proposed changes, all the Divisional College members would be able to participate in the work of the Divisions. As the result of the ballot would not impact upon the work of the meeting the business of the meeting continued whilst the votes were counted.

9 Approval of a new Division

David Ruzic explained that the BioInterfaces Study Group had been functioning as a Division throughout the past triennium and that, at ECM116, the STD had recommended that it become a Division in its own right. No secret ballot was necessary and the motion to approve the formation of a BioInterfaces Division was approved unanimously by a show of hands by the heads of each National Delegation.

The result of the ballot to change the By-Laws was declared; the motion had received unanimous approval.

10 Approval of the Accounts for the financial year 2012

The Treasurer, François Reniers, explained that the Union was constituted under Belgian law and consequently the General Meeting had to approve the accounts of the previous year; the accounts also had to be validated by a certified accountant. He presented the figures for 2012 showing the balance sheet and the state of the General Fund which, at the end of 2012, stood at 480kEuro. He invited questions and comments; there were none. A motion to approve the accounts for 2012 was carried unanimously by a show of hands.

11 Approval of the Budget for the financial year 2013.

François Reniers explained that normally the approval of the Budget would be carried out at the first meeting of the year but every three years it was more appropriate that it be carried out at a triennial meeting. He presented his budget for 2013.

Questions and comments were invited. Miran Mozetic asked about Visual Aids and the expenditure agreed at ECM116; François Reniers explained that this would not appear as a separate line in the budget but would be covered by Discretionary Expenses.

A motion to approve the budget for 2013 was carried unanimously by a show of hands.

12 Transfer of Presidency

At this point in the meeting Prof Pireaux formally transferred the Presidency of the Union to Dr Mariano Anderle by handing over the gavel as a symbolic gesture.

13 Elections for the Triennium 2013-2016

The new President introduced the proposed new Officers; the Executive Council's nomination for President Elect was Lars Montelius, there had been no other nominations. The General Meeting approved unanimously the Executive Committee's nomination by a show of hands. Lars Montelius was invited to take the seat of the President Elect. The President then proposed that David Ruzic continue as Scientific Director; Andrej Vincze to become Scientific Secretary, François Renier to continue as Treasurer and Prof Christoph Eisenmenger-Sittner to replace Dr Ron Reid as Secretary General, David Sykes would continue as Recording Secretary. There were no objections to the appointments. Daniel Verniere proposed a vote of thanks to Ron Reid for all the work he had done for the Union; the meeting honoured Dr Reid with a standing ovation.

14 Ratification of the framework budget for the Financial Years 2014-2016

François Renier presented his framework budget for the new triennium explaining that the income and expenditure was slightly higher than for the past triennium as a result of the changes in shares. The motion to accept the proposed budget was carried unanimously by a show of hands.

15 Approval of the subscription rates for each of the Financial Years 2014, 2015 and 2016

François Renier proposed that the subscriptions remain at their current value of 150Euro/share for the Financial Years 2014, 2015 and 2016; the proposal was approved unanimously by a show of hands.

16 Ratification of National Committee Councillors and Alternates

Christoph Eisenmenger-Sittner presented a list of Councillors and Alternates as given in the Book of Reports; he noted that Israel had nominated members to the Divisional Colleges but not a Councillor or Alternate Councillor. The Councillors and Alternate Councillors were approved by the General Meeting.

17 Recognition of retiring Officers and ECM Members

Prof Pireaux presented a list of retiring Officers, Councillors and Alternates and Division Chairs [GM-18-03-03]. He presented those present at the meeting with certificates and asked fellow countrymen of those not present to deliver their certificates on his behalf.

18 Any Other Business

The President asked if there were any other items of business delegates wished to discuss; there were none.

The President then adjourned General Meeting 18 and opened the Extraordinary General Meeting 2013. The meeting was declared quorate.

19 Retiring President's Report [GM-18-02-01]

The Retiring President, Prof Jean-Jacques Pireaux, presented his Retiring President's Report [paper GM-18-02-01]. He expressed his thanks to all those who had helped him during his presidency, in particular Ron Reid and François Reniers.

Questions or comments were invited; there were no questions or comments.

20 Report of the Secretary General [GM-18-03-06]

Ron Reid, the Retiring Secretary General, said his report on the previous triennium was given in the Book of Reports [paper GM-18-03-06]. He took the opportunity to thank all those who had helped him with his work over the preceding nine years.

21 Committee Reports

The President, Mariano Anderle, invited the Retiring President, Prof Jean-Jacques Pireaux, to present a summary of the reports on work carried out by the committees during the previous triennium. [These can be seen in full in the Book of Reports].

He reported that:

the Long Range Planning Committee determined the future strategies for the Union by identifying emerging areas of science and communities:

the Congress Planning Committee coordinates the conferences within the Unions remit and considers bids to host the IVC meetings; the next IVC in 2016 will be held in Busan, South Korea and that in 2019 in Malmo, Sweden:

the Awards and Scholarships Committee is responsible for the IUVSTA Science Prize and the IUVSTA Technology Prize, administers the Elsevier Student Travel Awards and co-ordinates the Welch Scholarship which has been suspended for 2013 and to which changes are anticipated in the near future:

the Publications Committee had re-launched the IUVSTA Bulletin in 2011, had compiled the Directory (a searchable database of members expertise) and was working on the web site to improve the visibility of the Union:

the Emerging Societies Committee also was working to improve the visibility of the Union in potential new member countries, a new Global Development series of conferences had been proposed:

the Education Committee had responsibility for the Visual Aids material which was now freely available on the Union's web site, two Technical Training Courses had been held although grants for eight had been available in the triennium and, as a consequence, it had been agreed to relax the rules for TTC funding, two Schools and two short courses had been funded, a review paper based on the Highlights Seminars had been published:

the work of the Statues Committee had been covered in the Secretary General's Report.

Prof Pireaux thanked all the committee chairs for their work throughout the triennium.

22 Scientific and Technical Director's Report

The Scientific and Technical Director, Prof David Ruzic, reminded delegates of the Directory remarking that only about half of the members had completed their entries. He reported that a total of ten Workshops and two Schools had been supported in the triennium and all had had successful outcomes. He observed that the Union's Divisional structure only worked if the Divisions were represented at the Executive Council Meetings. He informed the meeting of the incoming Division Chairs: Bonnie Tyler (ASSD), Ivana Capan (EMPD), Christian Teichert (NSD), Timo Gans (PSTD), Ivan Petrov (SED), Peter Varga (SSD), Alberto Tagliaferro (TFD), Jay Hendricks (VSTD). He thanked the outgoing Division Chairs for their work and reminded the meeting that their reports on the work of the past triennium could be found in the Book of Reports.

23 Treasurer and Finance Committee Report

[GM-18-04-01]

The Treasurer, Prof François Reniers, began his report by reminding delegates that he had taken over as Treasurer at the start of the triennium; he soon learned that officers of societies keep changing but always got kind replies to his messages to treasurers of national societies. Sometimes his job was complicated by changes in legislation, for example it was not possible to transfer funds from Iran to Belgium. The need for an accountant to check the figures was good for transparency but was time consuming.

He reported that the Budget for 2013 was on track and the Union had ridden out the financial crisis in the Euro zone despite significant losses from investment in Greek government bonds. The new policy of investment in bonds with a wide geographical spread was working well, at the start of the triennium the General Fund stood at 453kEuro and now was 500kEuro; he thanked Daniel Verniere and the Investment Sub Committee for their help

24 Inaugural Address

[GM-18-02-02]

The President read his inaugural statement from the book of reports.

He reminded delegates that the first ECM of the new triennium, ECM117, would take place on the following Friday in the same room.

A motion to adjourn the meeting was proposed and seconded; the President closed the meeting at 15.50.

D E Sykes
Recording Secretary

Report of the treasurer for the triennium 2013-2016

Introduction

Since the new IUVESTA statutes, the IUVESTA budget runs on a double time scale: the triennium, and on an annual base. Each year, the treasurer, with the finance committee, establishes a budget that must be accepted by the yearly AGM. The treasurer also establishes the final accounts of the previous calendar year, which are audited by a registered accountant, and are proposed to the AGM.

The annual budgets are prepared in the general framework of the triennium budget, which reflects the global policy of IUVESTA. Each annual budget, however, must reflect the expected income and expenses of the year, to the best of the finance committee and treasurer knowledge.

According to the wish of the majority of the IUVESTA member societies, the budget was established in a rather conservative approach, trying to limit the risk in investments, through diversification.

1 Previous triennium budget

The status of the previous triennium budget was presented at the general assembly that took place in Paris, during IVC 19.

2. Current status of the 2013-2016 triennium budget

The status of the triennium budget, as established on July 1st, 2016 is presented in table 1. This table shows the budgeted amounts, for the full triennium, per year, and the current status. The columns "2014-final" and "2015-final" contains data which have been audited by the certified accountant.

Due to the accounting rules, expenses and income that are really taking place in the calendar year have to appear, no matter if they should still "belong" to a different calendar year or triennium. For this reason, it is expected to have, during this triennium, two donations (IVC-Busan, and IVC-Paris), as the donation from IVC-Paris arrived in early 2014.

The interest coming from the investments will probably be higher than expected at the beginning of the triennium.

The member societies are paying they fees mostly in due time. Sometimes there are technical difficulties for bank transfer with some countries. The treasurer always tries to find a pragmatic solution when possible to help such societies.

Some expenditure will still occur before the end of the triennium, such as expenses for the officers, IUVESTA prize, payment of schools and short courses that will take place before the end of the calendar year.

The difference between the expected total income and expenses for the full triennium is due mostly to the double donation from IVCs expected during this triennium.

IUVESTA Budget 2016-proposed-Busan Euro	2010/2013	2014/2016	2014	2014 final	2015	2015-final	2016	2016-July1	final expected 31/12/2016
Income:									
Subscriptions (share value of 150 € per year)	62100	65250	21750	21967,62	21450	18934,94	21750	20751,73	62652,56
Interest	25700	24784	6000	9325,46	6000	9970,5	9500	5012,45	28795,96
Visual Aids	500	0		-250					-250
Donation (from IVC-19+IVC20)* transfer from general fund	30000	30000	40000	40000	0		30000		70000
Total income	118300	120034	67750	71043,08	27450	28905,44	61250	25764,18	161198,52
Expenditure:									
Publications	6500	6000	2000	1407,26	2000	0	4000	1178,54	5407,26
Educational Activities	20000	20000	5000	2500	5000	2000	15500	5000	20000
Workshops/Schools	60000	60000	24000	24000	30000	18000	30000	12000	72000
World Transfer Program	10000	10000	10000	0	10000	0	10000		10000
Officers discretionary expenses and travel	12000	6000	2000	2059,6	2000	1682,88	2000		5742,48
Scientific and technical directorate	2000	2000	1000	900	1000	0	100		1000
Liability insurance for IUVESTA president	1000	984	328	327,75	328	327,75	328	327,75	983,5
ICSU/NGO-UNESCO	2000	2000	800	500	800	500	800	500	1800
Bank charges, taxes, commitments, miscellar	4000	4000	2000	102,13	4000	37,88	4000	135,99	4140,01
Accountant for tax fillings	800	2250	750	605	750	605	750		1960
IUVESTA Prize transfer to general fund		6800		19872			6800		6800
Total expenditures	118300	120034	67750	32401,74	55878	23153,51	74278	19142,28	129833,25
IUVESTA prize 2016 Prize Fund (for previous donations)		48270							

Table 1: IUVESTA 2014/2016 triennium budget, as of July 1st, 2016.

3. Accounts and investments

Since a few years, one significant trend of the global economy is volatility, which is characterized by strong increases of the stock exchange markets, followed by sudden drops. Slowing down of the Chinese economy, political crisis and wars, extreme volatility on the energy (oil) market, stagnation of the European economy, redundant weakness of the Greek economy are impacting negatively the growth of the economy, and as a consequence for IUVSTA, they lead to a very small inflation, giving interest rates close to zero. Some countries (Germany, Japan,...) even have negative interest rates on their government bonds. Only the American economy has been performing well these last 3 years, leading to a growth of the stock market. This was reinforced by the policy of the US Federal bank which maintained interest rates at very low levels. Taking all these aspects into account, it is not possible anymore for the IUVSTA treasurer to obtain a 4% net interest on fixed safe investments (such as Eurobonds), to cover the IUVSTA expenses. The treasurer, with the investment subcommittee, proposed to the finance committee to invest a larger ratio of our assets in funds (either stock-based funds or mixed bonds-stocks fund), and in different countries and currencies to try to a) increase the return and b) limit the risk by diversification. Today IUVSTA has assets in USD, GBP, CHF and Euro. The IUVSTA accounts being established in Euro, positive and negative variations in the exchange rates also have an impact of the total value of the IUVSTA fund. Apart from Euro, our largest investments have been made in USD, to benefit from the strong US economy.

Table 2 presents the value of the fund as of July 1, 2016.

<i>IUVSTA GENERAL FUND</i>		<i>1 July 2016</i>				
<i>US Mutual Funds</i>	<i># shares</i>	<i>value</i>	<i>currency</i>	<i>total value</i>	<i>EUR/USD</i>	<i>Total EUR</i>
DWS Global thematic fund	3165,857	27,55	USD	87219,36	0,9004	78532,31
Vanguard 500 index fund	515,311	194,08	USD	100011,6	0,9004	90050,41
cash	839	1	USD	839	0,9004	755,4356
<i>total US Funds</i>				188069,9		169338,2
<i>EURO Mutual Funds and bonds</i>						
Aberdeen Global Europea	1023,365	43,82	EUR			44843,85
Aberdeen Global Dividend	229,798	187,35	EUR			43052,66
Fidelity Eurobond Fund	1562,5	13,91				21734,38
Fidelity Fund European Hij	1886,8	10,01				18886,87
Invesco Pan Europe H.I.	1483,67	13,77				20430,14
JPM Global I	136,2	143,3				19517,46
Schroeder Europe DivMa	336,14	48,64				16349,85
Schroeder ISF Euro	731,8	35,35				25869,13
SISF Swiss equity	819,67	39,57	32434,34	CHF	0,9223	29914,19
Tel Italia 5/34	0	97	14550	USD	0,9004	13100,82
5,3% fix int. Hellenic Republic (2026)	50000					10249,91
Delhaize 2040 5,7%	50000	114,08	57039,5	USD	0,9004	51358,37
5,625 Renault (2017)	40000	103,79				41516
Labroke GBP 14/22 5,125	18500	103	19054,08	GBP	1,2001	22866,8
Wienerberger 2020 4%	24000	109,55				26292
Bekaert 2019 5%	15000	110,75				16612,5
<i>total Euro investments</i>						422594,9
<i>Accounts</i>						<i>EUR/CHF</i>
						0
				0		0
Citibank CHF money market				10286,06	0,9223	9486,833
Citibank EUR checking						384,06
Citibank EUR Savings						68220,55
Citibank US Money Market				0		0
Citibank CHF current				1591,64	0,9223	1467,97
Citibank US current				547,93	0,9004	493,3562
<i>Total Accounts</i>						80052,77
<i>Grand Total</i>						<i>671986</i>
<i>IUVSTA Prize</i>						<i>-48270</i>
						<i>623715,8</i>

Table 2 : IUVSTA General Fund, as of July 1st, 2016

4. Annual budgets

The annual budgets for 2014 and 2015 have been voted at the AGM-2 in Trento and AGM-3 in Graz, respectively. The final accounts for the calendar years 2013 and 2014, after auditing by the registered accountant, were accepted by the same two AGM. The final accounts for 2015 have been audited and were presented at the finance committee and ECM-122 in Braga. It will be the role of the GM in Busan to vote on this final acceptance. A provisional budget for 2016 was prepared and presented at the finance committee and ECM-122, although they will have to be approved at GM in Busan.

5. Budget 2016

A provisional budget for 2016 was prepared and presented at the finance committee and ECM-122, although it will have to be approved at GM in Busan. This proposed budget is highlighted in red in Table 1.

6. Proposed budget for the 2017-2019 triennium

The triennium budget should reflect the IUVSTA policy for the next triennium. It is prepared by the treasurer and the finance committee, after discussion with the president-elect and the officers. The most significant items of this budget are presented hereunder, and the budget is presented in Table 3:

- value per share : it is proposed NOT to increase the value per share, keeping it at 150 €
- number of shares by country : after a considerable change in the number of shares by country in the current triennium, it is proposed to keep these numbers unchanged in the current triennium. Should the Phillipine Vacuum Society join IUVSTA (to be decided at GM-Busan), it will have one share. The total amount expected from subscriptions is however not changed at this stage as past-experience shows that there are always one or two countries which do not pay their fees in due time.
- donation from IVC Stockholm : the expected donation from IVC Stockholm is 40.000 €
- the president-elect proposed to increase the IUVSTA activities. After discussion in the LRP committee, the finance committee proposed to finance these new activities by a one-shot transfer from the general fund of around 51.000 €. In these new expenses, around 35.000 € are considered as a “one-shot” investment. Should the shareholders be reluctant to decrease the IUVSTA patrimony, ECM or (A)GM could precondition any new expense to new income.
- The budget for the IUVSTA core activities is increased (80 k€ instead of 60 k€ for schools and workshops, and 24 k€ instead of 20 k€ for educational activities). It is also proposed to develop a new communication plan to increase the visibility of IUVSTA, to organize a IUVSTA summit and to distribute grant and awards for students. The budget for the IUVSTA prize is increased to 10.000 €, which is more realistic, as it covers not only the prize value, but also some expenses for the laureates, and technical items (medals,....)

IUVSTA Budget for triennium 2017/2019			
Euro	2010/2013	2014/2016	2017/2019
			initial investment
Income:			
Subscriptions (share value of 150 € per year)	62.100	65.250	65250
Interest	25.700	24.784	25000
Visual Aids	500	0	
Company engagements			10000
Donation (from IVC)	30.000	30.000	40000
transfer from general fund			51150
Total income	118.300	120.034	191.400
Expenditure:			
Publications	6.500	6.000	6000
Educational Activities	20.000	20.000	24000
Workshops/Schools	60.000	60.000	80000
World Transfer Program	10.000	10.000	
Officers discretionary expenses and travel	12.000	6.000	12000
Scientific and technical directorate	2.000	2.000	3000
Liability insurance for IUVSTA president	1.000	984	1000
ICSU/NGO-UNESCO	2.000	2.000	2000
Bank charges, taxes, commitments, miscellar	4.000	4.000	4000
Accountant for tax fillings	800	2.250	2400
IUVSTA Prize		6.800	10000
transfer to general fund			
IUVSTA summit			20000 15000
recruitment new societies			1000 1000
Website			6000 6000
Communication Plan			3000 3000
Awards: Students, Graduates, Specific conf awards			15000 10000
unexpected expenses			2000
Total expenditures	118.300	120.034	191.400 35.000

Table 3: proposed budget for the 2017/2019 triennium.

Election of Officers for the Triennium 2016-2019

The President will be Prof Lars Montelius

The Past President will Dr Mariano Anderle

The Executive Council nominee for President Elect is Prof. Anouk Galtayries

The President nominates the following Officers:

Scientific Director Prof David Ruzic

Scientific Secretary Dr Andrej Vincze

Secretary General Prof Christoph Eisenmenger-Sittner

Treasurer Prof François Reniers

Short biographies/CVs are on the following pages

Curriculum vitae Lars Montelius



H-index 34: 298 publications, 4.091 citations, last 10 years \approx 250 citations/year. Data from ISI Web of Knowledge 2016-06-19. More than 70 personally invited talks. 22 patent applications.

Doctoral degree

870824: Ph.D. in Solid State Physics, Lund Institute of Technology at Lund University, Lund 1981-1987. Thesis: Electrical and Optical Characterization of deep levels in Ge, Si and GaAs. Supervisor: H G Grimmeiss.

Postdoctoral work

1988-1989: Post-doc/Visiting Scientist, IBM Research Center, Yorktown Heights, NY, USA
Qualifications as associate professor/research fellow
1993-05-26, LTH

Honorary degree/Awards

Awarded Dr hc, Tartu University, Dec 2013
Pioneering Award Nanoimprint Lithography, Nov 2015
President (from Aug 2016, presently President Elect) of IUVSTA, The International Union of Vacuum Science & Technology; an international member organization encompassing 32 countries and more than 15000 researchers.

Current position

140910-present, Director General, International Iberian Nanotechnology Laboratory
www.inl.int
000601- present, Professor, Physics Dept, Nanometer Consortium, <http://www.nano.lth.se/>,
The NeuroNanoscience Center, Lund University, <http://www.med.lu.se/nrc>
Director SwedNanoTech, <http://www.swednanotech.com>
Researcher ID: <http://www.researcherid.com/rid/B-9071-2008>
Homepage: <http://www.nano.lth.se/lars.montelius>

Previous positions and periods of specific appointments

2011- 2014: Director Lund University Lighting Initiative INSIDE LIGHT,

<http://www.lth.se/li/>

2012 - 2014: Director LU SP – The Lund University & SP Cooperation Initiative

2009 - 2011, Director for Øresund University & Øresund Science Region, being a crossborder cooperation between eleven universities, three regional authorities, two countries in the Øresund Region, one of Europes most innovative regions. LM was during 2011-2014 expert advisor to the Vice Chancellor of Lund University and engaged in several regional and European activities & initiatives.

03-07-01- 08-12-31 appointed as Dean of the Physics Department, Science and Engineering Faculty, Lund University.

