



Scientific and Technical Directorate(STD)

Jay Hendricks, Scientific Director

Katsuyuki Fukutani, Scientific Secretary

ECM-133

Virtual Meeting

October 9, 2020



Scientific Director's Forward View

The Scientific and Technical Directorate (STD) coordinates the Scientific and Technical activities of the Nine IUVSTA Divisions

- **Communication:** “Serve as an international communication ‘hub’ that connects vacuum science and technology scientists around the world”.
- **Education:** Work with Division Chairs to develop *Workshops, Schools, Short Courses, and Technical Training*
- **IVC Scientific:** Work with IUVSTA Division Chairs to Develop IVC-22 Program and abstract calls through the international program committee.
- **Society Impact:** Find Applications where our science has positive impact for society.
 - Support for science in less developed countries .
- **Develop Focus Topics:**
 - Quantum Science (AVS launches Quantum Science journal, Quantum Based Units, Quantum Computing/deep learning).
 - Photonics and Nano photonics (multiple technologies, including bio applications)
 - Role of Sensors and Sensor Science (AI, Self-driving cars)
 - Technologies for Sustainability (clean water, air,)
 - Next Gen. Energy (Fusion, Solar, new materials and process enabling technologies, batteries)
 - **FIGURE OUT HOW TO FUNCTION IN A PANDEMIC!!!**

2019-2022 IUVSTA Scientific and Technical Division Officers

IUVSTA Division

Chair

Vice Chair

Secretary

ASSD - Applied Surface Science

Leszek Markowski

John T. Grant

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BID - Biointerfaces Division

Dmitri Petrovykh

Miguel Manso

Carlos R. Grandini

EMPD - Electronics Materials & Proc.

Ivana Capan

Monika Kwoka

Reinhard Schwarz

NSD - Nanometer Structures

Ana Gomes Silva

Shuji Hasegawa

Carla Bittencourt

PSTD - Plasma Science & Tech.

Satoshi Hamaguchi

Miran Mozetič

Deborah O'Connell

SED - Surface Engineering

Ivan G. Petrov

Peter Schaaf

Monika Jenko

SSD - Surface Science

María Carmen ASENSIO

Mario Rocca

Fumio Komori

TFD - Thin Film

Mile Ivanda

Papken Hovsepian

Diederik Depla

VSTD - Vac. Science & Tech.

Marcelo J. Ferreira

Martin Wüest

Joe Herbert

EC- Education Committee

Alberto Tagliaferro

Ana Silva

Sylve Bourgeois

The changing landscape of scientific meetings

- In-Person Meetings
 - PRO: Fantastic opportunity, real-world experience-based learning
 - CON: Expensive
- Virtual Meetings
 - PRO: Unlimited reach, low-cost
 - Lack the real-world learning experience
- Hybrid Events
 - PRO: Best of both worlds
 - CON: Twice the work for organizer





IUVSTA Call for Proposals for ECM 133

Dear IUVSTA Colleague,

it is now time to call for proposals for scientific meetings that will be considered for IUVSTA funding for the upcoming ECM133 which will be held virtually October 9-10th, 2020.

Proposals are due on or before September 29th, 2020. Coordinate the submission with your Division Chair

Traditionally, this call includes Workshops (WS), Schools (Sch), Technical Training Courses (TTC) and Short Courses (SC). These meetings have been traditionally face-to-face and held in the “brick-and-mortar” real world (and involve, travel, hotel stays, and conference halls). In this time of COVID-19, we are encouraging applications to consider how they could achieve scientific impact with meetings that are “virtual” and take place via remote/teleworking technology or are a “hybrid” event with both in person and remote options running simultaneously.

As many of the “in-person” meetings from 2020 are being pushed into 2021, it is not recommended that a 100% in-person meetings be proposed for 2021 and should be even discouraged for 2022. While proposals can still be written for these, it is unlikely that they will be successfully approved at ECM133.

Therefore, please consider how your event can be planned with virtual or remote learning technology. It will be understood that an “all-remote/virtual” meeting will be less expensive to carry out and therefore the budget should reflect this. The message here