(Offered a Chair in NanoSystem Engineering at DTU 2003)

(Ranked 2nd Chair in Sensor Physics at Linköping University 2000)

990101—000601 Ass Prof (Univ. Lektor), SSP, LU

970701-981231 Ass Professor (vik Univ. Lektor), SSP, LU

1993-05-26 Associated Professor (Docent)

1992—97-07-01 1:st Research Engineer (Folng), SSP, LU

1989-1992 Research Assistant, SSP, LU

1988-1989 Visiting Scientist, IBM Research, Yorktown Heights, USA

1987-1988 Research Assistant (Fo.ass), SSP, LU

1985-1987 Doktorandtjänst, SSP, LU

1983-1985 Scholarship & Assistant, SSP, LU

1981-1983 Assistant, SSP LU

National and international assignments of importance

Commissions of trust:

Appointed as special advisor to Vice –Chancellor, Lund University,

2011-2015. Appointed as Dean Physics Department (50%) 2003-07-01—2008-12-31, Faculty opponent, Member Steering Committee of Vision & Leadership Development Groups at LTH, Faculty opponent for PhD thesis defense 12 times. Member Examination Committees Ph D degrees in Sweden, 12 times, Faculty examiner for Professor Chair positions in Uppsala 2004, Karlstad 2011, DTU 2012. EU Expert evaluator 2004/05, 2008, 2010, 2013, 2014.

Evaluator ERC 2015 & 2016, Evaluator Singapore National Science Council 2008, Taiwan National Science Council 2005, Finnish Academy of Sciences 2004, Estonian Academy of Sciences 2000&2001 &2009&2010, Cyprus Academy of Science 2009, 2014, Israel Science Foundation 2008- 2011, 2014, Saint Gobain 2009, CEITEC (Brno, Czech Rep) 2014 and Switzerland & Great Britain 2013 and Danish S&T Council 2015 & 2016. Member

Organizing Committee:

The 4th International Conference on Nanometer Sci. & Technology,

Beijing 1996, 7th Int. Conference on Nanometer Sci. & Techn., Malmoe 2002, Chairman 1st Nordic SPM workshop, Lund May 1996, Chairman International Steering Committee ; Nordic & Baltic SPM Workshop, Chairman 1st International workshop on Nanoimprint lithography. Lund 2002, Member International Scientific committee for the series of

International Nanoimprint and related technologies & Program Chair, Vienna 2004, Vice Program Chair Japan 2005, Chair Paris 2007, Chair Øresund 2010. Vice Program Chair International Vacuum Conference (IVC-17) and International Conference on Nanoscience & Technology ICN+T 2007, Stockholm 2007, Vice Chair International Vacuum Conference (IVC-18) and Chair International Conference on Nanoscience & Technology ICN+T 2010, Beijing 2010, Program Chair IVC 2016 and Conference Chair 2019. Member International Scientific Committee for the Micro and Nanoscale engineering conference series, conference co-chair, Copenhagen 2007, Chair 2017, Program & Advisory Committee 3M-NANO conference series.

President Elect in IUVSTA, Chair IUVSTA Long Range Planning Committee. Chair Swedish Technical Standardization Committee on Nanotechnology 2007-2014, Chair Lund Nano Lab, Board member SciBlu (2004-2012), The Nanometer Structure Consortium (1989-present), NeuroNanoScience Center (2004-present) (Strategic Research Centers at LU). He is a member of the Executive High Level Group (HLG) hosted by DG NMPB, board member of the ETPs EuMat, NanoFutures (Chair Skills & Education) and value4nano.

Entrepreneurial achievements

Director of the board & part founder of SciMont AB, ENI AB, SwedNanoTech AB, Compacta AB, BrainLit AB, WaterSprint AB, Cellevate AB, and EmbeddedNano AB. Director of the Board of Obducat AB, SwedNanoTech AB and MISTRA NanoEnvironment&Safety. LM has filed 25 patent applications. Founder of the entrepreneurial network SALE (Sällskapet Akademiska LundaEntreprenörer) and the network SwedNanoTech, a Swedish network to promote Swedish nanotechnology.

Popular-scientific activities Numerous lectures in national workshops and for various organizations. Numerous popular science lectures for general audiences in Sweden. LM has arranged three press conferences, resulting in several TV reportages in Sweden and in a Nanotechnology trailer in CNN-Asia.

EU programs:

Coordinator for CHANIL (STREP), NANOTECH (STREP) and NCS (Interreg), Ø-MIC (Interreg), Governance of the Sound of Science (Interreg). Have participated in NaPa (IP) Nano2Life (NoE), HUNN (CA), PARNASS (STREP), BIONEL (ETS), ReNaChip (FET), NOMAD (FET), SMALL (ETN), Science Link (BSR) projects and participates presently in the following H2020 EU Greenanofilms (RTD), ENIGMA (CSA), SSLerate (CSA) and LICARA (RTD).

Mariano Anderle - Short Biography

Mariano Anderle, President of IUVSTA-International Union for Vacuum Science, Technique and Applications for the triennium 2013-2016, Fellow 2003 of the AVS-The Society of Science and Technology, Past President and Honorary Member of the Italian Society for Science and Technology (AIV), Paul Harris Fellow of the Rotary International, since September 1st, 2015 is Scientific Attaché at the Embassy of Italy, in Hanoi, Vietnam. From May, 2009 to August 2015 he has been Responsible of the Special Project "Promotion and Internationalization of the Trentino High Education and Research System" at the Department of Knowledge of the autonomous province of Trento, Italy, Chief Scientific Adviser of the Trentino Minister of University and Research, and Senior Scientist at the Plasma Physics Institute of the Research National Council in Milan.

He received his Doctor Degree (Laurea) in Physics from the University of Trento in 1980, and shortly thereafter he began his research career in surface and thin film science. He joined the Istituto per la Ricerca Scientifica e Tecnologica IRST (now Bruno Kessler Foundation - FBK) in 1984, a nonprofit research institute sponsored by the Autonomous Province of Trento, at which he has served, till April 2009, in a variety of research and research management roles. May 2008, he has been indicated by the Italian Foreign Affairs Minister as Scientific Attaché at the Italian Embassy in Beijing-China.

Dr. Anderle spent a sabbatical year at the IBM T. J. Watson Research Center in Yorktown Heights NY during 1990-91, as well as shorter visiting scientist appointments at University of Illinois, Urbana-Champaign in 1985, at IBM in 1992 and 1995, at CERN summers 1999-2002 and at University of Maryland summers 2003-2008.

He has also been active in international professional circles, including serving as Councilor for Italy, Vice-chair of Applied Surface Science Division Committee, Chair of Congress Planning Committee, Chair of the Biomaterials Interface Steering Committee, Chair of the Long Planning Committee and Scientific Director of IUVSTA and organizer for numerous International surface analysis and engineering activities (i.e. IVC 16, 2004 Program Vice Chair; PSE 2010 International Scientific Committee Member; SIMS 18, 2011 General Co-Chair; etc.).

Referee and responsible of International, National and Regional academic and industrial research projects, Adjunct Professor at the Universities of Trento and Torino and Adjunct Faculty at the Materials Science and Engineering Department, University of Maryland, he is author of more than

145 papers on international scientific journals and he holds 3 international patents and 2 IBM Invention Achievement Awards. His research includes surface analysis and engineering, semiconductor materials and processing, combinatorial materials science, biomaterials and biointerfaces.

More details can be found on Mariano Anderle home page: www.marianoanderle.it

Dr. Anouk GALTAYRIES

PhD, Habilitation

anouk.galtayries@chimie-paristech.fr

46 years old

Married, 2 daughters (2002, 2005)

**WORK EXPERIENCE**

- 1999-today** **Associate Professor** in Materials/Chemistry (Maître de Conférences)
Vice-Dean of Studies since 2007
Coordinator of 4 courses in bachelor and master degrees
 @ École Nationale Supérieure de Chimie de Paris (Chimie Paristech)
 (National Graduate School of Chemistry of Paris)
<https://www.chimie-paristech.fr/en/chimie-paristech-english/>
 @ Institut de Recherche de Chimie Paris (CNRS)
 Research Group : **Physico-Chemistry at Surfaces**
http://www.chimie-paristech.fr/fr/la_recherche/ircp/
- 1996-1998** **Post-doc** in the CEZIRENCAT TMR Network
 University of Namur (B)
- 1992-1996** **Assistant Professor**
 University of Lille (F)

INTERNATIONAL RESPONSIBILITIES

- Sept. 2017** **Co-Chair of the Conference**
 ECASIA'17, Montpellier (F)
- Aug. 2016** **Vice-chair of the Organizing Committee**
 IVC-20, Busan (ROK)
- 1992-1996** **Assistant Professor**
 University of Lille (F)
Member of the Organizing Committee
 ECOSS-32, Grenoble (F)
- Sept. 2013** **Vice-chair of the Program Committee**
 IVC-19, Paris (F)
- May 2012** **Member of the Organizing Committees**
 & **Nov. 2014** 2 IUVSTA workshops for Biointerface Division

PARTICIPATION TO IUVSTA

- 2013-2016** **Chair of the Congress Planning Committee**
Councillor for France
Vice-Chair of the Biointerface Division
- 2010-2013** **Chair of the Biointerface working group**

NATIONAL RESPONSIBILITIES

- 2013-today** **President of the French Vacuum Society (SFV)**
Management of a staff of 4 persons / Instructor in 2 short courses
www.vide.org
- 2015-2017** **Vice-secretary (Officer) in the board of directors of Fédération Gay-Lussac (FGL)**
- 2011-today** **Representative of the Director of Chimie ParisTech** at FGL executive council meetings in charge of the FGL Research biennial colloquium
www.20ecolesdechimie.com
- 2010-today** **Chair of the Francophone ToF-SIMS (ION-TOF) users meeting**
6 editions since 2010
- 2008-2012** **Member of the CNRS national committee #14**
Recruitment and evaluation of researchers
- 2002-2008** **Secretary and Vice-Chair** of University committee joint for Chimie ParisTech-ESPCI Paris- Paris 6 University
Recruitment of professors

EDUCATION

- 2008** **HDR "Habilitation à Diriger des Recherches"**
University Pierre et Marie Curie (Paris 6, F)
- 1996** **PhD Thesis** in Spectrochemistry, Molecules, Solids, Reactivity
University of Science and Technology (Lille, F)
- 1992** **Master degree in Spectrochemistry**
University of Science and Technology (Lille, F)
- 1989-1992** **Chemist degree**
Ecole Nationale Supérieure de Chimie de Lille (National Graduate School of Chemistry of Lille, F)
- 1987-1989** **Two-year intensive program preparing** for the national competitive exam for entry to **engineering higher schools** Grandes Ecoles (Limoges and Tours, F)

RESEARCH

- || **Fields:**
Surface characterisation under UHV (XPS, ToF-SIMS)
Surface reactivity of model catalysts and passivated metals and alloys: oxidation, corrosion, biointerfaces
- || Member of the Editorial Board of the Biointerphases Journal (AVS)
- || **Leader of "Biointerfaces"** thematics team in the Research Group @ Chimie ParisTech
- || **Scientific responsibility** of the XPS and ToF-SIMS platforms at IRCP/Chimie ParisTech
- || **Supervision:**
9 PhD students, 8 PhD students in collaboration, 22 master students
10 participations to PhD jurys (member, referee or president) from 2008 to 2015
- || Author or co-authors of more than:
70 papers (and 19 proceedings)
128 scientific communications (oral or poster papers) in national and international conferences
- || **14 invited conferences and seminars** since 2012 including 7 international ones.

COLLABORATIONS

Academic:

- Université de Bretagne Occidentale (Brest, F)
- Université de Technologie de Compiègne (F)
- Université Pierre et Marie Curie (Paris 6, F)
- Ecole Normale Supérieure Paris (F)
- Université Paris Diderot (Paris 7, F)
- University of Cádiz (E)
- Politecnico Torino (I)
- University of Ferrara (I)
- Bulgarian Academy of Sciences (Sofia, BG)
- Romania Academy of Sciences (Bucarest, RO)
- Federal University of São Carlos, (BR)
-

Industrial:

- Rhodia
- CEA
- Areva
- TOTAL
- Saint-Gobain
- EDF

MISCELLANEOUS

- || Member of the AVS *since 2013*
- || Member of the Société Chimique de France
since 2014
- || President of a parent teacher association
(PTA) *from 2010 to 2015*
- || Philately
- || Sports: basket-ball *for 15 years until 1995*,
Pilates & NIA *since 2015*, Running
- || Novels reader

Curriculum Vitae

Prof. Dr. David Neil Ruzic

Department of Nuclear, Plasma and Radiological Engineering
 University of Illinois Urbana-Champaign
 216 Talbot, 104 S. Wright St.
 Urbana, IL 61801
 voice: (217) 333-0332 fax: (217) 333-2906 mobile: (217) 840-3282
 druzic@illinois.edu <http://cpmi.illinois.edu>

Date of Resume: December 11, 2015

Date of Birth: February 10, 1958

Citizenship: USA

Rank: Professor

Graduate Standing: Physics, Electrical and Computer Engineering, and
 Nuclear Plasma and Radiological Engineering

Education and Training

Undergraduate	Purdue University	Physics/App. Math	BS	1979
Graduate	Princeton University	Physics	MA	1981
	Princeton University	Physics	PhD	1984

Research and Professional Experience

Abel Bliss Professor, College of Engineering, 2011 - present
 Affiliate in Micro and Nanotechnology Laboratory, 2008 - present
 Director, Center for Plasma Material Interactions, 2004 - present
 Associate Vice President for Administration, University Administration, 2002 - 2005
 Faculty Fellow, Vice Presidents for Academic Affairs Office, 2000 - 2002
 Assistant Dean, College of Engineering, Academic Programs, 1995-1996
 Affiliate Faculty in Dept. of Electrical and Computer Engineering, 1991 - present
 Professor, 1994 - present
 Associate Professor, 1989-1994
 Affiliate Faculty in Dept. of Material Science and Engineering, 1988 - 2002
 Honors Faculty for Undergraduate Campus Honors Program, 1988 - present
 Graduate Faculty in Physics, 1986 - present
 Assistant Professor, 1984 - 1989
 Research Staff I, Princeton University Plasma Physics Lab, Feb.1984 - June 1984
 Research Assistant, Princeton University Plasma Physics Lab, 1979 – 1984

Fields of Research: plasma-material interactions relevant to fusion, semiconductors, and plasma manufacturing through a combination of computational and experimental means; Plasma surface interactions with lithium

Current research topics:

- SLiDE – Solid/Liquid Lithium Divertor Experiment
- DEVeX – Divertor Edge and Vapor shielding eXperiment
- Plasma Surface Interactions – Scientific Discovery through Advanced Computing
- Commercial Hollow Cathode Magnetron: Diagnostics and New Operation Modes
- High power pulsed magnetron sputtering

Awards and Honors

Presidential Young Investigator Award, 1985-1990, NSF
 Arnold O. Beckman Award, 1985
 XEROX Award, 1990
 Fellow, American Nuclear Society (ANS), 2004
 Micron Professorship, 2005 – 2008
 Fellow, American Vacuum Society (AVS), 2007
 Plasma Prize from AVS, 2012
 Fellow, American Physical Society (APS), 2014

Graduate and Post-Graduate Research Advising

- 49 M.S. Degrees Granted Students
- 26 Ph.D. Degrees Granted Students
- 17 Post-Doctoral Associates (2 at Present)
- 6 M.S. Thesis Students Supervised at Present
- 6 Ph. D. Thesis Students Supervised at Present

Publications, Patents and Invited Talks

- 171 Refereed Journal Articles
- 5 Patents
- 34 Invited Lectures (last 5 years)
- 3 Books and Monographs
- 5 Book chapters

Most Significant Products (last 5 years):

1. M. A. Jaworski, T. K. Gray, M. Antonelli, J. J. Kim, C.Y. Lau, M. B. Lee, M. J. Neumann, W. Xu, and D. N. Ruzic,
 “Thermoelectric Magnetohydrodynamic Stirring of Liquid Metals” *Physics Review Letters*, 104, 094503 (2010).
2. D.N. Ruzic, W. Xu, D. Andruczyk and M. A. Jaworski,
 “Lithium - Metal Infused Trenches (LiMIT) for Heat Removal in Fusion Devices”, *Nuclear Fusion*, 52 pp102002-6 (2011).
3. P. Raman, I.A. Shchelkanov, J. McLain, D.N. Ruzic,
 “High power pulsed magnetron sputtering: A method to increase deposition rate”, *J. Vac. Sci. Technol. A* 33(3), May/June 2015

Grants Received (last 5 years)

2010	Federal Funding	\$ 531,667
	Industrial Funding	\$ 1,076,000
2011	Federal Funding	\$ 637,000
	Industrial Funding	\$ 855,000
2012	Federal Funding	\$ 665,667
	Industrial Funding in	\$ 545,000
2013	Federal Funding	\$ 670,000
	Industrial Funding	\$ 380,000
2014	Federal Funding	\$ 657,000
	Industrial Funding	\$ 445,000
2015	Federal Funding	\$ 832,000
	Industrial Funding	\$ 618,000

Entrepreneurial Activities

Part-owner: Starfire Industries – located at UIUC’s research park

2014 performance: 22 full-time employees, \$3 million in revenues

Board of Directors: Solar Forest – located in Portland OR

2010 start-up company: Beta financing round expected end 2015.

Expert Witness: Novellus, Kurt J. Lesker Co., View, Zond, and others.

Major Consulting Activities (past five years)

Fannie and John Hertz Foundation - Interviewer and Selection Committee

LAM Research – expert witness for patent disputes

Professional Societies

American Nuclear Society – Fellow

Executive Committee of the Fusion Energy Division 1996-1999

American Vacuum Society – Fellow (2007)

Plasma Science and Technology Division

Chair – International PSTD, 2005 - present

International Vacuum Union Representative, 2005 - 2010

Chair PST Division, 1991 - 1992

Program Committee, National Symposium, 1988, 1990, 1993, 2007

Executive Committee, 1987 - 1994

Advanced Surface Engineering Division Executive Committee 2000-2006

American Physical Society – Fellow (2014)

Program Committee, DPP meeting, 1997, 2007, 2012, 2013

International Union of Vacuum Congresses – Scientific Director

Plasma Science President – 2004 – 2009

Scientific Director 2009 - present

IEEE – Executive Committee of the Fusion Energy Division, 2001 - 2009

Advisory Group International Atomic Energy Agency - 1989-1993

SPIE, Technical Working Group on EUV Collector Optics, 2004-present

Andrej Vincze

International Laser Centre
Ilkovicova 3, 841 04 Bratislava
Telephone: +421 265421575; Mobile: +421 903 328453;
E-mail: vincze@ilc.sk or andyvincze@yahoo.com

**Employment**

- 2005 – **International Laser Centre**
SIMS laboratory, Analysis of inorganic/organic materials, depth profiling
- 2005 - External research assistant – Institute of Electronics and Photonics
FEI STU Bratislava
- 1999 - 2005 **FEI STU Bratislava**
Assistant lecturer – Electronics/optoelectronics, Nanoelectronics, MBE, Vacuum technologies

Education

- 2010 - Researcher, assoc. prof. qualification
- 2006 - Researcher, SIMS laboratory
- 1999 - 2006 **PhD student, FEI STU Bratislava**
PhD Thesis: Epitaxial growth and characterization of GaAs and LT GaAs using MBE
- 2002 - 2003 TU Darmstadt, MBE growth and characterization of LT GaAs for high frequency applications (THz antennas), research training
- 1993 – 1999 **Slovak University of Technology (STU) Bratislava**
Faculty of Electrical Engineering and Information Technology
Specialization: Electronics and Optoelectronics
Diploma thesis: Application of semiconductor lasers in the diagnostics in medicine

Personal Details

- Date of Birth 8 April 1975
Place of Birth Bratislava
Citizenship Slovakia
Gender Male

PUBLICATIONS

69 CC publications with 120 citations

PROFESSIONAL MEMBERSHIPS

Slovak Vacuum Society 2007

IUVSTA member and councillor of Slovakia from 2009 - 2013

IUVSTA Scientific Secretary 2013 - 2016

Slovak chemical society 2006

Andrej Vincze, Bratislava July 1, 2016

CURRICULUM VITAE

Christoph Eisenmenger-Sittner

Personal Data:

Christoph Eisenmenger-Sittner, born on 21st July 1965 in Mödling, Austria

Professional Background:

2002 – now: Permanent position as Assistant Professor at the Vienna University of Technology, Institute of Solid State Physics

10/2001: Habilitation and achievement of the permission to teach "Applied Physics"

1991 - 2001: Assistant at the Institute of Applied and Technical Physics at the Vienna University of Technology

Education:

1990 – 1994 PhD student at the Vienna University of Technology, Institute of Applied and Technical Physics, supervisor Professor Peter Skalicky

subject: *Roughness Induced Phase Separation in Multicomponent Systems*

1989 – 1990 Physics (Diploma) Vienna University of Technology, Institute of Applied and Technical Physics; supervisor Professor Alfred Wagendristel; subject:

Gesputterte Gleitlagerbeschichtungen auf Cu-Basis

1984 - 1990 Study of "Technical Physics", Vienna University of Technology

Memberships:

Deutsche Physikalische Gesellschaft

Materials Research Society

European Materials Research Society

Austrian Vacuum Society

International Union of Vacuum Science, Technique and Application (IUVSTA)

Referee Activities:

Deutsche Forschungsgemeinschaft

Croatian Ministry of Science

Institute for the promotion of Innovation by Science and Technology in Flanders (IWT Flanders)

Applied Physics Letters

International Journal of Materials Research

Journal of Applied Physics

Journal of Physics D

Journal of Testing and Evaluation

Langmuir

Materials Chemistry and Physics

Physica B
Surface and Coatings Technology
Surface and Interface Analysis
Thin Solid Films
Vacuum

Meeting Activities:

Co-organizer ECASIA 05
Co-Organizer E-MRS Spring Meeting 2007, Symposium Q "Protective coatings and thin Films"
Membership Programme Committee JVC 12, 2008
Membership International Programme Committee IVC 18, 2010
Membership International Programme Committee ICTF 15, 2011
Membership International Organizing Committee JVC 14, 2012
Membership International Organizing Committee VASSCAA 6, 2012
Membership International Programme Committee IVC 19, 2013
Organizer Joint Vacuum Conference 15 (JVC-15), Vienna, 2014
Programme Chair International Programme Committee ICTF 16, 2014

Functions in National and International Bodies:

2004-2013 Secretary General of Austrian Vacuum Society
2004 Austrian Councillor at IUVESTA
2005 Appointment to coordinator of "IUVESTA Technical Training Courses" (ITTC)
2007 Appointment to IUVESTA Scientific Secretary
2013 Appointment to IUVESTA Secretary General

Number of publications in refereed journals: 79

More details:

http://static.ifp.tuwien.ac.at/homepages/Personen/duenne_schichten/german/index_g.htm

SHORT CV FRANÇOIS RENIERS

Prof. François Reniers hold the chairs of general chemistry and plasma chemistry at the Université Libre de Bruxelles, Belgium. He got a PhD in 1991 (in surface analysis), and did a post-doc at UC Berkeley (Somorjai group, catalysis).

Since 1999, he leads a group active in atmospheric plasma chemistry and technology. More than 60 papers have been published in this field and 11 patents have been filled in this domain, and he is involved in various research projects dedicated either to the fundamental understanding of the plasma chemistry or to their application in industry. His group is also very active in the surface characterization of materials, more specifically using X-Ray photoelectron and Auger electron spectroscopies with more than 30 papers published and 4 book chapters.

Prof. Reniers was also Vice Rector for Academic policy, Vice Rector for Research of the ULB, and Dean of the Faculty of Sciences.

François Reniers was the chairman of the ECASIA 2007 conference and program chair of the IVC-19 conference in Paris in 2013. He was the president of the Belgian vacuum society (BELVAC) in 2004 and 2005, and served as Belgian councilor at the IUVSTA from 2004 to 2010. From 2007 to 2010 he was also secretary to the treasurer of the IUVSTA. Since 2010 is member of the board of officers of IUVSTA, serving as treasurer. He is also a member of the ISC of ECASIA, co-chair of the IVC 20 (Korea) conference, and member of the executive committee of the plasma division of the American Vacuum Society.



**National Committee Councillors and Alternates
Triennium 2016-2019**

Society	Councillor	Alternate
Argentina	Alfredo Juan	Julio Ferrón
Australia	Anton P.J. Stampfl	Jamie Quinton
Austria	Manfred Leisch	Wolfgang Werner
Belgium	Diederik Depla	François Reniers
Brazil	Pedro A. P. Nascente	Rogério P. Mota
<i>Bulgaria*</i>	<i>Milena Damyanov</i>	<i>Ivan Petrov</i>
Croatia	Slobodan Milosevic	Maja Buljan
Czech Republic	Stanislav Novák	Vladimír Matolín
Finland	Jari Koskinen	Antti Korhonen
France	Sylvie Bourgeois	Daniel Vernière
Germany	Ute Bergner	Dietrich Zahn
Great Britain	Timo Gans	David Sykes
Hungary	László Kövér	András Berkó
India	S.C. Gadkari	K.C. Mittal
Iran	Morteza Zargar Shoushtari	Seyed Mohammad Rozati
Israel	Sidney Cohen	Shachar Richter
Italy	Enrico Maccallini	Paolo Manini
Japan	Katsuyuki Fukutani	Shuji Hasegawa
Korea	Geun Young Yeom	Yong Min Kim
Mexico	Emmanuel Haro-Poniatowski	Francisco S. Aguirre-Tostado
Netherlands	Ingmar Swart	Sander Otte
Pakistan	Javaid Ahsan Bhatti	Suleman Qaiser
<i>Philippines*</i>	<i>Magdaleno R. Vasquez Jr</i>	
P.R. China	Ningsheng Xu	Hongjun Gao
Poland	Marek Godlewski	Leszek Markowski
Portugal	Carlos Jose Macedo Tavares	Orlando M.N.D. Teodoro
Romania (in suspense)		
Russia	Sergey B.Nesterov	Gennady G.Bondarenko
Slovakia	Jozef Novák	Andrej Vincze
Slovenia	Miran Mozetič	Janez Kovač
Spain	Francisco Tabarés	José A. Martín-Gago
Sweden	Pär Omling	Ulf Karlsson
Switzerland	Jörg Patscheider	Martin Wüest
Ukraine (in suspense)		
USA	Joe Greene	Gregory Exarhos

**Subject to acceptance by GM 19*

Certificates of Recognition

Presented at GM-19 to

Executive Council Members and Division Chairs who are demitting office

Name	Latin	English
	praeses	
Jean Jacques Pireaux	MMX - MMXIII	President
	propraeses	
	MMVII - MMX	Vice President
	MMXIII - MMXVI	
David Sykes	perscriptor	Recording Secretary
Rod Boswell	consilarius	Councillor
Bruce King	consilarius	Alternate Councillor
Nikola Radic	consilarius	Alternate Councillor
Frank Richter	consilarius	Councillor
S.K. Gupta	consilarius	Councillor
Alireza Z. Moshfegh	consilarius	Councillor
Yaron Paz	consilarius	Councillor
Alon Hoffman	consilarius	Alternate Councillor
Espedito Vassallo	consilarius	Councillor
Kenjiro Oura	consilarius	Councillor
Won Ho Choe	consilarius	Alternate Councillor
Sandra Rodil	consilarius	Councillor
Stephen Muhl	consilarius	Alternate Councillor
W. M. M. Kessels	consilarius	Alternate Councillor
Jianguo Hou	consilarius	Councillor
Xu Chen	consilarius	Alternate Councillor
Jacek Szuber	consilarius	Alternate Councillor
Vasco Teixeira	consilarius	Alternate Councillor
Dmitriy V. Bykov	consilarius	Councillor
Marian Veselý	consilarius	Councillor
Marian Vojs	consilarius	Alternate Councillor
Monika Jenko	consilarius	Alternate Councillor
E. Román	consilarius	Alternate Councillor
Ulf Helmersson	consilarius	Alternate Councillor
Mike Seidel	consilarius	Alternate Councillor
Timo Gans	praeses divisionis	Division Chair
Alberto Tagliaferro	praeses divisionis	Division Chair
Peter Varga	praeses divisionis	Division Chair
Jacek Szuber	propraesis divisionis	Division Vice-Chair

Report of the Retiring President

Mariano Anderle: triennium 2013-2016

IUVSTA is a Union of 31 Societies representing around 15,000 professionals working in vacuum and related topics. It is an “itinerant” organization. In fact every ECM is organized in a different place. Let me start, therefore, to thank the Societies which, in this triennium, have been in charge of the ECM’s organization: French Vacuum Society for ECM 117 held in Paris, Italian Association of Science and Technology for ECM 118 held in Trento, Croatian Vacuum Society for ECM 119 held in Dubrovnik, Austrian Vacuum Society for ECM 120 held in Graz, AVS - The Science and Technology Society for ECM 121 held in Morgan Hill, Portuguese Vacuum Society for ECM 122 held in Braga, and Korean Vacuum Society for ECM 123 held in Gyeongju.

My three years of activity as IUVSTA President has really been a privilege! Chairing this triennium ECMs, I always felt a deep emotion meeting with people so strongly committed to collaboration and sharing of their knowledge and experience. And this is wonderful!

In this General Meeting a detailed descriptions of the triennium activities is reported by Officers and Committee Chairs. I will therefore highlight some key points that the Union has achieved together with some issues not properly addressed. Among the latter I would like to underline the necessity to renew the IUVSTA web side and to work effectively in the direction of involving new scientific topics and communities.

Having in mind what I promised in my inaugural statement three years ago, here there are some highlights we have achieved that I consider important for the Union continued progress:

- At the beginning of the triennium we formally established the ninth division of the Scientific and Technical Directorate, the Bio Interfaces Division. During the triennium, this division has been very active not only in the preparation of the relative scientific program for IVC-20 but also in proposing and organizing a workshop (Frejus, October 2014) on surface biocompatibility issues which reflects how IUVSTA continues to evolve and to welcome new areas of scientific exploitation.
- Scrolling through the list of the workshops and schools approved in this triennium one has the distinct impression about the high scientific quality of these events together with the variety of the topics proposed indicating the effective contribution by all the scientific divisions.
- We have continued to run the Highlights Seminars and have, for the first time, because of the commitment of the Education Committee chairman, developed the content into a very success scientific paper by incorporating the presentations into a full article. The final manuscript was published as an open-access topical review (“Recent advances in vacuum science and applications”, J. Phys. D: Appl. Phys. 47 (2014) 153001) which has downloaded more than 14900 times since it was published. I know we are now working on a second review paper which will underline new areas of development and the major results from groups worldwide based on talks presented at the last, so well organized by the Scientific Director, Highlights Seminars that was a co-chaired session of the AVS International Symposium 2015, San José, California.
- This triennium sees the growth in the number of Union members. Thanks to the efforts and the great contribution of the Emerging Societies Committee members, we note that the Bulgarian and the Philippines Societies have been granted provisionally membership and I look forward to them being granted full membership at this General Meeting. We are also looking forward to having positive feedback from the Turkish Society, a potential new member, still working on official approval by its Government.

- Finally I should highlight that, thanks to the work of the Awards and Scholarships Committee chairman in organizing and coordinating the evaluation process, we met our objective of awarding the two IUVSTA Prizes. I congratulate the two winners, Prof. Jean Marie Dubois for the Science Prize and Prof. Taeghwan Hyeon for the Technology Prize.

Since the credit of the success belongs to all of you, I wish to thank all the Officers, the STD members, Committees and Divisions chairmen and chairwoman and all the ECM members for having devoted so much of your time to the IUSTA issues. Then let me say few final words for three persons:

First of all I would like to express my appreciation to our Past President, Jean Jacques Pireaux, who will retire from office today. I am really happy to recognize Jean Jacques' role in steering, so professionally, the Union over the previous nine years. Secondly, I would like to deeply thank our Secretary General, Christopher Eisenmenger Sittner, who has by far the largest workload of any of the officers, always on top of everything and so effectively managing the administration of the Union. Finally let me express my strong gratitude to David Sykes for his untiring activity in IUVSTA. David has not only been for twelve years the perfect recording secretary but also the reference point for all the matter related to IUVSTA procedure, manual, statute and history issues.

For what we have done together, it was a great pleasure to work with all of you!

For what it is still remaining to do, I am sure I leave the Presidency in good hands. Best wishes Lars and happy to serve as Past President!

Mariano ANDERLE

Report of Secretary General to GM-19
on
Triennium 2013-2016
Busan, Korea, 24th August 2016

1 Period and activities

This report covers the period from Wednesday, 11th September 2013 till the official end of the triennium on Wednesday, 24th August 2016. It should be noted that the Financial Triennium (on which the Treasurer will report) covers the three financial years 2014, 2015 and 2016.

The major activities of the Secretary General during this period were:

- general administration and correspondence
- organization of the Executive Committee Meetings with the assistance of the host National Societies
- organization of GM19 in conjunction with the organizing agents for the International Vacuum Congress
- updating and maintaining various parts of the web site
- interactions with UNESCO, ICSU, ISO, and other organizations

Some of the main points are presented below. More detailed and complete information is available in the reports to the various Executive Council Meetings, which are all available on the website.

2 Relations with other Bodies

2.1 UNESCO

IUVSTA is a corresponding member of UNESCO, and an associate member of the NGO-UNESCO Liaison Committee. I receive the agendas, decisions and minutes of the Executive Council and General Conference, mainly by email. A great deal of this is not particularly relevant to the work of the Union.

There are reports on many meetings and conferences but essentially none are of interest to the IUVSTA community.

We also receive invitations to meetings, which, when relevant, are passed to IUVSTA members, but as far as I am aware, none have been attended this triennium.

2.2 ICSU

IUVSTA is an associate member of the International Council of Science (ICSU). Again, most material is now disseminated by email. The ICSU Grants Programme aims at supporting relevant collaborative scientific initiatives of the ICSU "family" in order to promote international scientific and technological activities that contribute to the benefit and well-being of society but ICSU will not normally support travel grants to attend standard scientific meetings and conferences, nor support fellowship programmes.

2.3 ISO

IUVSTA has liaison status with ISO, and is represented on two Technical Committees: TC201 on surface analysis and TC112 on Vacuum Technology.

TC201 is quite active, and during this triennium the relations to TC112 have been revived by the Vacuum Science and Technology Division of IUVSTA. The relevant IUVSTA Divisions maintain contact and contribute on behalf of the Union. The weekly newsletter STADIST which lists information on newly issued, revised and withdrawn standards is distributed by email. Members interested in the work of ISO are referred to the website www.iso.ch.

2.4 Commercial Bodies

I receive copious quantities of literature and invitations from Congress Centres, meetings organizers and hotels around the world.

3 National Vacuum Societies

I maintain correspondence with National Vacuum Societies. I am grateful to those Societies which promptly inform me of changes in Officers so that correspondence goes to the relevant persons.

It was with pleasure that we received an application for membership from Bulgaria and from the Philippines. We also anticipate an application from Turkey and Romania in the next Triennium.

4 Communications and Documentation

4.1 Communications

The vast bulk of communication is now by email, but I am trying to put a more active role to the web site for documentation and sharing of information.

4.2 Procedures Manual, Statutes and By Laws

The Procedures Manual, Statutes and By-Laws are available on the website.

4.3 Web Site

The web site which is hosted by the University of Illinois now plays a major role for our communication and the distribution of information. Thanks are due to Ivan Petrov, Chair of Publications and John Koudelka, the webmaster, for their hard work in maintaining and improving the site.

The ECM Minutes and Papers are placed in the Records Area of the Members' part of the web site by the Recording Secretary as soon after each ECM as the material is available. Information on current matters is put into the Members' part of the web site, Meantime area, by the Secretary General.

5 Executive Council Meetings

The following Executive Council Meetings have been held during the Triennium

- ECM 117 Paris, France, 13 September 2013
- ECM 118 Trento, Italy, 30 March 2014
- ECM 119 Dubrovnik, Croatia 12 October 2014
- ECM 120 Graz, Austria, 19 April 2015
- ECM 121 Morgan Hill, CA, USA 25 October 2015
- ECM 122 Braga, Portugal, 17 April 2016
- ECM 123 Gyeongju, Korea, 21 August 2016

In each case (apart from ECM 117) the meeting was preceded by two days of Committee and other meetings.

I would like to offer my personal thanks to all those who made arrangements for all these meetings; this requires considerable effort to coordinate travel and meetings information in a timely fashion. Thanks are also due to those societies which made offers to host the meetings and for their hospitality.

6 Conclusion

In conclusion, I would like to thank all those who have helped to make my task easier on the past Triennium. Serving in this position the first time, some actions may not have been so smooth like the ones taken by my predecessor, Ron Reid, to whom I would like to offer special thanks for sharing all his knowledge and experience with me whenever I needed it. Finally, I would like to thank David Sykes for his invaluable work as Recording Secretary. He was always there to guide me through the intricate ramifications of the Union and provided help whenever I needed it.

Christiph Eisenmenger-Sittner

July 2016

v1.1 Page

Awards and Scholarships Committee (ASC)**Report for the Triennium 2013-2016**

Chairman: Frank Richter, Vice-Chairman: Martin Wüest,

Members: Mariano Anderle, Maria Carmen Asensio, Andras Berko, Christoph Eisenmenger-Sittner, Monika Jenko, Janez Kovac, J.A. Marti-Gago, Slobodan Milosevic, Lars Montelius, Miran Mozetic, Pedro Nascente, Kenjiro Oura, Jean-Jacques Pireaux, Nikola Radic, Francois Reniers, Sandra Rodil, David Rusic, Daniel Verniere, Andrej Vincze, Marian Vojs.

The Awards and Scholarships Committee (ASC) is set up by the President and is responsible for administration and organization of international awards and prizes in the scientific and technical areas covered by the Union.

ASC meetings were held in conjunction with all ECM meetings between the International Vacuum Congresses in Paris and Busan.

IUVSTA Prizes

IUVSTA Prize for Science is awarded to recognize and encourage outstanding internationally acclaimed research in the fields of interest to the Union. IUVSTA Prize for Technology is awarded for outstanding experimental and/or theoretical research in vacuum science, technique or its applications.

Endowment for the Prizes is provided by generous donations from Canon Anelva Corp., Funai Electric, Intevac, Inc., Kratos Analytical, Oerlikon Balzers, Oerlikon Leybold Vacuum, Omikron nanotechnology, Osaka Vacuum, Physical Electronics, SAES Getters, TAV S.p.A., Ulvac Inc., VAT Vacuumvalves AG, IOP Publishing, and Varian Associates.

The 2016 IUVSTA Prize for Science was awarded to prof. Jean-Marie Dubois from Institut Jean Lamour - UMR 7198 CNRS / Univ. Lorraine for his outstanding contributions to the field of metallic glasses, quasicrystals and complex metallic alloys, in both fundamental and applied research aspects.

The 2016 IUVSTA Prize for Technology was awarded to Prof. Taeghwan Hyeon from School of Chemical and Biological Engineering, Seoul National University, for outstanding contributions in the scalable production of uniform-sized nanoparticles with precisely controlled compositions and dimensions as well as pioneering research in the design of metal oxide nanoparticles for medical applications.

The prizes will be presented at the International Vacuum Congress in Busan, Korea.

IUVSTA Prize Rules

After discussion during its meeting in Braga the ASC decided to modify the procedure for IUVSTA Prizes in order to clear up contradictions in the current IUVSTA Procedures Manual. In future ASC shall be responsible for the whole process. Modified rules for the IUVSTA Procedures Manual have been meanwhile submitted to the IUVSTA Secretary General.

Welch Scholarship

The M.W. Welch International Scholarship was intended to support younger scientists working abroad in vacuum science and technology. The scholarship was made possible since the late 1960ies by support from M.W. Welch and the Welch family.

In spring 2013 IUVSTA got the message that Mrs. Bro, who had donated 12.000 \$ every year passed away recently. Lawyers of the Welch family conveyed that the family wants to move away from the yearly donation but to endow the award. The support was stopped until a new regulation is found. Consequently, the award for 2013 was suspended. Unfortunately, there is still no decision by the Welch family, therefore the Welch Awards was suspended during the full 2013-2016 triennium.

Working group

During ECM-121 in San Jose (Calif.), a working group was formed which shall develop suggestions for a reorganisation of the IUVSTA awards and prizes system as well as for the measures to obtain the necessary funds. Members were Lars Montelius, Frank Richter, Martin Wüest and Christoph Eisenmenger-Sittner. First results of the group have been presented at the ASC meeting during ECM-122 in Braga, Portugal.

IUVSTA-Elsevier Student Awards

The aim of these awards is to give partial financial support to younger research students to help them to attend IUVSTA meetings and conferences at which they are presenting a paper. ("Young scientist" means that the date when the young scientist has received her/his first academic degree shall be within seven years before the start date of the conference.)

During the 2013-2016 triennium the following conferences have been selected for support:

2014: ICTF Dubrovnik (Croatia) and EVC Aveiro (Portugal), 2,000 € each,

2015: ECOSS 2,000 €,

2016: IVC Busan (Korea) jointly with VASSCAA, 4,500 €.

A new MOU for 2016-19 has been prepared und will be signed during the IVC in Busan, Korea. Elsevier will increase its support from 10.5 T€ to 12.0 T€ within the triennium.



Frank Richter

Chairman

3-year report for Congress Planning Committee

A. Galtayries, chair of CPC 2013-2016

Executive summary: this committee has been very active during the 3 years. Including the chairs, members, and observers, up to **56 persons** participated to the meetings. Up to **14 conferences** (including the final report of *IVC19* held in 2013 and the progress reports of *ICTF17* to be held in 2017) were carefully followed and discussed. In the last 9 months, the **bidding process for IVC22 in 2022** took place, from the call of bids to the final selection to be done in ECM123. Along the sessions, several **announcements of international scientific events organized by the national societies** were also favored, when possible, and discussions on the distribution of IUVSTA conferences over the next 2-3 years and then next 10 years are opening different prospects for this committee.

This report is divided into 4 parts: participation, conferences, bidding process for IVC22 in 2022, and discussions. They all reflect the venue, presentations, and discussions of 5 CP committee meetings (all except ECM123).

1- Participation:

According to the table below, up to 56 different persons participated to the meetings of the CPC, including chairs of IUVSTA congresses who came on purpose to report on their conference. In general, chairs or vice-chairs came to make progress reports and final reports, which resulted in firsthand information and interesting discussions. I want also to point the investment of the members of this committee in emails interaction during the preparation preceding the meetings, and in particular L. Köver.

		ECM 118 (Trento)	ECM 119 (Dubrovnik)	ECM 120 (Graz)	ECM 121 (Morgan Hills)	ECM 122 (Braga)
1	A. Galtayries Chair	x	x	x	x	x
2	N. Radic Vice-Chair	x	x	x	x	
3	Mariano Anderle IUVSTA President	x	x	x	x	x

	Members (alph. order)					
4	J. A. Bhatti Pakistan Council	x		x		
5	D. Depla Belgium Council		x			
6	C. Eisenmenger-Sittner IUVSTA Secretary General	x	x	x	x	x
7	K. Fukutani Japan A. Council		x		x	x

8	M. Jenko Slovenia A. Council	x		x		
9	J. Kovac Slovenia Council	x	x	x		
10	L. Köver Hungary Council		x	x		
11	M. Leisch Austria Council	x	x	x		x
12	Jose Angel Marti-Gago Spain Council					x
13	S. Milosevic Croatia Council	x	x	x		x
14	Lars Montelius IUVSTA President- Elect	x	x	x	x	x
15	M. Mozetic Slovenia, Educ Comm. Chair	x	x	x	x	x
16	P. A. P. Nascente Brazil Council			x	x	x
17	J.-J. Pireaux IUVSTA Past-President	x	x	x	x	x
18	F. Reniers IUVSTA Treasurer	x	x	x	x	x
19	F. Richter Germany ASC Chair	x	x	x		x
20	David Ruzic Scientific Director	x	x	x	x	x
21	D. Sykes IUVSTA recording secretary	x	x	x	x	x
22	D. Vernière France A. Council		x			x
23	A. Vincze IUVSTA Scientific Secretary	x		x	x	x
24	Martin Wüest Switzerland Council			x	x	x
25	G. Y. Yeom Korea Council		x	x	x	x

	Observers (alph. order)					
26	C. Arasa Cid The Netherlands (Elsevier)					x
27	M.-C. Asensio France, SSD Vice-Chair	x	x		x	x
28	M.-G. Barthes, France IVC19 Chair	x				
29	U. Bergner Germany, A. Council.	x			x	x
30	M. Buljan Croatia		x			

31	I. Capan Croatia, EMPD Chair		x	x		
32	G. Ceccone Italy, BID Chair	x			x	x
33	F. Fracassi Italy	x				
34	J. Fraxedas Spain, ECOSS 31 Chair			x		
35	T. Gans UK, PSTD Chair	x	x	x		x
36	J. Greene USA Council	x	x		x	x
37	E. Haro Poniatowski Mexico					x
38	U. Helmersson Sweden		x		x	
39	J. Hendricks USA, VTD Chair	x		x	x	x
40	G.-Y. Hsiung Taiwan	x		x	x	
41	U. Karlsson Sweden Council	x		x		x
42	P. Manini Italy A Council	x	x	x	x	x
43	L. Markowski Poland, ASSD		x			x
44	A. Moshfegh Iran Council		x			
45	S. Novak Czech Rep. Council		x	x	x	x
46	I. Petrov USA, Publication Comm. Chair, SED Chair		x		x	
47	P. Schaaf Germany, SED Vice- Chair	x		x		
48	R. Schwarz Portugal, EMPD		x		x	
49	M. Seidel, Switzerland A Council		x			
50	Alex Shard UK					x
51	A. G. Silva Portugal, NSD			x		x
52	J. Szuber Poland A. Council	x		x		
53	A. Tagliaferro Italy, TFD Chair	x	x			
54	Ch. Teichert Austria NSD Chair			x		x
55	B. Tyler UK, ASSD Chair	x	x	x		
56	P. Varga Austria, SSD Chair		x			x

2- Conferences:

The table below presents the **13 different conferences** (14 if including ICTF-17 announced for 2017, not shown in the table) for which presentation and reports were made during the 3 years. As expected, a special focus was put on the IUVSTA conferences, but also on IUVSTA endorsed conferences as well as international events which were organized by national vacuum societies, when the agenda allowed it (especially during the year 2015, not listed in the table).

Among the IUVSTA conferences, IVCs had a special focus:

- the last report for IVC19 was presented by MG Barthes, chair of IVC19, in Trento,
- several progress reports were presented by Geun Young Yeom, chair of the IVC20 organizing committee, from the meeting of Dubrovnik to the one held in Braga.

From the short summaries of each IUVSTA conference which was organized during the triennium and that are displayed below, I want to point particularly the number of participants, communications and exhibitors during this 3-year period. It is difficult to extract a trend but probably the number of participants is decreasing within a series of conference as a function of time over these 3 years.

	IVC (CPC)	EVC (VST)	ICTF (TF)	ECOSS (SS)	VASSCAA (SS)	endorsed events	ICN+T (NS)
Period	3 years	2 years	3 years	1 year	2 years		1.5 years/ 2 years
2013	Paris, France Sept. 9-13	x	x	x	x		Joint with IVC
2014	x	Aveiro, Portugal, Sept. 8-12	Dubrovnik, Croatia, Oct. 13-16	Antalya, Turkey Aug. 31-Sept. 5	Hsinchu, Taiwan, Sept. 29-Oct. 3	JVC-15,Vienna (Austria) June 15-20 1 st Ibero- American Congress Natal + XXXV- CBRAVIC (Brazil) Oct. 21-24	USA, July 19-26 Vail (Colorado, USA)
2015	x	x	x	Barcelona, Spain, Aug. 31-Sept.4	x	XXXVI- CBRAVIC Vitoria (Brazil) Sept. 5-9	x
2016	Busan, Korea, Aug. 21-26	Portoroz, Slovenia June 6-10	x	Grenoble, France Aug. 28-Sept. 2	Joint with IVC		Joint with IVC

IVC 19 was organized in Paris (France) from 9 to 13, September 2013, chaired by MG Barthes-Labrousse. The attendance was composed by **1770 participants** at the conference only (the exhibition was free) including **5 plenary speakers, 10 keynote speakers, and 90 invited speakers**, who gave **979 oral communications** and presented **482 posters** (1471 papers in total). **112 companies** were exhibiting.

IVC 20 is organized in Busan (Korea) from 21 to 26, August 2016, chaired by H. J. Kang. As of 14 April, 2016, the total number of communication is 1310 including **7 plenary speakers, 20 keynote speakers, and 91 invited speakers, 34 exhibitors** were registered.

ECOSS-30 was organized in Antalya (Turkey) from 31, August to 5, September 2014, chaired by Sefik Suzer. The attendance was composed by **630 participants** including **2 plenary speakers, 7 keynote speakers and 30 invited speakers**, who gave **290 oral communications** and presented **270 posters**. The **number of exhibitors** was not given.

ECOSS-31 was organized in Barcelona (Spain) from 31, August to 4, September 2015, chaired by Jordi Fraxedas. The attendance was composed by **594 participants** including **5 plenary speakers, 29 invited speakers**, and they gave **298 oral communications** and **266 posters. 22 exhibitors** were present.

ECOSS-32 is organized in Grenoble (France) from 28, Aug to 2, September 2016, Chaired by Roberto Felici). As of 1 month before the conference, the attendance is composed by **400 participants** including **5 plenary speakers, 28 invited speakers**, to give **348 oral communications** and **posters. 27 exhibitors** are also registered.

ICSMVA (1st Iberico-American Congress on Surface, Materials and Vacuum Applications) + **XXXV CBRAVIC** (Brazilian Congress of Vacuum Applications in Industry and Science- CBRAVIC (IUVSTA endorsed conference) was organized in Natal (Brazil) from October 21 to 25, 2014, chaired by Clodomiro Alves Junior. The attendance was composed by **210 participants** including **16 invited speakers. 261 posters** were presented. About **5 exhibitors** were also present.

XXXVI CBRAVIC was organized in Vitoria (Brazil), from September 5 to 9, 2015, director: Mauricio Antonio Algatti, **11 plenary lecturers, 160 scientific contributions, and 5 industrial exhibitors**.

EVC-13 + ETCHC-7 (European Topical Conference on Hard Coating) + **IVM-9** (Iberian Vacuum Meeting) was organized in Aveiro (Portugal) from September 8 to 12, 2014, chaired by Orlando Teodoro. The attendance was composed by **274 participants** including **5 plenary speakers, and 22 invited speakers**, the **number of communications** was not given. **11 exhibitors** were also present.

JVC-15 (endorsed conference) was organized in Vienna (Austria) from June 15 to 20, 2015, chaired by Wolfgang Werner. The attendance was composed by **150 participants** who gave **70 oral communications** and **80 posters. 11 exhibitors** were also present.

EVC14-JVC16 was organized in Portoroz (Slovenia) from June 6-10, 2016, chaired by Janez Kovac. As of 16 April, 2016, **200 participants** expected for **175 communications** including **5 plenary lectures, 20 invited speakers, for 85 oral communications** and **65 posters. 12 exhibitors** were also registered.

ICTF-16 was organized in Dubrovnik (Croatia) from October 13 to 16, 2014, chaired by Nikola Radic. The attendance was composed by **320 participants**, including **4 plenary speakers**, and **17 invited speakers**, who gave **115 oral communications** and **138 posters**. **10 exhibitors** were also present.

(As an announced conference, **ICTF-17** will take place in Mumbai (India) from November 13 to 18 in 2017, chaired by Dr Aswal.)

ICN+T 2014 was organized in Vail (Colorado, USA) from July 19 to 25, 2014, chaired by P. & E. Sutter. The attendance was composed by **360 participants**, including **5 plenary speakers**, and **35 invited speakers**, the number of **oral communications** and **posters** was not given. **5 exhibitors/corporate sponsors** were also present.

VASCAA-7 was organized in Hsinchu (Taiwan) from October 6 to 9, 2014, chaired by Gao-Yu Hsiun. The attendance was composed by **349 participants**, including **4 plenary speakers**, and **35 invited speakers**, who gave **63 oral communications** and **135 posters**. **26 exhibitors** were also present.

3. Bidding process for IVC22 in 2022

On behalf of the CP Committee, following ECM121, I launched the call for bid for organization of IVC22 in 2022 by the end of the year 2015, with a deadline on the 15th February for first versions of the projects. A total of **4 bids** were received from **4** national societies, Brazil, Japan, Mexico, UK, from 3 continents, which is very interesting for a worldwide union like IUVSTA, as it represents the attraction that the national societies have for the triennial IUVSTA congress.

The CPC members proceeded to a careful evaluation of the bids before their presentation at ECM 122.

The 4 bids were presented_Brazil (presentation made by Pedro Nascente), Japan (Katsuyuki Fukutani), Mexico (Emmanuel Haro Poniatowski), UK (Alex Shard and Martin Mc Coustra) in the order listed above for a total of 15 minutes each, including questions/discussion and they brought to the assembly a full overview of their proposal, insisting on the main criteria which will be evaluated. In some cases, the proposals had already been completed or improved with more details.

In Braga, the CP committee members discussed and made recommendations for the final phase of the process to be taking place in the last ECM of the triennium. A new deadline for final version of the bids was proposed to all bidders by the **15th July 2016**. At this time, **3 bids** were finally received: Japan, Mexico and UK. Once again, they are in the hands of the CP committee members for a new evaluation before a final decision is taken at ECM 123, upon recommendation of the committee based on the election of the best proposal.

4. Discussions

To summarize the discussions that took place during the different committee meetings, they were dealing with 4 different items:

- 1) It is of prior importance to inform or remind the chairs of IUVSTA conferences that **guidelines** and different information **are always available in the IUVSTA procedure's manual** (which can be downloaded from the web site or asked to the Secretary General or Committee chairs). This is the first reference point when starting to organize such conference. As regards the ELSEVIER-IUVSTA grants, the situation can be asked to the Chair of the ASC.
- 2) **The ICN+T periodicity has been discussed twice.** As can be seen in the table of the conferences, it shifted during this triennium from 1.5 year to 2 years. The point was that it is difficult to organize a conference on the periodicity of 1.5 years. Consequently, with this change, every second IVC, it will remain independent: it will be a joint conference of IVC in 2016 (as in 2013) but not for IVC in 2019. After 2016, the next issue will be in 2018. The case of the year 2020 was then pointing the venue of ICN+T (as for 2014, all IUVSTA conferences take place except IVC). After discussion, the situation remained as scheduled for ICN+T in 2020.
- 3) Upon request at mid-triennium, it came that the table of the "IUVSTA conferences at a glance" for 2016-2020 could be useful for all ECM participants, so I decided to extract it from the report and systematically upgrade and send to the committee members and make it available for all, posted on the IUVSTA web site.

Knowing the issues in advance, I recommend to the organizers to book and block website names and aliases well in advance, to avoid competition with other conferences (sometimes on close topics) using the same logos (it was the case for ICN+T and ICTF17).

Following a table of IUVSTA conferences of the immediate 3-4 years, I produced a long-term table on the range 2018-2028 for last ECM (see below). It points that:

- every 6 years, unless conference reorganization, the year is very busy: 2014-2020-2026 as all IUVSTA conferences take place except IVC.
- the possibility of avoiding a competition between EVC and JVC will be proposed for discussion in the last ECM, by aligning their frequency on the one of IVC (triennial) and by alternating IVC/EVC/JVC or IVC/JVC/EVC.
- the possible competition between ECOSS and IVC (when IVC takes place out of Europe) could be solved by cancelling ECOSS when IVC is organised, wherever in the world.
- as regards ECOSS again, the apparition of a new possibly competitive conference called ICASS (1st edition in Shangaï in 2015, organized by ELSEVIER) was noticed, in a frame where ECASIA also takes place every two odd years.

	IVC (CPC)	EVC (VST)	ICTF (TF)	ECOSS (SS)	VASSCAA (SS)	ICN+T (NS)	extra-IUVSTA conferences
2016	Korea, Aug. 22-26	Slovenia June 6-10	-	France 28 Aug -2 Sept	Joint with IVC	Joint with IVC	JVC/EVC
2017	-	-	India, Nov.	Hungary Aug -Sept	-	-	ECASIA, France SIMS-21, Pol.
2018	-	Switz., June	-	ECOSS-34	Australia, July	Cz. Rep, July	JVC, Czech Rep.
2019	Sweden, June	-	-	J/IVC	-	-	ECASIA, Germ. SIMS-22, Asia
2020	-	EVC-16	ICTF-18	ECOSS-35	VASCAA-10	ICN+T	JVC
2021	-	-	-	ECOSS-36			ECASIA SIMS-23, America
2022	IVC-22	?	-	?	?	?	JVC ?
2023	-		ICTF-19	ECOSS			ECASIA SIMS-24, Europe
2024	-	EVC	-	ECOSS	VASCAA	ICN+T	JVC
2025	IVC-23	-	-	?	-	-	ECASIA SIMS-25, Asia
2026	-	EVC	ICTF-20	ECOSS	VASCAA	ICN+T	JVC
2027	-		-	ECOSS			ECASIA SIMS-26, America
2028	IVC-24	?	-	?	?	?	JVC ?

- 4) **IVC20**: many letter exchanges took place between CPC and the local organization committee about the structuration and organization of the IUVSTA main conference, following progress reports in 2014 and 2015. Systematic email exchanges gradually took place in 2016 for help in **short courses** organization with **an IUVSTA offer, managed by CPC (Chair and vice-Chair)** with the help of the IUVSTA treasurer. Following this work, we all expect a successful meeting venue in Busan.

To conclude, I want to tell the great pleasure I had to work for this committee, with Nikola Radic, Vice-Chair, with all the members, and with all the persons I specifically contacted. As regards the IVC bidding process, I want to point the high investment of the members, in particular Lazslo Köver, who could unfortunately not always join us but who was very committed with the activities of this committee. Thank you all!

EDUCATION COMMITTEE

Report for the triennium 2013 – 2016

Chair: Miran Mozetič

Vice-chair: Manfred Leisch

Members: Mariano Anderle (president), Jean Jaques Pireaux (past-president), Lars Montelius (president-elect), Christoph Eisenmenger (secretary general), Andrej Vince (scientific secretary), David Ruzic (STD director), David Sykes (recording secretary), Francois Renoirs (treasurer), Bruce King, Nikola Radić, Slobodan Milosević, Daniel Verniere, Maria Carmen Asensio, András Berko, Laszlo Köver, Kenjiro Oura, Sandra Rodil, Javid Ahsan Bhatti, Orlando Teodoro, Marian Vojs, Monika Jenko, Martin Wüest, Joe Greene.

The following briefly reports on the activities of the IUVSTA Education Committee during the Triennium 2013 – 2016.

Committee activities:

1. Visual aids
2. Technical training courses
3. Short courses
4. Schools
5. Review papers

1. **Visual aids.** The visual aids are available to download from IUVSTA official web page. Interested users are welcome to register first and then download the documents in pdf format. The users are free to use the aids for non-commercial purposes.
2. **Technical training courses (TTCs).** The Union supports National Vacuum Societies, which are members of IUVSTA, in organizing Technical Training Courses locally, in the local language for the principle benefit of technicians, production engineers and students. IUVSTA helps for the organisation and with a small subsidy for attendees. The IUVSTA grants are primarily intended to be used for travelling/accommodation subsidies within their own national borders for participants and lecturers at the Technical Training Courses.

Technical Training Course #16 was entitled “Applied Vacuum Technology” and organized in December 22-24, 2014 at COMSTECH Headquarters, Islamabad, Pakistan. A total of 58 participants were registered for participation in the course from all over Pakistan. These include; 10 from industries, 13 from research organizations and 35 from universities.

Technical Training Course #17 entitled “Principles of Technology” was organized in October 8-11, 2015 at Hotel Trigán, Štrbské Pleso, Slovakia. The number of participants was 45, mainly Slovak and Czech students and technicians.

Technical Training Course #18 entitled “Low Pressure Plasma Processes and Technology” was organized in May 30 - June 2, 2016 at Hotel Kraví hora Bořetice, Czech Republic.

- 3. Short courses.** The program of IUVSTA Short Courses (IUVSTA SC) is intended to teach the current state of the art of a technique or scientific field within the fields covered by IUVSTA. Such courses are held in conjunction with a major scientific meeting. A typical Short Course lasts 1 - 2 days and attracts all groups of specialists like students, technicians and full academics. Top notch experts of the field intensively teach the current state of the art of a technique or scientific field. An ISC is typically organized by a National Vacuum Society in conjunction with a major scientific meeting in a field covered by IUVSTA divisions. In general, IUVSTA will not financially support a series of ISC's taking place in the same country in consecutive years. A second ISC organized by a National Vacuum Society may be financially supported by IUVSTA if the previous ISC had a completely different topic. However, first time applicants have priority for support if otherwise all requirements for organizing a successful ISC are satisfied.

A Short Course entitled “Plasma assisted surface modification treatments” was organized by Brazilian vacuum society in Vitoria, Esporito Santo, Brazil on 5-6 September 2015.

Another Short Course entitled “Modern Trends in Microscopy” was organized by Pakistan vacuum society in Islamabad, Pakistan on 10-12 May 2016.

- 4. Schools.** 12th IUVSTA School on Lasers in Materials Science: Laser Engineering of Surfaces and Coatings was organized by Italian vacuum society and Venice International University from July 13 till July 20, 2014 in San Servolo, Italy. The co-chairmen of the school from IUVSTA (SED) were Prof. Paolo Ossi, Milano, Italy (Italian representative to IUVSTA) and Prof. Peter Schaaf, Ilmenau, Germany (Vice president of IUVSTA-SED).

13th IUVSTA School was organized in the framework of the IUVSTA educational program in Thessaloniki Greece between 17th and 21st May 2015. The event has been co-chaired by Prof. Felix Sharipov (Brazil), Dr. Oleg Malyshev (UK) and Prof. D. Valougeorgis (Greece), who was also the local Organizer.

14th IUVSTA School on Nano Optics: from Principles to Basic Research and Applications, was organized by Portuguese vacuum society and International Iberian Nanotechnology Laboratory in Braga, Portugal, from 11th till 15th April 2016. The school was organized under the leadership of Ana G. Silva (Secretary of Nanoscience Division) together with Christian Teichert, (Chair of the Division). Local organizers were Carlos José Macedo Tavares and Jana Nieder.

5. **Review papers.** IUVSTA visibility in the international scientific community is enhanced by publication of review papers. The papers are organized by the Chair of Education Committee who encourages Divisions' representatives to prepare their contributions on the base of IUVSTA Highlights Seminars. The paper published in this triennium has been entitled Recent advances in vacuum sciences and applications and was published in Journal of Physics D: Applied Physics as M. Mozetic et al, J. Phys. D: Appl. Phys. 47 (2014) 153001 (23pp). The paper scored 14752 total downloads by the time of writing this report (July 2016). This paper was selected by the journal Editors in the exclusive Highlights of 2015 collection. The link to the paper is available at IUVSTA website and publisher's web <http://iopscience.iop.org/0022-3727/47/15/153001>.

The next review paper will be published on the base of the materials presented at IUVSTA Highlights Seminar in San Jose, California in fall 2015. The tentative title of the paper is Recent Developments in Thin Films, Nanoscience, Biomaterials, Plasma Science, and Vacuum Technology and will be published in Thin Solid Films by the end of 2016 or in early 2017.

Committee chair:
Miran Mozetič

Committee vice-chair:
Manfred Leisch

IUVSTA Emerging Society Committee Report for the 2014-2016 Triennium

This was a very active triennium for the IUVSTA Emerging Society Committee with considerable progress. Participating committee members during this triennium include Mariano Anderle, Maria Ascensio, Anouk Galtayries, Alberto Herrera Gómez, Ulf Helmersson, Monica Jenko, Lars Montelius, Miran Mozetic, Jean-Jacques Pireaux, Nikola Radic, David Ruzic, Daniel Verniere, Andrej Vincze, and Geun-Young Yeom. In addition, important contributions were made by observers in attendance including Diederik Depla, Ulf Karlsson, Janez Kovac, Lazlo Kover, Leszek Markowski, Slobodan Milosevic, David Sykes, Peter Varga, and Martin Wuest.

Primary topics of discussion and areas of progress are summarized below.

1. The triennium began with a broad discussion of approaches for enhancing the visibility of IUVSTA in worldwide scientific and technological communities and increasing the membership in our union. It was clearly recognized that this is not a job for a single individual, but requires the active participation of a broad cross-section of IUVSTA members (officers, committee chairs, councilors of member countries, and other active participants). That is, it is up to all of us to discuss the benefits of IUVSTA membership with our colleagues.

In fact, IUVSTA offers a wide range of professional services appropriate for interested persons across all educational levels: graduate students, post-doctoral students, scientists, technologists, managers, etc. Joe Greene developed the following (incomplete) list of activities as points for discussion with colleagues:

- Triennial IUVSTA congresses
- Co-sponsored conferences (ICTF, ECOSS, EVC, VASSCAA)
- Short courses
- Workshops (designed for experts in the field)
- Schools (designed primarily for students and those moving into a new field)
- Technical Training Courses
- Visual aids
- Technical material available on the IUVSTA website
- News Bulletins
- Welch Scholarship Awards
- IUVSTA is a member of ICSU and UNESCO
- IUVSTA participates in setting ISO standards
- IUVSTA provides multiple opportunities for interacting with international colleagues.

2. Another important mechanism for familiarizing colleagues with IUVSTA is the use of a few PowerPoint slides, describing the benefits and functions of IUVSTA, shown as introductory information at meetings and workshops or at the beginning of lectures and invited talks at conferences and other venues. Ron Reid has prepared information which can be used to construct appropriate slides. It is available on the IUVSTA website under: Member services/Meantime/Wiki/A simple guide to IUVSTA. Several ESC members and observers have reported using such slides and successfully generating new interactions.

3. Some committee members expressed concern that, like many national vacuum societies, we are constrained by the term vacuum in our name. While vacuum-based research and technology is still

very important to the union, many of our members do not use vacuum at all and are more interested in, for example, solution-based synthesis and processing. Perhaps more importantly, there is a worry that our name may be inhibiting groups from joining our union. A suggestion was made that we consider adding a tag line to IUVSTA which better expresses the breadth of our union in dealing with the science and technology of materials, interfaces, nano/bio, etc. The issue was passed to the Long-Range Planning Committee for consideration.

This led, in turn, to a continuing discussion of how we best communicate to potential members the breath of IUVSTA science and technology. Simply listing our divisions (Applied Surface Science, Biointerfaces, Electronic Materials and Processing, Nanometer Structures, Plasma Science and Techniques, Surface Engineering, Surface Science, Thin Films, and Vacuum Science and Technology) establishes to colleagues that we are very much broader than vacuum technology; we also encompass most of materials and interface science.

4. Emerging Society Committee members as well as interested IUVSTA officers, committee chairs, and councilors agreed to develop a network of contacts in non-member countries. This program has been extremely successful in raising the visibility of IUVSTA and has led to several countries expressing interest in joining or rejoining, after having allowed membership to lapse, our union.

Last triennium, Argentina joined our union and this triennium Bulgaria (thanks to Ivan Petrov) and the Philippines (thanks to David Ruzic and Joe Greene) have completed the necessary paperwork and are set to join the union at the General Meeting in Busan, August, 2016. Turkey was also expected to join this triennium (thanks to Anouk Galtayries and Joe Greene), but political instability has delayed their application.

The evolving list of countries in which IUVSTA members have established contacts and initiated dialog, with the corresponding IUVSTA member names, includes the following.

- Algeria: Daniel Verriere
- Baltic Countries: Laszlo Kover and Lars Montelius
- Bangladesh: Javaid Bhatti
- Bosnia: Monica Jenko
- Bulgaria: Ivan Petrov
- Chile: Pedro Nascente
- Denmark: Lars Montelius, Ulf Helmersson
- Greece: Miran Mozetic
- Malaysia: Jean-Jacques Pireaux
- Nepal: Mark Kushner
- Norway: Lars Montelius, Laszlo Kover, Joe Greene
- Philippines: David Ruzic, Joe Greene
- Saudia Arabia: Bill Rogers
- Singapore: Joe Greene
- Serbia: Miran Mozetic
- South Africa: Jean-Jacques Pireaux
- Turkey: Anouk Galtayries and Joe Greene
- Vietnam: David Ruzic, Mariano Anderle.

5. There was a continuing discussion regarding a suggestion promoted by David Sykes that we consider developing a program for sending IUVSTA-sponsored expert speakers to selected emerging

countries upon request. This would be another avenue for positive interaction while providing a useful service.

In summary, this triennium has been a very lively and exciting one due to the active volunteer participation of many IUVSTA members who believe in, and have worked hard to, further the goals of the Emerging Society Committee. It was a privilege to work with such an enthusiastic group.

Respectfully submitted,

A handwritten signature in blue ink that reads "J.E. Greene". The signature is written in a cursive style with a large initial "J" and "G".

J.E. Greene

D.B. Willett Professor of Materials Science and Physics, University of Illinois

Tage Erlander Professor of Physics, Linköping University, Sweden

University Professor of Materials Science, National Taiwan Univ. Science & Technology

Long Range Planning Committee Report 2013-2016

Executive Summary:

The Long Range Planning Committee of IUVSTA has during the last triennium been very active. The committee has primarily discussed and analyzed new ways of increasing the activities of and the interest for IUVSTA. Further, we have spent time on how to renew our meetings in order to make best utilization of the fact that we are gathering a large number of talented scientists about two times per year in the ECMs. We have discussed the needs of achieving an enhanced return-of-investments of various IUVSTA-supported actions such as our conferences, workshops and schools. And ultimately, we have repeatedly touched on the possibilities to spend some of the capital reserve of IUVSTA and last ECM has suggested a spending of the capital reserves for making an investment in the next triennial budget enabling increased activities including a new web-profile and the launch of a communication plan for IUVSTA.

1. Increase the activities of and the interest for IUVSTA:

Several changes or developments are needed to boost IUVSTA activities and increase the interest among the scientific community to become engaged within IUVSTA and the national Societies. There is a need to increase the awareness for IUVSTA among the community. Discussions points have been the following: How can we from IUVSTA make a difference? What community do we try to reach? How can IUVSTA support the engagement nationally? What role do IUVSTA want to take for the development of Scientific Social Responsibility concept? The discussion is based on the need to become a more attractive society and for recruiting new members especially among the younger generations. It is also based on the conception that IUVSTA seems not be an important entity among the younger generations. Therefore considerable effort has been spent on discussions of various actions that would make IUVSTA more well-known and more attractive.

These actions are:

- i) a discussion about the establishment of a Global Development Conference Series being a new IUVSTA conference having a high scientific content and a solid societal impact,
- ii) a discussion about a possible renewal of the work of IUVSTA including a new modern layout of the divisions more oriented versus societal challenges than our present research divisions and
- iii) a discussion on how we can increase our visibility among the younger generations through enhanced activities related to e.g. various kinds of prizes for well-achieved results.

By starting a new kind of conference series being focused on the large societal needs clearly articulating how different kind of vacuum-related sciences can be recruited to tackle these challenges we may increase the impact of IUVSTA in society. It is by most people deemed more important to make an effort in science towards a societal goal than to make an effort towards a specific sub/topic within a special domain of vacuum science. In other words, It is more societal important to talk about *building a cathedral* instead of discussing *how to cut stones*. By proper articulating we may recruit more young scientists as well as we will gain more political awareness. It may be possible to start this new kind of a conference of a

- i) high-level summit character. A possible name for such a conference series could be The IUVESTA TALKS.
- ii) Hand in hand with the reasoning above, we have had a discussion about whether it is good to keep our old structure of research divisions. These discussions have been built around the suggestion from last triennium to form a working group on Future Directions on Science and Technology. This working group has primarily been active during the ECMs and we have noted the large resemblance with i) above. To sum up some of the discussions we have talked about the following questions: Why is it important to make a distinction between e.g. Applied Surface Science and Surface Science? Why wouldn't it be better to have divisions oriented towards societal challenges such as e.g. a division for renewable energy, a division for a resilient society etc? We have not yet reached any conclusions on this and a compromise could be to make a matrix organization having the present divisions as rows and the societal challenges as columns. A discussion has appeared to test such a kind of structure in the next IVC to be held 2019.
- iii) This activity is very well intertwined with the activities and the discussions being performed within the Awards and Scholarship Committee. Basically, we have considered that there are so many various ways of getting scholarship supports that IUVESTA does not contribute significantly. Therefore we have discussed to initiate a number of prizes or awards that could be given to the younger generation. We have awards today that are directed to the senior level and by introducing awards to the junior level we would make our portfolio stronger and hence our awards would become more known to the younger generations. Such prizes should be linked to active participation in IUVESTA supported actions. And preferably linked to various possibilities to ultimately co-brand these prizes with an industrial entity such as the IUVESTA-Company X Prize for "best poster presentation" or something similar. These prizes are a possible start for also other co-branding or partnership activities that may become important new sources of incomes.

2. Other discussions:

Then in addition to the main discussions above, we have noted and discussed the needs of achieving an enhanced return-of-investments of various IUVESTA-supported actions such as our conferences, workshops and schools. We do get reports but the qualities of these reports are varying a lot and we as society do not use the data being reported. We do not keep good track of the outputs. In order to become more digital IUVESTA should start to gather information that indirectly will have a value for the organization. It may be an advantage if we would make a template for such reports making it easier and possible for us to take advantage of results being also indirect.

And finally, we have spent time on how to renew our meetings in order to make best utilization of the facts that we are gathering a large number of talented scientists about two times per year in the ECMs. We have discussed to initiate how we more effectively could take advantage of the collected brainpower. Questions being brought to the table are: How can we get more time to discuss about weak signals in science? Which emerging areas of science related to IUVESTA is out there? What are the new trends in Science? How does that possibly affect IUVESTA? Should we use the ECMs to identify Emerging Topics and take actions to pro-actively propose workshops in these teams and allow our societies to make bids for organizing them? These discussions have not yet been finalized and needs to be further developed in the next triennium. However, already during this triennium a new scheme of

reporting the research divisions work has appeared avoiding a duplication of reports making the meetings becoming more effective. Discussions will for sure continue in the next triennium on how to take better advantage of the meetings. And ultimately, we have repeatedly touched on the possibilities to spend some of the capital reserve of IUVSTA and in the next triennial budget a spending of our capital is suggested. A spending being motivated as an investment will allow new activities to take place. These activities include a new web/site but also the development of a communication plan and a new strategy for awards.

Lund 2016-08-07

Lars Montelius

Chairman LRPC

IUVSTA Publication Committee Report Triennium 2013-2016

Publication Committee Membership

Chair Ivan Petrov

Vice Chair László Kövér

Members: Ex Officio, Mariano Anderle, Christoph Eisenmenger-Sittner, Jean-Jacques Pireaux, Francois Reniers, Slobodan Milosevic, Nikola Radic, Maria Carmen Asensio, Javaid Ahsan Bhatti, Reinhard Schwarz, Andrej Vincze, Miran Mozetic, Lars Montelius, Martin Wüest, David Ruzic.

Committee activities:

1. Maintaining the IUVSTA website
2. IUVSTA directory
3. Calendar of events
4. News bulletin
5. Future directions

1. Maintaining the IUVSTA website

The main purpose of the IUVSTA web-site has been to facilitate communication among the active IUVSTA members. It houses official minutes and records in the members only area, dating back to 2001, which is constantly updated by the Secretary General Christoph Eisenmenger-Sittner, Scientific Secretary Andrej Vincze, and the Recording Secretary David Sykes. The left panel of the front page of the web-site informs about future events and forums including workshop and schools, while the right panel is dedicated to news. The website provides general information about the Union, its history, governing documents, scientific and educational activities, IUVSTA publications and awards and prizes. The website is maintained and developed by webmaster John Koudelka, who is available to assisted Committees and Divisions who wish to use the web-site as a means of communication for their activities.

2. IUVSTA directory

The IUVSTA directory was updated at the beginning of the triennium with information provided by the Secretary General with names, emails, and country for the people active as councilors and scientific division representatives. The webmaster created web-based data entry form, has more fields: first name, last name, email, country, institution, IUVSTA position, expertise.

<http://iuvsta-us.org/iuvsta2/index.php?id=2043>

It was up to the individuals to check and complete their entry with key word describing their interests. The directory is accessible in the “members-only-area”, i.e. protected by a password. The directory is searchable.

<http://www.iuvsta-us.org/iuvsta2/index.php?id=254>

As a reminder the IUVSTA web-site member section can be accessed by entering
Username: iuvsta Password: 1qaz2wsx

In the new triennium the IUVSTA directory will be updated following the same steps: entering the information provided to the Secretary General, and voluntary completions of the data entry form by individuals.

3. Calendar of Events

Future events can be found on the left panel on the main page, on the Calendar of Events, as well as on the calendars of workshops and schools. Reports for workshops and schools are posted where available.

<http://iuvsta-us.org/iuvsta2/index.php?id=508>

<http://iuvsta-us.org/iuvsta2/index.php?id=22>

<http://iuvsta.org/iuvsta2/index.php?id=640>

4. News bulletin

The publication of the News bulletin resumed in 2011 and continues without interruptions. The newsletter is distributed through email to all people active in IUVSTA and posted on the web-site. The feedback is positive and the newsletter seems to play a useful role in keeping everyone informed. It provides a summary of recent activities at a glance, which otherwise may be buried in the “Records” sections. The volume of the news bulletin has grown and includes reports from IUVSTA ECMs, conferences, workshops, schools but also information from Member Societies.

The President (2016-2019) Lars Montelius initiated a new form for interaction “News Flash”. Issue #1 was devoted to the scientific presentation by Sander Otte at the ECM 124 on his latest discovery published in Nature Nanotechnology. A copy of the article was included.

5. Future directions

The publication committee is working on a Wikipedia entry on IUVSTA. President Elect (2016-2019) Anouk Galtayries launched an initiative to modernize the IUVSTA web-site so that it communicates with the outside world; the publication committee will work on the project.

Ivan Petrov



Publication Committee Chair

IUVSTA Statutes Committee Report for the 2014-2016 Triennium

After the Transformation of the Union from Swiss to Belgian law which required significant changes in the statutes of the Union the work of Statutes committee within the Triennium 2013 – 2016 consisted in fine tuning procedural matters and in taking care of processes which were perceived as questionable by some members of the Executive Council, namely the handling of proxy votes. Also negotiations with new possible members were performed and the documents supplied by these potential members were pre – screened by the committee before they were presented to the Executive Council. The members of the committee during this triennium are Christoph Eisenmenger-Sittner (Chair), David Sykes (Secretary), Mariano Anderle, Jean-Jacques Pireaux, Francois Reniers, Slobodan Milosevic, Daniel Verniere, Andrej Vincze, Lars Montelius and David Ruzic.

A persistent topic during the triennium was the development of guidelines for Short Courses which now constitute the fourth format of events which are financially supported by the Union these four event types are

- Workshops
- Schools
- Technical Training Courses
- Short Courses

In close Co-operation with education Committee the guidelines for Short courses were developed. According to these guidelines, Short Courses are defined as follows:

"The program of IUVSTA Short Courses (IUVSTA SC) is intended to teach the current state of the art of a technique or scientific field within the fields covered by IUVSTA. Such courses are held in conjunction with a major scientific meeting. A typical Short Course lasts 1 - 2 days and attracts all groups of specialists like students, technicians and full academics. Top notch experts of the field intensively teach the current state of the art of a technique or scientific field. An IUVSTA SC is typically organized by a National Vacuum Society in association with a major scientific meeting in a field covered by IUVSTA divisions."

They are supported to a maximum extent of 2 000 €. These guidelines will be incorporated into the procedures manual at the beginning of the next triennium, after the General meeting is informed on the matter.

Concerning the distribution of proxy votes to the members of the Executive Council and, in special to the officers, the chair the committee monitored the number of proxies given to the different persons. Basically it was noticed that most proxies were given to the Secretary General and to the President, but even for these persons the number never exceeded four, so that for the time being the system of proxy votes seems to work properly.

Negotiations with new potential members resulted in the probable admission of two new member societies, the "Bulgarian Union of Physicists" and the "Vacuum Society of the Philippines". The documents required for admission to full membership were checked by the committee and distributed among the members of the Executive council so that it can be expected that both societies will be granted full membership at GM 19.

Vienna, August 2016-08-10



Christoph Eisenmenger-Sittner, Chair

**STD Report for book of reports Triennium 2013 – 2016,
IUVSTA ECM 117 – ECM 123**

The IUVSTA Scientific and Technical Directorate was lead by prof. D. Ruzic as STD Director and supported by A. Vincze as Scientific Secretary of IUVSTA. Beside them the members are the division chairs, vice-chairs or secretaries of the 9 IUVSTA divisions, and also the IUVSTA Educational committee chair/vice chair holds the right to vote.

As the name of the scientific directorate suggests, the most important in the agenda of the STD is the Workshop and Schools proposal evaluation form the scientific point of view. The STD director D. Ruzic after the Paris IUVSTA ECM 117 in 2013 addressed a request toward the divisions chairs/vice chairs and through them to all division members to be active in the specific fields in the divisions. As a response, a large number of proposals were submitted to all IUVSTA ECM meetings, from which the more appropriate after presentations and discussions were awarded by the IUVSTA Workshop or School, typically by 6000 eur support.

Beside this, also the conferences running and organized by various divisions were commented, directed or another way supported by IUVSTA, also endorsements and ideas were supported.

Some new or emerging countries, like Greece, where the national vacuum society were most likely to form, were supported by a school held in Thessaloniki, where the beside the IUVSTA flag/logo also the vacuum science and technology knowledge was spread to the audience (mostly for students of local universities). In this way and manner, the Technical Training Courses (TTC) also supported by the less developed countries (Pakistan, Slovakia, the Czech Republic), were supported by lectures from the vacuum science and technology knowledge in local language. Finally yet importantly, a new item called IUVSTA Short Course, which is awarded typically by 2500 eur were supported for e.g. in Brazil.

The STD sponsored 8 workshops, 4 schools, 4 technical training courses and 1 short course during the triennia.

All these supported events were to help to increase the visibility of the IUVSTA, also to get more information about vacuum science and techniques.

The periodical IUVSTA Highlight seminar in Morgan Hill, CA, USA was organized by the STD director as a joint event of the American Vacuum Society meeting, where all 9 IUVSTA divisions presented the highlights in the field and from which again a review paper will be published with a cooperation of the Educational Committee chair Miran Mozetic.

The following list contains the places of the IUVSTA workshops as calendar events, held in the triennium or supported/discussed in the triennium 2013 - 2016.

2014 :

72nd IUVSTA Workshop (Surface Engineering Division, Thin Film Division, Plasma Science and Technology Division)

"Plasma-assisted vapour deposition of oxide based thin films and coatings"

Schloss Seggau, Austria

April 06 – 11, 2014

73rd IUVSTA Workshop

"Nanostructures on two-dimensional solids"

Eisenerz, Austria

September 22-26, 2014

74th IUVSTA Workshop

"Blood-Biomaterial Interface: Surface Analysis meets Blood Compatibility"

La Villa Clythia Frejus, France

2015 :

75th IUVSTA Workshop (Plasma Science and Techniques Division, Electronic Materials and Processes Division)

"Sheath Phenomena in Plasma Processing of Advanced Materials"

Slovenia, EU

January 19-23, 2015

78th IUVSTA Workshop (Surface Engineering Division)

"New horizons in oxynitride thin films: from synthesis to applications"

Braga, Portugal

October 5-9, 2015

2016 :

76th IUVSTA Workshop (Thin Films, Surface Science, Applied Surface Science, Nanometer Structures Division)

"Structure of ultra thin films of oxides on metal surfaces"

Avila, Spain

June 27- July 1, 2016

77th IUVSTA Workshop (Vacuum Science and Technology Division)

"Surface processes, gas dynamic and vacuum technology of cryogenic vacuum systems"

Kasugi View Hotel, Fuefuki, Japan

August 17-21, 2016

80th IUVSTA Workshop

"Ultra Low Emittance Light Source Vacuum Systems"

Hsinchu, Taiwan

October 24-28, 2016

2017 :

79th IUVSTA Workshop

"3D chemical imaging from fundamentals to advancing applications"

Sardinia, Italy

May 15-19, 2017

The following list contains the places of the IUVSTA schools as calendar events, held in the triennium or supported/discussed in the triennium 2013 - 2016.

2014

12th IUVSTA School on Lasers in Materials Science: Laser Engineering of Surfaces and Coatings
July 13 - 20, 2014
San Servolo, Italy

2015

13th IUVSTA School on Vacuum Gas Dynamics: Theory, Experiments and Applications
May 17 - 21, 2015
Thessaloniki, Greece

2016

14th IUVSTA School on Nano Optics: from Principles to Basic Research and Applications
April 11 - 15, 2016
Braga, Portugal

15th IUVSTA School on Lasers for the Nano-Engineering of Surfaces
July 10 – 17, 2016
San Servolo/Venice

The Union supports National Vacuum Societies, which are members of IUVSTA, in organizing Technical Training Courses locally, in the local language for the principle benefit of technicians, production engineers and students. IUVSTA helps for the organisation and with a small subsidy for attendees. The IUVSTA grants are primarily intended to be used for travelling/accommodation subsidies within their own national borders for participants and lecturers at the Technical Training Courses.

Technical Training Course #16

Applied Vacuum Technology
December 22-24, 2014
COMSTECH Headquarters, Islamabad, Pakistan

Technical Training Course #17

Principles of Technology
October 8-11, 2015
Hotel Trigan, Strbske Pleso, Slovakia

Technical Training Course #18

Low Pressure Plasma Processes and Technology
May 30 - June 2, 2016
Hotel Kravi hora Bořetice, Czech Republic

Technical Training Course #19

Modern trends in Microscopy

May 10 – 12, 2016
COMSTECH Headquarters, Islamabad, Pakistan

Applied Surface Science Division

Triennial Report (2013-2016)

Bonnie J. Tyler - Chair, John T. Grant - Vice chair, Leszek Markowski - Secretary

Division Representatives: Jamie Quinton, Wolfgang Werner, Rony Snyders, Carlos R. Grandini, Mladen Petracic, Vladimir Matolin, Jari Koskinen, Florence Mercier-Bion, Birgit Hagenhoff, Laszlo Ovari, Shri T.K. Saha, Irina Gouzman, Francesco Ghezzi, Hidehiko Nonaka, Yongsup Park, Martín Zapata Torres, Zafar Iqbal, Zhen-Chao Dong, Carlos Tavares, Alexey K. Rebrov, Lubomír Caplovic, Janez Kovac, A. Gutierrez, Joachim Schnadt

Conferences:

IVC-19/ICSS- 15 and ICN+T 2013

9-13 September, Paris, France

The International Scientific Committee of the Applied Surface Science part of the IVC-19 (with the ASSD Chair and further 10 Members of the ISC from the ASSD) was working together and cooperating with the Program Committee of IVC-19 successfully and put together an attractive program. The Applied Surface Science part of IVC-19 received more than 200 papers and has 1 Keynote and 9 Invited speakers, 10 oral sessions plus 4 joint oral sessions (with 5 Invited speakers) together with the Surface Engineering, Bio-Interfaces and Energy and Sustainable Development parts of the IVC-19 and in addition, 3 poster sessions and 3 joint poster sessions with the Bio-Interfaces, Nanoscience and Technology, Surface Engineering and Energy and Sustainable Development parts of the IVC-19. The submitted manuscripts have been published in 2014 in the Special Issue of Applied Surface Science journal (László Kövér previous ASS chair was one of the Guest Editors).

Also worthy of mention is that at the IVC-19 the IUVESTA Prize for Technology has been given to John T. Grant, present Vice-chair of the ASSD.

The 13th European Vacuum Conference & 7th European Topical Conference on Hard Coatings (with the Special Symposium on "Ultra thin oxide films and oxide coatings applications")

8-12 September 2014, Aveiro, Portugal

The conference featured 5 Plenary speakers, 23 Invited speakers, and over 200 contributed talks and posters. A full conference program can be viewed at <http://eve13.com/>. As a Member of Organising Committee was Carlos José Tavares, Departamento de Física, Universidade do Minho, Portugal – ASSD Representaive from Portugal.

**IVC-20 (with ICSS-16, ICN+T 2016, VASSCAA-8, 25th KVS, ITC 2016, ISPB 2016)
22-26 August, 2016, Busan, Korea (South)**

The following ASSD members have been nominated for the International Programme Committee of IVC-20: Yongsup Park (Korea) (Chair), Bonnie J. Tyler (UK) (Co-Chair), John Grant (USA), Carlos Jose Tavares (Portugal), Francois Reniers (Belgium), Leszek Markowski (Poland). The Applied Surface Science field is divided into 13 topics and include 1 Keynote and 9 Invited Speakers. Moreover, until the date of this report, the abstract submission results in more than 130 oral and poster presentations. More IVC-20 details can be found on the IVC-20 webpage <http://www.ivc20.com/>

**SIMS21 - 21st International Conference on Secondary Ion Mass Spectrometry
10-15 September 2017, Kraków, Poland**

This conference is organized under the auspices of the Polish Vacuum Society and sponsored by Applied Surface Science Division and supported also by Biointerfaces, Nanometer Structures and Surface Science Divisions. All of them will vote for its endorsement of IUUSTA. The conference will provide a forum for colleagues from both academia and industries throughout the World to exchange results and new ideas on Secondary Ion Mass Spectrometry and related techniques. The conference will cover advancements of scientific knowledge from fundamentals to applications. Organizers expect around 600 attendances from more than 30 countries from all the World. In conjunction with the Workshop the Short Course Secondary Ion Mass Spectrometry will be held.

Other Conferences:

- “Low Energy Electrons: Dynamics and Correlation near Surfaces and Nanostructures” (LEE2015, sponsored by ASSD), 7-11 September 2015 at Herrnstein Castle near Vienna, Austria.
- The ASSD division of SOPORVAC, Portuguese Vacuum Society, is organizing a Vacuum workshop, VACUO 2016, together with the 20th National Physics Conference. The event will be held on September 8 2016 at the University of Minho in Braga, Portugal. Topics will include Vacuum technology, Applied Surface Science, Thin Film deposition, among others. More details can be found on the workshop webpage: <https://eventos.spf.pt/fisica2016/pt/workshop>

IUUSTA Workshops: During the 2013-2016 triennium the Division co-sponsored or co-supported four successful IUUSTA Workshops The Final Reports of the Workshops are available at the IUUSTA webpage: <http://www.iuusta.org>

73rd IUUSTA Workshop (organized by Nanometer Structures Division and supported by ASSD) "Nanostructures on two-dimensional solids", Eisenerz, Austria, September 22-26, 2014.

74th IUUSTA Workshop (organized by Biointerfaces Division and supported by ASSD) "Blood-Biomaterial Interface: Surface Analysis meets Blood Compatibility" La Villa Clythia Frejus, France, November 3-7, 2014.

76th IUUSTA Workshop (sponsored by Thin Films, Surface Science, Applied Surface Science and Nanometer Structures Division) "Structure of ultra thin films of oxides on metal surfaces", Avila, Spain, June 27- July 1, 2016.

80th IUVSTA Workshop (organized by Taiwan Vacuum Society and sponsored by Vacuum Science and Technology Division and co-supported by ASSD), "Ultra Low Emittance Light Source Vacuum Systems" Hsinchu, Taiwan, October 24-28, 2016

Other Workshops:

“Nanoparticle concentration, chemistry and interfaces” (endorsed by the Institute of Physics (IOP), the British Vacuum Council (BVC), and the International Union for Vacuum Science Technique and Applications (IUVESTA) and co-sponsored by ASSD), 20-24 April 2015, in Peckforton Castle, Cheshire, UK.

The ASSD co-supported also **Technical Training Courses:**

- “CORSO DI TECNOLOGIE DI DEPOSIZIONE PVD e CVD” (organized by Italian Vacuum Society in cooperation with Associazione Italiana di Scienza e Tecnologia, co-supported by ASSD), 27-28 May, 2014, Turin, Italy.
- Vacuum, Coating & Nanotechnology submitted by Pakistan Vacuum Society, November 17-19, 2015, in the National Institute of Vacuum Science and Technology (NINVEST), Islamabad, Pakistan.
- No. 18 entitled “Low Pressure Plasma Processes and Technology” (organized by Czech Vacuum Society and co-supported by ASSD), May 30 - June 2 2016, Boretice, Czech Republic.

The short course entitled 'Secondary Ion Mass Spectrometry' will be discussed and considered for IUVESTA sponsorship during ECM123. This short course (organized by Jagiellonian University (Poland) under the auspices of the Polish Vacuum Society) will be organized in conjunction with the 21st International Conference on Secondary Ion Mass Spectrometry, SIMS21. It will be held on Sunday, September 9, 2017, just before the beginning of the conference. During this day 5 lectures devoted to fundamental aspects of SIMS are planned to be organized. It is expected that in this course more than 60 participants from many countries will attend. Application for IUVESTA patronage and financial support with amount of 2 400 Euro have been applied.

Other events:

In 2015 the 30th Anniversary of the founding of the Applied Surface Science Division of the American Vacuum Society has been marked. This milestone has been celebrated at the AVS 62nd International Symposium and Exhibition in San Jose, California, 18-23 October 2015. Invited presentations have been given by several "ASSD 30th Anniversary Speakers".

Elections of the ASSD officers for the triennium 2016-2019

The number of National Representatives in the Applied Surface Science Division for the triennium 2016-2019 counts 29 scientist from 29 countries – 28 members of IUVESTA and one provisional member from Bulgaria. The ballot was conducted within the members of the new ASSD Electoral College through E-mails. The results of the election are as follows:

Chair: Leszek Markowski (Poland)

Vice Chair: Mladen Petravić (Croatia)

Secretary: Wolfgang Werner (Austria)

Proposed goals for the Applied Surface Science Division for the next triennium

1. to sponsor a IUVSTA School in a non-member country (preferably with intention to be a member country)
2. to sponsor a Workshop on fundamental problems and applications of electron transport e.g. in carbon based surface and interface structures (including graphene and nanotubes)
3. to enhance the Applied Surface Science related information available at the IUVSTA website (e.g. to make accessible the ISO Vocabulary on Surface Chemical Analysis).

Acknowledgements

I would like to express my thanks to the members of the ASSD Divisional Committee and ASSD Divisional College, as well as to the officers of IUVSTA for their continuous support over the past triennium.

Respectfully submitted, August 2016.

Leszek Markowski
ASSD Secretary (trienium 2013-2016)

3 Years Activity Report from IUVSTA BI division: 2013- 2016

The present report has been prepared in chronological order, summarizing the most outstanding aspects reflected in periodic reports presented previous to every ECM.

2014

- 1) The activities of the BI division mainly concerned the organization of the 74th IUVSTA workshop “Focus on Blood Biomaterial Interface: Surface analysis meets blood biocompatibility”, which required optimizing the dates of celebration, the confirmation of sponsoring contracts, managing the panel of speakers (Only one speaker fell from that list) and the broadcast of the Workshop has been broadcasted in different forums.

The Workshop took finally place in **Villa Clythia**, Fréjus, France from Nov 3 to Nov 7th 2014. The workshop brought together 33 scientists from 11 countries (France, Germany, Italy, Portugal, Spain, Switzerland, UK, The Netherlands, plus Australia, Canada & USA) with representatives from academia, national laboratories and industry. The program was balanced to critically evaluate the state-of-the art in the blood-biomaterial interface field, surface analysis from the perspective of blood-biomaterial interactions, and discuss new research directions in these areas. The schedule included ample time for discussion, both after each talk and a dedicated “round table” session on Thursday, November 6th. This round table has finally led to a REVIEW article (<http://authors.elsevier.com/sd/article/S0268960X16300479>) and the In Focus Biointerphases issue, published in May-June 2016. The BID obtained a very high level of sponsoring (same as IUVSTA sponsorship) and the presence of one industrial company on site (Q-SENSE).

- 2) The BI division also prepared and submitted a bid for an additional IUVSTA workshop in 2015 on “Nanoparticles concentration, chemistry and interfaces”.

2015

- 1) During this year, the BID chairs collaborated with chairs of the 20th International Vacuum Congress providing names for divisional committee some of which effectively feature in the final Scientific Committee of the congress. Furthermore the Chairs Supported Dr. DaeWoo Moon in organizing the Biointerfaces session(s) at the next IVC conference providing names for plenary keynote and invited speakers.
- 2) The chair of the BI division managed the endorsement of the workshop on “Nanoparticles concentration, chemistry and interfaces”, The bid for obtaining IUVSTA sponsorship was submitted too late at the ECM119 and resubmitted at ECM 120. A special issue of the journal Biointerphases dedicated to nanoparticles characterisation will be published in December 2016
- 3) The BID chair was involved in organizing a session on biointerfaces at the AIVXXII conference held in Genova on 22-25th May, 2015.
- 4) BID co-chair A. Galtayries (ENSCP) together with V. Migonney (University Paris 13) organized a Biointerfaces scientific meeting in honour of Prof B. Ratner and D Castner BIOMATERIALS AND BIOINTERFACES SCIENTIFIC DAY, Paris March 23rd, 2015. 80 participants, from Paris area mainly, France and close European countries.
- 5) Chair and Co-chair presented a lecture at the 2015-IUVSTA Highlights workshop organized at the 62 nd AVS Symposium and Exhibition (October 18-23, 2015, San José, CA, USA).

2016

- 1) The activity of the division months has been mainly devoted to continuing the support to Dr. DaeWoo Moon, Chair of the BID session at IVC20, in organizing the Biointerfaces session(s) at the next IVC conference and checking the applications for presentations. By March 31st, 2016 the BI session received 76 abstracts. Compared to the Biointerfaces related submissions of the IVC19 (Paris 2014) the number of abstracts increased by 70%.
- 2) Consideration as possible actions to promote the endorsement of national and international conferences/workshops on biointerfaces by the IUVSTA-BID, which as proposed for discussion at ECM122).
- 3) Organization of the BID elections.
- 4) Followup of Bio-related contributions to EVC 14 and analysis of progress with respect to EVC 13.
- 5) As follow-up of the workshop on “Nanoparticles concentration, chemistry and interface, the Chair relaunch the call for papers for the Focus Issue entitled “Nanoparticles Interfaces” that will be published on the AVS Journal Biointerphases. A special issue of Biointerphases from the BID-IVC20 presentation, co-edited by BID Chair/co-Chair/ and DW Moon. Selection of 20 papers on site.

3 Years Activity Report from IUVESTA EMPD division: 2013- 2016

- Regular email correspondence among EMP division members established.
- A joint proposal between the Plasma Science & Techniques and the Electronic Materials and Processes Division for the IUVESTA Workshop on "Sheath Phenomena in Plasma Processing of Advanced Materials,,
- Recommendation of plenary and invited speakers and student award applications for IVC-20
- Elections for the new trienium: Ivana Capan (Chair), Detlev Grützmacher (Vice Chair) and Reinhard Schwarz (Secretary).

Respectfully submitted, August 2016.

Ivana Capan
EMPD Chair (trienium 2013-2016)

3 years Divisional Report 2013-2016: IUVSTA Nanometer Structure Division

This report covers the period: between ECM 117-123.

The OFFICERS of the NSD in the Triennium 2013-2016:

Chair:	Christian Teichert, Austria
Vice-chair:	Sidney Cohen, Israel
Secretary:	Ana C. Gomes Silva, Portugal

NSD committee meetings:

There was a divisional committee meeting at in September 2013 at IVC-19 in Paris, France, where the present National Representatives of NSD met. A second meeting was during the ICN+T 2014 meeting in Vail, CO, USA. The officers had a strong interaction during this Triennium. The committee members have been actively included in preparation of activities and activity reports.

Activities:

Workshops and Schools

- 1) The NSD organized the 73rd IUVSTA workshop on "**Nanostructures on two-dimensional solids**" organized under the leadership of Christian Teichert, University of Leoben, Austria (current chair), Hongjun Gao, Chinese Academy of Sciences, Beijing, China (former chair of NSD), Thomas Micheley, University of Cologne, Germany, and Markus Kratzer, University of Leoben, Austria. The workshop was supported by the Surface Science as well as the Applied Surface Science Divisions. The International Scientific Committee was recruited from members of NSD (S. Cohen, Vice-chair, Ana Gomes Silva, Secretary of NSD, M. Buljan, Croatia, K. Balazci, Hungary, R. Czajka, Poland, Y. Hyttel, Spain, H. Kawai, Japan) supplemented by Bonnie Tyler, Chair of ASSD and Peter Varga, Chair of SSD. The committee selected 20 distinguished researchers in the field of two-dimensional matter ranging from graphene via hexagonal boron nitride, transition metal dichalcogenides, silicene, and germane to topological insulators and ultrathin quasi-crystalline films.

The meeting took place from Sept. 22 till 26 2014 in Eisenerz, Province of Styria, Austria, in a Youth and Family Guesthouse at an altitude of 1040 m in front of the Styrian Ore Mountain. All together 41 scientists from 20 nations including the U.S., China, Japan, Israel and 16 European Countries attended the workshop with one plenary talk (1h), 19 invited talks (40 min) and 4 contributed talks (30 min). The latter were selected by the organizing committee from the submitted poster contributions. A highlight was the poster advertisement session where the poster presenters had the possibility to advertise their posters in 7 minutes. Based on this and on the poster content of course, the two winners of the Poster Prizes sponsored by the Austrian Vacuum Society were selected. The winners were Dr. Susanne Hahne, Germany, and M.Sc. Okan Deniz, Switzerland. Besides the two poster sessions, there was ample of time for intense scientific discussions during the two excursions to the largest monastery library on earth and to a mountain lake. The round-table discussion was devoted to the further development of the field. The participants also discussed why there was less interest than expected for non-invited participation, and it was agreed that the possibility for contributed work being limited to poster presentation, as recommended by ECM 118, prevented further participation. Nevertheless, all attendees agreed that it was just the right size for a stimulating and most successful workshop.

- 2) The NSD prepared the 14th IUVSTA School on "**NANO – OPTICS. From principles to basic research and applications**" organized under the leadership of Ana Cristina Gomes Silva, Universidade Nova de Lisboa, Portugal (Secretary of NSD) together with Christian Teichert, University of Leoben, Austria (Chair of NSD). The school has been held from April 11 - 15 2016 at the International Iberian Nanotechnology Lab (INL) in Braga, Portugal. Local organizers are Carlos José Macedo Tavares, Departamento de Física, Universidade do Minho, Braga, and Jana

Nieder, INL, Braga. The School was supported by the BioInterfaces Division as well as the Surface Science Division. Besides Lars Montelius, INL, the International Scientific Committee was recruited from National Representatives within NSD (Sidney R. Cohen, Israel, Vice-chair of NSD, Antonin Fejfar, Czech Republik, Steven Schofield, UK, Yves Huttel, Spain, Maja Buljan, Croatia, Hideaki Kasai, Japan, Ryszard Czajka, Poland, Nancy A Burnham, U.S., and Katalin Balazsi, Hungary). The committee proposed about 15 distinguished researchers in the wide field of Nano-optics as lecturers of which 9 accepted to present tutorial lectures of 1 hour duration. The closing lecture (90 min) was presented by Prof. Thomas Klar, former student and collaborator of 2014 Nobel Prize Winner Stefan Hell. Within the 10 invited speakers two were female, representing 20% of the invited lecturers. In addition, there were two sessions with all together 5 contributed lectures (30 min each) as well as two poster presentations including shotgun presentations (5 min) of the 23 presenters. The six exhibitors present were given the opportunity for short oral presentations of their technologies in a commercial session (one hour in total). In addition, the attendees were offered an overview tour of the International Iberian Nanotechnology Lab (INL) as well as specific laboratories on an "INL Nano-Optics Tour". Demonstrations and posters were prepared by the different researchers of the INL laboratory, specifically for the Nano-Optics tour. The school included a brain-storming session on the future of the field with active participation of the students and lecturers. Finally, the participants evaluated the School and the lectures.

- 3) The NSD supported several other **workshops organized by other divisions like SSD and ASD**.
International Vacuum Conferences (IVC)

4) **IVC-20**

International Scientific Committee Nanometer Structure Division/ICN+T 2016:

From the NSD, the following colleagues served on the IVC-20 International Scientific Committee Nanometer structures topic:

Christian Teichert, (Chair of the NSD), National Representative for Austria
Sidney Cohen, (Vice-chair of the NSD), National Representative for Israel
Ana Silva, (Secretary of the NSD), National Representative for Portugal
Hideaki Kasai, National Representative for Japan

Antonin Fejfar, National Representative for Czech Republic, he will be one of the organizers of ICN+T 2018.

Margit Zacharias, National Representative for Germany

Committee Chair: In-Whan Lyo (Korea), Co-Chair: Christian Teichert (Austria)

International Conferences on Nanoscience + Technology (ICN+T).

All NSD committee members are also members of the ICN+T Steering Committee which is organizing and preparing ICN+T conferences that are held every two years. The IUVSTA NSD has proposed selection rules (geography, gender, frequency) for plenary, keynote, and invited speakers of this conference.

5) **IVC-19 & ICN+T-2013, Paris, Sept. 9-13 2013.**

All the 7 members of the divisional committee are members of the "Nanoscience and Technology" International Scientific Committee (altogether 19 members, Chair: Roland Wiesendanger, Hamburg, Germany, Hongjun Gao, Beijing, PRC, Andrej Vincze, Bratislava, Slovakia).

There were 366 accepted contributions in the Nanoscience and Technology field.

As Keynote lecturer Wolfgang Wernsdorfer, Institut Néel, Grenoble, France, Molecular Spintronics. A Nanoscience Education session was proposed for the ICN+T 2014 (see below).

6) **ICN+T 2014, Vail, CO, U.S.A., July 20 -25 2014.**

Organizers: Peter and Eli Sutter, Brookhaven National Lab. supported by Joe Stroschio, NIST. All national representatives of the NSD are members of the steering committee. There was a steering committee meeting with some of the NSD committee members present, in particular, the Vice-chair Sidney Cohen.

Organizers: Peter and Eli Sutter, Brookhaven National Lab. In this meeting, the proposed guidelines mentioned above were ratified.

<http://www.icnt2014.org>

Topics were scanning probe microscopy/spectroscopy and related instrumentation, nanosystems, nanomechanics, nanomanipulation, nanomagnetism, nanooptics, nanowires, nanofluidics, nanobiotechnology, molecular electronics, quantum devices, and advances in materials and processing for nanotechnology and nanofabrication, nanoeducation.

- Number of participants: over 600; 5 plenary lectures, 49 invited talks, 280 contributed ones, 70 posters.

- Nanoscience Education was a new topic with 4 oral presentations.

7) **IVC-20/ICN+T-2016 meeting, Busan, South Korea, Aug. 22-26 2016,**

All national representatives of the NSD are involved in the steering committee (46 members). They were asked to suggest keynote and invited speakers. They selected from 61 suggestions (rather well distributed) one more keynote speaker and 37 speakers (only two female) who will present in the NS/ICN+T 2016 sessions. Finally, the steering committee members evaluated 348 abstracts that were submitted.

There will be a steering committee meeting on August 23 in Busan discussing the future of this conference series.

8) **ICNT-2018 Brno, Czech Republic, July 22 – 27 2018.**

Organizers Tomas Sikola, University of Technology Brno and CEITEC, and Antonin Fejfar, Institute of Physics, Czech Academy of Sciences, Prague.

The organizers will present the current status of preparation of this event at the steering committee meeting in Busan.

Christian Teichert,

Chair of the Nanometer Structure Division, Leoben, Austria, Aug. 5 2016

Divisional triennium report 2013 - 2016
Plasma Science and Technique Division

The division has had an active and productive triennium. Summaries of activities are given in the individual divisional reports for ECM-118, ECM-119, ECM-120, ECM-121, and ECM-122. Below are some specific highlights:

- The division supported and participated in the IUVSTA sponsored '*International School on Lasers in Materials Science – Laser Engineering of Surfaces and Coatings – LESC*' held in Italy 2014.
- The division developed the concept for the IUVSTA sponsored workshop on '*Sheath Phenomena in Plasma Processing of Advanced Materials*' successfully held in Slovenia 2015. It was a joint workshop with the Electronic Materials and Processes Division.
- The division supported and participated in the IUVSTA sponsored workshop '*New horizons in oxynitride thin films from synthesis to applications*' held in Portugal in 2015.
- The Chair of the division delivered an invited talk on '*Recent Highlights and Trends in Plasma Science and Technology*' at the IUVSTA Highlight Seminar during AVS held in San Jose in 2015.
- The division supported and organised the IUVSTA sponsored Technical Training Course on '*Low Pressure Plasma Processes and Technology*' held in Czechia in 2016.

An important part of activity has also been the preparation of the divisional programme for the IVC-20 in Korea. Details of the final programme are available at http://www.ivc20.com/sub02_1.php.



, 11th August 2016

Prof. Dr. Timo Gans

Chair of the Plasma Science and Technique Divisional Committee Surface Engineering Division

3 years Divisional Report 2013-2016: IUVSTA Surface Engineering Division

USA	Ivan G. Petrov	petrov@illinois.edu	Chair
Germany	Peter Schaaf	peter.schaaf@tu-ilmenau.de	Vice Chair
Slovenia	Monika Jenko	monika.jenko@imt.si	Secretary

IUVSTA Surface Engineering Division 2013-2016



Main Activities of IUVSTA-SED

- Active email discussion among all SED members
- Meeting of SED members at several conferences (AVS, ICMCTF, ICTF)
- Organizing IUVSTA workshops
- Organizing IUVSTA schools
- Putting together the Surface Engineering Program at IVC-20

IUVSTA-SED workshops

- 72nd IUVSTA Workshop
"Plasma-assisted vapour deposition of oxide based thin films and coatings"
Schloss Seggau, Austria, April 06 – 11, 2014
Web: <http://iuvsta72.unileoben.ac.at>
Chairs: Robert Franz, Christian Mitterer
Final Report: http://www.iuvsta.org/iuvsta2/assets/docs/pdf/Final_Report_IUVSTA72.pdf
- 78th IUVSTA Workshop
"New horizons in oxynitride thin films: from synthesis to applications"
Braga, Portugal, October 5-9, 2015
Web: <http://www.multifunctioncoatings.com/home/index.php/78thiuvstaworkshop1>
Chair: Filipe Vaz
Final Report: http://www.iuvsta.org/iuvsta2/assets/docs/pdf/Final_Report_IUVSTA78.pdf

IUVSTA-SED Schools

- 12th IUVSTA School
“Lasers in Materials Science: Laser Engineering of Surfaces and Coatings”
San Servolo, Italy, July 13 - 20, 2014
Chairs: Paolo Rossi, Peter Schaaf
Final Report:
http://iuvsta.org/iuvsta2/assets/docs/pdf/Final_Report_IUVSTA_SC12.pdf
- 15th IUVSTA School
“Lasers in Materials Science: Laser Engineering of Surfaces and Coatings”
San Servolo, Italy, July 13 - 20, 2014
Chairs: Paolo Rossi, Peter Schaaf

SED Program Committee for IVC-20

Ivan Petrov [petrov@illinois.edu] - chair
Jeon Geon Han [hanjg5445@gmail.com] - co-chair
Javier Barriga [javier.barriga@tekniker.es]
Eiji Kusano [kusano@neptune.kanazawa-it.ac.jp]
Jörg Patscheider [Joerg.Patscheider@empa.ch]
Kostas Sarakinos [kostas@ifm.liu.se]
Peter Schaaf [peter.schaaf@tu-ilmenau.de]

Flyer used for promotion of SE @ IVC20

www.ivc20.com

20th INTERNATIONAL
VACUUM
CONGRESS
IVC-20
AUGUST 21-26, 2016
BUSAN, KOREA

Organized by
KVI

Sponsored by
MTEC, MTT, MTT, MTT, MTT, MTT, MTT, MTT, MTT, MTT

Keynote speakers:
Prof. Jochen Schneider, RWTH Aachen University, Germany "Quantum Mechanically Guided Materials Design for Surface Engineering"
Prof. Jolanta E. Klemberg-Sapieha, Polytechnique Montreal, Canada "Nanostructured protective coatings for harsh environments: From design to manufacture."

SED Program at IVC-20

6. Surface Engineering (SE)

SE/TF-01	Nanostructured Surfaces and Coatings; Architecturally Designed Multilayers Part 1	Aug-22 (Mon)	14:00	16:00
SE/TF-02	Nanostructured Surfaces and Coatings; Architecturally Designed Multilayers Part 2		16:30	18:00
SE/TF-03	Nanostructured Surfaces and Coatings; Architecturally Designed Multilayers Part 3	Aug-23 (Tue)	11:30	12:15
SE/TF-04	Surface Engineering and Thin Films for Biomedical/ Biological Application		14:00	16:00
SE/TF-05	Advances in Surface Engineering and Deposition Techniques Part 1	Aug-24 (Wed)	11:30	12:30
SE/TF-06	Advances in Surface Engineering and Deposition Techniques Part 2		14:00	15:30
SE-01	Theory, Modeling, Atomistics of Thin Film Microstructure and Morphology Evolution *(w/ TF)	Aug-25 (Thu)	9:00	10:45
SE-02	Advanced Protective Coatings and Tribological Applications		13:30	15:15
SE-P1	Poster Session 1		16:30	18:00

Keynote speakers:

Jolanta KLEMBERG-SAPIEHA, Canada

Jochen M. SCHNEIDER, Germany

Invited speakers:

Maria DINESCU, Romania

Guang-Ping ZHANG, China

Weiguo LIU, China

Susan KRUMDIECK, New Zealand

Jyh-Wei LEE, Taiwan

Atsuo KAWANA, Japan

Marcela BILEK, Australia

Report

15th IUVESTA School on

Lasers for the Nano Engineering of Surfaces - LANES

10-17 July 2016, Isola di San Servolo, Venice (LANES 2016)

Paolo Ossi

The School was organized in the framework of the IUVESTA activities within the Surface Engineering Division (SED), in cooperation with the Venice International University (VIU) and the Politecnico di Milano, and it was endorsed by Città Metropolitana di Venezia, by AIV - Associazione Italiana di Scienza e Tecnologia and by SIOF (Italian Society of Optics and Photonics). The LANES2016 was recognized and supported as the 15th IUVESTA School. Among the co - chairmen of the school, from IUVESTA (SED) there was Prof. Paolo Ossi, Milano, Italy (Italian representative to IUVESTA). The 15th IUVESTA International School on Lasers for the Nano Engineering of Surfaces (LANES 2016) was held on Isola di San Servolo, Venice, Italy, from 10th to 17th of July, 2016. The school also included a presentation of IUVESTA, delivered by Prof. P. Schaaf, Ilmenau, Germany (Vice president of IUVESTA - SED) presenting its structure and its scientific and educational activities. The structure, divisions, conferences, and publications of IUVESTA were illustrated to the students and participants as well.

Although the School has been geared towards the level of a PhD student, advanced undergraduate and Master students, as well as postdoctoral researchers have joined in the school. In total, 32 students, mainly from EU, Russia (3), the USA (11), have attended the School. The main purpose of the School has been to provide graduate students, PhD students and young research scientists working in the field of laser engineering of surfaces with robust fundamental roots that are often lacking in their formation, so that they could profitably interact with colleagues working in areas neighboring, although not coincident, with their own research field. This research area usually involves plenty of questions related to vacuum science and technology.

The School encompassed several activities including a set of lectures imparted by 18 international experts in the field of lasermaterials interaction and vacuum science and technology (the program is provided below and also at the web page <http://www.slims.polimi.it/>). The active participation of students was stimulated through posters and brief (10 minutes) oral contributions. Structured discussions among lecturers and students took place in dedicated sessions. Several “classrooms” enforced the after - lecture discussion and questions of the students. Prizes were awarded in a closing ceremony for the best student contributions.

Questionnaires were filled by the students at the end of the school. There was a very positive response about the school, its contents and quality. Particularly appreciated were the time schedule, the role of lectures dedicated to basic topics, the classroom discussions and the possibility to have free discussions with the lecturers throughout the entire school duration. The student participation was extremely active.



Group picture of the 15th IUVSTA School LANES-2016 attendees

Surface Science Division

Triennial Report (2013-2016)

This report covers the activity that the Surface Science Division has developed during the ECM 117 – 123

The OFFICERS of the SSD in the Triennium 2013-2016 are as follow:

Chair: Peter Varga, **Austria**, varga@iap.tuwien.ac.at
Vice-chair: Maria C. Asensio, **France**, asensio@synchrotron-soleil.fr
Secretary: Mario Rocca, **Italy**, rocca@fisica.unige.it

Committee Members of the SSD:

Country	Delegate	Email address
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Croatia	Zeljko Crljen	Zeljko.Crljen@irb.hr
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Switzerland	Roman Fasel	Roman.Fasel@empa.ch
USA	Joanna Mirecki Millunchick	joannamm@umich.edu

Surface Science activities during the Triennium:

This was a very active Triennium for the IUVSTA Surface Science Division with considerable achievements. The SSD officers have lively animated the communication and activities with all the member of the SSD, during the Triennium. The contacts with all the division members have been established via email, in such a way that the main objectives to be achieved during the present Triennium have been regularly addressed.

The main efforts of the Division have been focalized on the following scientific activities:

1.- Divisional activity on related conferences: The SSD via its officers has continued a close collaboration with the organization committees of the ECOSS and VAASCCA conferences, regularly organized in Europe and Asia, respectively, where the participation of the Surface Science community is dominant.

2.- Workshops organized during the Triennium 2013-2016: The Division has received several proposals to organize workshops. However, all the applications have been critically evaluated, searching the scientific excellence. Hence, only two workshops, listed below, have been sponsored by SSD.

i.-) 73rd IUVSTA Workshop

"Nanostructures on two-dimensional solids"

Eisenerz, Austria, September 22-26, 2014

Web: <http://iuvsta.unileoben.ac.at/>

Brief report, follows:

From September 22 - 26 2014, the 73rd IUVSTA workshop was held in Eisenerz, Province of Styria, Austria, in the vicinity of the "Styrian ore mountain". 41 specialists from 19 countries were discussing during four days in the middle of the Alps the formation, characterization, and

potential applications of nanostructure arrays on two-dimensional materials ranging from graphene, hexagonal boron nitride, and transition metal dichalcogenides, to silicene, germanene, topological insulators, and quasi-crystalline thin films. 20 invited speakers - among them four female scientists - from Europe, China, Israel, Japan, and the US followed the invitation of the program committee and gave an overview on the current experimental and theoretical status of the field.

Besides the invited presentations, four contributed talks and 11 posters have been given. The long evening sessions were devoted to poster presentations; which started with an oral announcement by each presenter within a 5 min short talk; which was very much appreciated by all attendees. The jury lead by Patricia Thiel, Iowa State University, US, together with Feng Liu, University of Utah, and Antoine Fleurence, Japan Advanced Institute of Technology, had a hard time to select the two poster prizes. The Prizes of 100 € each have been sponsored by the Austrian Vacuum Society and were awarded during the Conference Dinner (with typical Styrian food) to Dr. Susanne Hahne (University of Osnabrück, Germany) und M. Sc. Okan Deniz (EMP A Dübendorf, Switzerland).

Beverages served during the poster sessions were sponsored by SPECS GmbH and Oxford Instruments Omicron Nanoscience. In a round table discussion, the participants were evaluating the success of the meeting and the future of the field. It was pointed out by several participants that the meeting was very successful in giving a podium to discuss the rising field of nanostructures on 2D materials from several aspects. The remote place allowed very intense discussions among all participants. It has been emphasized that such small meetings are frequently more beneficial than much more expensive large conferences.

Besides intense scientific discussions, the participants enjoyed the local food served in the youth and family guesthouse "Eisenerzer Ramsau" in an altitude of more than 1000 m. During the conference excursion on Wednesday afternoon, to the nearby monastery in Admont has been visited by the participants. The social program has been completed by a visit of the Museum in the mining town Eisenerz (English "iron ore"). Before the conference dinner, also, a hike around a mountain lake has been organized and plenty of Alpine folk music, during the dinner.



**Participants during the excursion to the world famous library of the Monastery
Admont.**

ii.-) **76th IUVESTA Workshop** (co-sponsored with Thin Films, Surface Science, Applied Surface Science, Nanometer Structures Divisions)

"Structure of ultra thin films of oxides on metal surfaces"

Avila, Spain June 27- July 1, 2016

Web: http://www.icmm.csic.es/aseva/iuvsta_76.html

Final Report: Still in process.

3.- SSD participation at the IUVSTA Highlight Seminar: The Division has promoted the participation of its members to the IUVSTA Highlight Seminar, celebrated just before the ECM121. The SSD Vice-chair, Maria C. Asensio presented a summary of the highlights in Surface Science at the AVS62nd meeting as part of the ECM121 meeting entitled “**Building Surfaces without Bulk: Last Highlights from Surface Science Division Beyond Graphene**” as invited speaker at the IUVSTA of the conference, organized by David Ruzic STD director. It has been decided by IUVSTA officers that the content of these presentations will be published as a highlight series. Miran Mozetič, who will compile all the material in a manuscript to be published, in the near future, is assembled the abstracts from each Division.

4.- Contribution of the SSD to the 20th International Vacuum Conference (ICV20) to be held in Busan, Korea in 21-26 August 2016. In the table 1 below, is indicated the list of selected topics for the SSD, as well as an early statistic of the received abstracts for poster, oral and invited contributions. This statistic is just partial due to the fact that the deadline has been extended and therefore additional contributions have been received. The definitive numbers will be known after the celebration of the IVC20, at the end of August 2016.

In the context of the IVC20, the SSD has also participated in the organization of the Short Courses of the conference, as part of the educational activities of the IVC20. The title of the course is “**Recent Developments in Synchrotron Radiation**”, which will develop the latest cutting-edge instrumental and scientific activities in the field of large installations facilities, related with the use of synchrotron radiation sources.

Topic Name of the Surface Science Division at the 20th International Vacuum Congress	Total	Posters	Orals	Invited
SS 01. Surface structures	10	4	6	
SS 02. Metal, alloys and their surfaces	8	1	7	
SS 03. Surface structure and dynamics	3	1	2	
SS 04. Oxide surfaces and thin/ultrathin oxide films	7	3	4	
SS 05. Adsorption and reaction on surfaces	8	5	3	
SS 06. Liquids and liquid surfaces *(w/ BI, ASS)	3	1	2	
SS 07. Electronic structures of surfaces	12	8	4	
SS 08. Molecules at surfaces	7	6	1	
SS 09. Organic layers	4	3	1	
SS 10. Polymer surfaces	0	0	0	
SS 11. Semiconductors, their surfaces and Semiconductors low dimensional materials *(w/ EMP)	3	3	0	
SS 12. Surface and interface growth	5	3	2	
SS 13. Imaging techniques other than SPM	0	0	0	
SS 14. Catalysis under ideal and real conditions	5	1	4	
SS 15. Electrochemistry on surfaces	4	2	2	
Total	92	38	41	13

Table 1: Preliminary participation of the SSD to the IVC 20 in Busan Korea.

5.- Finally, the elections of the SSD officers for the next Triennium 2016-2019 has been accomplished. The number of National delegate members of the SSD for the Triennium 2016-2019 counts 28 scientists from 28 different countries. The ballot has been conducted ensuring the participation of all members of the new SSD Electoral College, using their emails to widely transmit the information and rules. The result of the election is as follows:

Chair: Maria C. Asensio, **France.** Synchrotron SOLEIL & Université Paris Saclay.

Vice-chair: Mario Rocca, **Italy.** Dipartimento di Fisica dell'Università di Genova

Vice-Chair: Fumio Komori, **Japan.** ISSP, University of Tokyo, **(Formal Secretary)**

This concludes the summary of the SSD activities, during the Triennium 2013-2016.

Acknowledgements:

The SSD officers would like to express their sincere gratitude to all SSD members, as well as to the other Divisional officers, for the fruitful collaborative projects, that we have realized together, during this last Triennium. Moreover, we thank very much to the IUVSTA officers for their strong continuous support.

Report submitted by Maria C. Asensio

12th August 2016

TFD report Triennium 2013-2016

1. Elections

- *For the triennium 2013-2016*, the election procedure was initiated with a call to the country representatives to submit their vote. This call was repeated twice. 15 (out of 25 votes) were received. All members supported the candidacy of the-chair (A. Tagliaferro) and the secretary (D. Depla) of the previous triennium (2010-2013) to continue their function. For the vicechair, there were two candidates (P. Hovsepien and A. Maqsood). P. Hovsepien was elected. An overview of the members in 2013-2016 is given the end of the report.
- *For the triennium 2016-2019*, the election procedure was started with a call for representatives. D. Depla expressed his interest to continue his function as secretary. Two candidacies were received for chair (or alternatively vice-chair) : F. Frascassi (It.) and P. Hovsepien (GB.). 18 (out of the 27 votes) were received. The members supported the candidacy of the secretary (D. Depla) to continue his function. Both colleagues interested in the function as chair received the same number of votes (9). After a short discussion among F. Frascassi, P.Hovsepien and D. Depla, F. Frascassi was proposed to become chair of the TFD, and P. Hovsepien vice-chair. The TFD agreed with this proposal.

2. International conference of Thin Films (ICTF)

On November 28th 2013 the vacuum societies, represented by the TFD members, were invited to bid for the venue of ICTF-17. One bid was received by the Indian Vacuum Society(IVS) (representative Dr. Aswal) on January 30th 2014. After distribution of the bid by the IVS, the division members were invited to comment on the bid. Based on the input of the division members the secretary of the TFD sent on April 25th 2014 a list with questions. The response of the IVS was received May 1st 2014. The response was distributed among the division members with the request, if needed, to comment it. No further comments were received. The voting procedure was initiated on May 6th 2014. As the number of responses was too low to make a final decision, the call for votes was repeated on June 4th 2014. 15 votes (of 26 possible votes were received). Three email addresses didn't function anymore. Thirteen members approved the bid, two members abstained. Based on this outcome, the TFD officially informed the IVS that the bid was approved. The IUVSTA general secretary was informed, and on July 28th 2014 the general secretary sent a conformation letter to Dr. Aswal, representative of the IVS. The conference general Chairman is Dr. Arwal. Initially the BARC (Mumbai) was suggested as venue. However, for practical reasons it was agreed to change the venue to NPL in Delhi. The conference will take place mid November 2017 (13-17 November). A meeting was organized on 21 March 2016.

3. Supported workshops.

1. OXIDE NANOSTRUCTURES ON METAL SURFACES

The TFD members received the proposal on June 18th 2014. Thirteen members approved the proposal. No response was received from the other members. Based on the outcome of the voting, the TFD supported the IUVSTA workshop proposal. This 76th IUVSTA Workshop took place in Avila, Spain, between June 27- July 1, 2016

2. New horizons in oxynitride thin films: from synthesis to applications

The TFD members received the proposal on October 1st 2014. the members approved the proposal. Based on the outcome of the voting, the TFD supported the IUVSTA workshop proposal. The workshop took place at the INL, Braga (Portugal) between 4 and 9 October 2015.

4. IVC20

Responding to a question from Professor Young Kuk, the TFD proposed during a meeting at the ICTF16 (Dubrovnik), the 5 committee members This information was sent to Professor Kuk, in cc. with the contact persons for the thin film division for IVC, Dr. Yong-Min Kim. The list was further updated by the KVS.

- Chair : Euijun Yoo
- Vice-Chair : Alberto Tagliaferro
- Secretary : Yongmin Kim
- Belgium : Diederik Depla
- Austria : Christoph Eisenmenger-Sittner
- Brazil : Rogerio P. Mota
- Spain : Franciso Yubero
- Sweden : Erik Lewin
- Japan : Shigeaki Zaima
- P.R. China : Feng Pan
- Korea : Young-Woo Heo

The TFD has suggested a list of topics for the IVC 20 TFD Division program. On 16/12/2015 the following list was approved,

- TF 01. Advances in modeling thin film growth
- TF 02. Nanostructured and architecturally designed coatings, smart surfaces
- TF 03. Challenges in magnetic thin films
- TF 04. Structure formation in multi-component thin films
- TF 05. Carbon based films: diamond, DLC, organic polymers
- TF 06. Energetic particle and solid interaction
- TF 07. Oxide thin films *(w/ ASS)
- TF 08. Thin films in environmental applications (energy harvesting, saving and storage) *(w/ EMP, AE)
- TF 09. Plasma-surface interactions for thin film engineering *(w/ PST)
- TF 10. Plasma polymerized thin films *(w/ PST)
- TF 11. Protective coatings in severe environments
- TF 12. Thin films and surfaces in biological applications *(w/ BI)
- TF 13. Advances in deposition techniques
- TF 14. Chemical kinetics in reactive deposition and process
- TF 15. Aesthetic thin film coatings (colored coatings, luminescent coatings, and etc)
- TF 16. Chemical analytics at the nanoscale
- TF 17. Porous thin films
- TF 18. Emerging Thin Film Technology

78 abstracts were received.

5. Meetings

- 15/10/2014, Dubrovnik, Croatia
- 2. Presentation at the IUVSTA Highlight Seminar : “Highlights and Trends in Thin film Deposition” by C. Eisenmenger-Sittner, 01/10/2015, San Jose (USA).
- Video conference 21/03/2016 : ICTF17 organisation committee, secretary and chair of the TFD.



Members of the Thin Film Division Triennium 2013 - 2016

VSTD Report Triennium 2013-2016

First activity of VSTD in the triennium was the IUVESTA was ECM118 where the first order of business was to establish a working contact list of active VSTD members along with functioning emails. Regular (~monthly) email has been exchanged among the members. Due to changes and reorganization of the divisional structures of IUVESTA, VSTD is now a larger committee currently consisting of 28 members and representing 28 countries! As chair, I welcomed this change and invited more participants into the work that we do as a committee, and engage a wider audience from which we draw new ideas for VSTD.

VSTD has developed goals for the next triennium been defined and were circulated to the members. Goals for the triennium included:

- Serve as an international communication “hub” that connects vacuum science and technology scientists around the world.
- Program development of IVC-20 VSTD (Busan, Korea 2016).
- Organize call for European Vacuum Conferences (EVC) proposals and selection.
- Organize call for Workshops in Vacuum Technology.
- Organize call for education and Schools in Vacuum Technology.

September 8th-12th, 2014, the 13th European Vacuum Conference was held in Aveiro, Portugal. The meeting was a success and had 274 participants representing 33 countries.

During this meeting, VSTD held a special meeting to discuss EVC14 planning. A British Vacuum Society Bid had been planned but would conflict with the normal JVC meeting. It was suggested, that a joint EVC+ JVC meeting be planned for 2016 and that the British Vacuum Society Bid be withdrawn so that the Joint meeting would take place. Janez Setina worked with Slovenian Vacuum Society president, Janez Kovac, and it was agreed and a proposal was drafted.

October 10-12, 2015 during ECM119 Planning Future Workshops and Schools the following proposals were submitted

- Workshop submitted by Joe Herbert, “Functional Surface Coatings and Treatment of UHV/XHV Applications” 28th September - 1st October 2015. See full details below. VST wishes to have this considered strongly at ECM119 as it occurs in less than one year.
- Workshop: Ichiro Arakawa, Katsuyuki Fukutani, Oleg B. Malyshev, Paolo Chiggiato “Surface Processes, Gas Dynamics, and Vacuum Technology of Cryogenic Vacuum Systems” held as a satellite meeting of IVC-20 Aug. 22-26 in 2016 Korea. The VSTD Chair has forwarded this proposal to the IUVESTA scientific secretary for consideration. Click on the document for full proposal.
- IVC-20 VST planning: The Chair has been contacted by Young Kuk, program committee chair of IVC-20, and early planning has started. Target is 50% of divisional program committee members (up to 6 members) should be selected by IUVESTA divisions. I, therefore, ask you to suggest 4-6 program committee members of Vacuum Science and Technology from your division.

December 22-24, 2014 Technical Training Course #16

Applied Vacuum Technology

COMSTECH Headquarters, Islamabad, Pakistan

Final Report (pdf Format, 2.16 MB): [TTC 16](#)

April 17-19, 2015 at the ECM120 meeting in Gratz IUVSTA Workshop 77 was Funded: Ichiro Arakawa, Katsuyuki Fukutani, Oleg B. Malyshev, Paolo Chiggiato “Surface Processes, Gas Dynamics, and Vacuum Technology of Cryogenic Vacuum Systems” held as a satellite meeting of IVC-20 Aug. 22-26 in 2016 Korea. Funding of 6000 Euro approved at ECM119.

May 17th-21, 2015 13th IUVSTA School: “Vacuum Gas Dynamics: Theory, Experiments and Applications” was held 17-21 May 2015, Thessaloniki, Greece, taught by Felix Sharipov, Oleg Malyshev, Dimitris Valougeorgis. The school was a great success with over 40 participants. In total, 10 lectures and 6 practical sessions were given covering the many topics in the field of vacuum gas dynamics. Details can be found here:

http://www.iuvsta.org/iuvsta2/assets/docs/pdf/SC13_News_Snippet.pdf



October, 23-25 2015 ECM121 meeting in Morgan Hills CA was held with a special Highlight seminar. VSTD Chair, Jay Hendricks, presented a highlight seminar at the AVS62nd meeting as part of the ECM121 meeting entitled “highlights of Next Generation Vacuum Science and Technology” as part of an all invited speaker IUVSTA session organized by David Ruzic STD IUVSTA director.

October 23-25, 2015 EVC14 meeting planning is moving forward and announced it would be held in June, 2016. EVC14 will be in conjunction with JVC meeting and will be hosted/underwritten by the Slovenian Vacuum Society with usual scientific planning support from VSTD representatives of Europe and VSTD chair. The following Vacuum Science and Technology program committee is being organized and the website is planned to go live soon. Website: www.jvc-evc-2016.org

EVC14 VST Organizing Committee

- Janez Setina (as representative of organizing country)
- Jay Hendricks (IUVSTA VSTD chair)
- Lars Westerberg (Sweden)
- Christian Day (Germany)
- Joe Herbert (UK)
- Janez Setina (as representative of organizing country)
- Manfred Leisch (Austria)

28th September - 1st October 2015 Workshop On UHV/XHV Applications was held

“Functional Surface Coatings and Treatment of UHV/XHV Applications” was held 28th September - 1st October 2015 and was organized by Joe Herbert. The workshop was given funding by VACOM Vakuum Komponenten & Messtechnik GmbH and Ute Bergner, when it did not get IUVSTA funding at the ECM120. One VSTD member commented when it was announced that this was an excellent example of “...promoting good collaboration within IUVSTA, VSTD and the community in general!”

October 8-11, 2015 Technical Training Course #17 was held: **Principles of Technology**
Hotel Triglan, Strbske Pleso, Slovakia
Final Report (pdf Format, 29.55 MB): [TTC 17](#)

October 23-25, 2015 Workshop Planning for ECM121:

VSTD is supporting a workshop proposal entitled “Workshop for the Ultra-low Emittance Light Source Vacuum Systems” held 24-28 October 2016 held in Taiwan. The proposed IUVSTA Workshop underwritten by Taiwan Vacuum Society (TVS) and is organized by Gao-Yu Hsiung, NSRRC, Taiwan , Jay Hendricks, NIST, USA (VSTD of IUVSTA, Joe Herbert, ASTeC, UK (VSTD of IUVSTA), Yoshio Saito, KEK, Japan. The goal of this workshop tries to find the best solutions on the vacuum design and manufacturing processes for those upgrading projects, and planning synchrotron light source facilities approaching to the ultra-low emittance < 1 nm-rad. Presented by Gao Yu Hsiung at ECM121. The IUVSTA division chairs voted unanimously to forward to the ECM121 for a vote. The next day ECM121 voted to approve the workshop for 6,000 Euro.

October 23-25 IVC-20 VST planning: The VSTD Chair has been contacted by Young Kuk, program committee chair of IVC-20. Target is 50% of divisional program committee members (up to 6 members) should be selected by IUVSTA Vacuum Science and Technology from your division. Here are the names selected by VSTD:

Here is the final committee for IVC-20 VST

Chair Jay Hendricks (USA)

Co-Chair Chong Do Park (Korea)

Members Ichiro Arakawa (Japan)

Manfred Leisch (Austria)

Jean Louis Bersier (France)

Lars Westerberg (Sweden)

June-Rong Chen (Taiwan)

Martin Wüest (Switzerland)

Christian Day (Germany)

Ju-Young Yun (Korea)

Seung-Soo Hong (Korea)

April 15-17th, 2016 ECM-122 Braga Portugal Final planning for JVC-16/EVC-14 meeting was completed. Collaboration to hold Join meeting successfully moves forward:

EVC14 meeting is June 6-10, 2016. EVC14, and is in conjunction with JVC meeting and is hosted/underwritten by the Slovenian Vacuum Society with scientific planning support from VSTD representatives of Europe.

Website: www.jvc-evc-2016.org



EVC14 Organizing Committee

Conference Chairman: Janez Kovač (SLO)

Vice Chairman: Manfred Leisch (AUT)

Vice Chairman: Miha Čekada (SLO)

International Program Committee

- Janez Šetina (SLO), VST
- Jay Hendricks (USA), VST
- Manfred Leisch (AUT), VST
- Lars Westerberg (Sweden), VST
- Christian Day (Germany), VST
- Joe Herbert (UK), VST
- Miran Mozetič (SLO)
- Andrej Vincze (SK)
- Ivana Capan (CRO)
- Slobodan Milošević (CRO)
- Alberta Bonanni (AUT)
- Karel Mašek (CZ)
- Vítězslav Straňák (CZ)
- Béla Pécz (H)
- László Óvári (H)
- Monika Jenko (SLO)
- Lubomir Vanco (SK)

30 May-2 June 2016 IUVSTA Technical Training Course on “Low Pressure Plasma Processes and Technology” Technical Training Course: VSTD supported the proposal of S. Novak, CZ, TTC, “Low Pressure Plasma Processes and Technology” 30 May-2 June 2016. 3day course taught in Czech, 8 lectures covering plasma physics and plasma processes, kinetics and diagnostics; and lectures in barrier coatings, nanoparticles and pumping systems. 2,500 Euro support is being requested which is less than 1/3 the total cost of the TCC and is underwritten by the Czech Vacuum Society. The educational committee voted to approve forwarding to the ECM121 for a vote. ECM121 vote was passed and TTC funded for 2,500 Euro.

April 15th-17, 2016 EVC-Planning for EVC-15 (2018) has already begun and was conducted by the Chair (Jay Hendricks, USA) using the following timeline:

- 1st call for Bids: December 15th (approximate) (Completed)
- 2nd call for Bids: Reminder: ~Jan 15th (Completed)
- Planning Deadline for notifying of intent to submit a bid Feb. 25th, 2016 (Completed)
- Deadline for bids March 25th, 2016 (Completed)
- General Comments open until March 31st 2016(Completed)
- I'll email voting instructions April 1st (Completed)
- Voting competed by April 15th
- Announce Winning Bid to VSTD: Goal May 5th, 2016
- Decision announced at EVC14 in Slovenia, June 2016

Two Bids have been submitted and voting was started April 4th with both proposals being circulated to the members of VSTD. The end date for voting is April 15th

Swiss Vacuum Society bid to host the 15th EVC in 2018 (Swiss Bid Champions: Prof. Dr. Hans-Arno Synal
synal@phys.ethz.ch ; Martin.Wuest@inficon.com Mauro.Taborelli@cern.ch)



German Vacuum society bid to host 15th EVC in 2018 (German Bid Champions: Michael Kopnarski
kopnarski@ifos.uni-kl.de); Peter Schaaf Univ.-Prof. Dr. TU Ilmenau peter.schaaf@tu-ilmenau.de ; zahn@physik.tu-chemnitz.de)



On April 15th 2016 all votes were counted and the Swiss Bid won with a 60 % majority of the vote.

May 30 - June 2, 2016 Technical Training Course #18 was held: “**Low Pressure Plasma Processes and Technology**” Hotel Kravi hora Bořetice, Czech Republic
 Final Report (pdf Format, 0 kB):

June 6-10 2016 EVC-14 Combined with JVC-16 meeting was held.

Collaboration to hold Joint meeting between JVC-16 and EVC14 was held June 6-10, 2016 was a success. JVC/EVC joint meeting was was hosted/underwritten by the Slovenian Vacuum Society with scientific planning support from VSTD representatives of Europe. Conference had 190 talks and posters (130 oral talks and 60) and over 300 attendees.

Upcoming VST Workshops, Schools and Technical Training:

- 77th IUVSTA Workshop in conjunction with IVC20: “Surface Processes, Gas Dynamics, and Vacuum Technology of Cryogenic Vacuum Systems” Ichiro Arakawa, Katsuyuki Fukutani, Oleg B. Malyshev, Paolo Chiggiato “will be held satellite meeting of IVC-20 **Aug. 17-21** in 2016 Korea. IUVSTA funding of 6000 Euro.
[77th IUVSTA Workshop](#) (Vacuum Science and Technology Division)
"Surface processes, gas dynamic and vacuum technology of cryogenic vacuum systems"
Kasugi View Hotel, Fuefuki, Japan
August 17-21, 2016
Web: http://www.vacuum-jp.org/IUVSTA/77IUVSTA_workshop/
- 80th IUVSTA Workshop for the Ultra-low Emittance Light Source Vacuum Systems: VSTD supported a workshop proposal entitled “Workshop for the Ultra-low Emittance Light Source Vacuum Systems” will be held **24-28 October 2016** held in Taiwan.
<http://www.taiwanvacuum.org/index.php/en/ws80>. IUVSTA Workshop underwritten by Taiwan Vacuum Society (TVS) and is organized by an **International Organizing Committee (Chair*)** Jay Hendricks (NIST, USA), Joe Herbert (ASTeC, UK), Tohru Honda (KEK, Japan), Hsiao-Chaun Hseuh (BNL, USA), Gao-Yu Hsiung* (NSRRC, Taiwan), Yoshio Saito (ICRR, Univ. Tokyo, Japan). **The Program Committee consists of:** Eshraq Al-Dmour (MAX IV, Sweden), Paolo Chiggiato (CERN, Switzerland), Matthew Cox (Diamond, UK), Michael Hahn (ESRF, France), Jay Hendricks (NIST, USA), Joe Herbert (ASTeC, UK), Tohru Honda (KEK, Japan), Hsiao-Chaun Hseuh* (BNL, USA), Gao-Yu Hsiung (NSRRC, Taiwan), Hsin-Pai Hsueh (NSRRC, Taiwan), Kazuhiko Mase (KEK, Japan), Yusuke Suetsugu (KEK, Japan). The goal of this workshop tries to find the best solutions on the vacuum design and manufacturing processes for those upgrading projects, and planning synchrotron light source facilities approaching to the ultra-low emittance < 1 nm-rad. Presented by Gao Yu Hsiung at ECM121. The IUVSTA division chairs voted unanimously to forward to the ECM121 for a vote. The next day ECM121 voted to approve the workshop for 6,000 Euro.
[80th IUVSTA Workshop](#) (Vacuum Science and Technology Division)
"Ultra Low Emittance Light Source Vacuum Systems"
Hsinchu, Taiwan
October 24-28, 2016
Web: <http://www.taiwanvacuum.org/index.php/en/ws80>

This concludes the activities of the Vacuum Science and Technology Division

Jay H. Hendricks

VSTD chair Triennium 2013-2016

President Inaugural Statement : Lars Montelius

The goal during the next three years is to further develop IUVSTA and its identity as an inspiring, competent, engaging, well-known and influential international organization that proudly serve society. Our new activities being discussed during the past triennium related to setting up a communication plan and develop a completely new and modern web-interface are instrumental for achieving the goal.

Further, we shall continue the good work during the last triennium when it comes to enlarging IUVSTA by attracting new member states and helping new member states to form national organizations. In addition, we shall continue the discussions about developing IUVSTA as an organization that clearly has an important role for the development of a resilient society. We shall bring IUVSTA into the international dialogue by active engagement in important science policy actions and discussions.

The paradigm in science is changing. In the past it was all about individual achievements - whether individual mean individual nation or individual scientists. A typical example of the past paradigm was putting a man on the moon. Nowadays, we are facing complex grand challenges such as Aging Population, Obesity, Clean Water for everybody, Safe Society etc that need to be addressed in concert. Hence, the perception of science – from a community perspective – has become more and more important. In a further reduction and in one sentence, it is all about engagement of the citizens – and ultimately to knowledge empowerment of the consumers/citizens. This new paradigm implies that we have to be able to tell and explain our scientific and engineering world to the common people in the streets. In short, this is our scientific social responsibility.

We need to articulate clearly our role in problems that the younger generation is interested in, i.e. to convey the importance of Vacuum Science in relation to social innovation and societal development and thereby increase the interest of young people for becoming members in national societies and for work within IUVSTA, i.e. making students and post-docs more interested in the subject of Vacuum Science. Here our new initiatives for awards and prizes for younger scientists will be instrumental. Presently, internet-of-everything, industry 4.0 and augmented reality/virtual reality are hot subjects into which IUVSTA have to discuss its role.

I believe from the bottom of my heart that IUVSTA, has a very important role to play in the research, technology and innovation processes fostering a sustainable societal development. I will work together with all members of IUVSTA and specifically together with the officers, to develop IUVSTA to become an influential entity that students and professionals in the vacuum community worldwide will be proud of being a part of.

A short introduction to IUVSTA

This short introduction aims to give a brief survey of the IUVSTA background, particularly for those delegates who have little knowledge of the functioning mechanisms of the Union.

IUVSTA (International Union for Vacuum Science, Technique and Applications) is a Union of national member vacuum societies whose role is to stimulate international collaboration in the fields of vacuum science, techniques and applications and related multi-disciplinary topics including solid-vacuum and other interfaces.

General operational decisions and the associated discussions take place at meetings of the **Executive Council**, typically every 6 months, The Executive Council comprises the Officers (President, Past President, President Elect, Scientific Secretary, Scientific and Technical Director, Treasurer and Secretary General) and one representative of each member society, either the Councillor or the Alternative Councillor.

Associated with the Executive Council meeting there are meetings of several **Committees** where much of the debate takes place and a meeting of the **Scientific and Technical Directorate (STD)**.

The **Scientific and Technical Directorate** has its own Director and Secretary, provides a forum of discussion for the general scientific and technical activities of the Union and is responsible for the programme of IUVSTA Scientific Workshop and Schools, selecting topics and venues from the proposals made by the Divisions. STD also makes decisions on endorsement and sponsorship of Conferences and supervises the scientific organization of the IUVSTA Vacuum Congress. The STD comprises eight **Divisions: Applied Surface Science, Electronic Materials & Processing, Nanometer Structures, Plasma Science & Technique, Surface Engineering, Surface Science, Thin Film, Vacuum Science and Technology**. Each Division has a representative for all the national member societies. A **Steering Committee on BioInterfaces** has operated during the last Triennium.

The **Awards and Scholarships Committee** is responsible for overseeing the award of the M.W. Welch International Scholarship which was established in 1965 to support younger scientists working abroad in vacuum science and technology. The Committee selects also the conferences at which Elsevier Student Awards will be made and is responsible for the organisation and for the selection, through an ad hoc panel, of the winners of the triennial IUVSTA Prize for Science and of the triennial IUVSTA Prize for Technology. A new development is the World Transfer Program to encourage young researchers to work in another laboratory for short periods.

The **Congress Planning Committee** oversees the arrangements for the organization of the forthcoming triennial International Vacuum Congress and at the same time seeks and evaluates bids for the future IVC making recommendation to the Executive Council meeting.

The **Education Committee** oversees the activities of education. This includes visual aids programme, short courses associated with scientific meetings sponsored by IUVSTA and the Technical Training Course Programme.

The **Emerging Societies Committee** is responsible for liaising with the scientific community in countries where IUVSTA is not represented and encouraging their interactions and activities which might lead to the creation of a society which could apply for membership of the Union.

The **Finance Committee** is chaired by the Treasurer and monitors the investments of the financial resources of the IUVSTA and prepares the triennial budget.

The **Long-Range Planning Committee** is chaired by the President Elect and provides a forum of wide-ranging discussions in structure and news activities for IUVSTA,

The **Publications Committee** oversees IUVSTA publications, and the web page <http://www.iuvsta.org>

The **Statutes Committee** oversees the Statutes, By-Laws and working practices of the Union and ensures that they are modified to take account of changing situations.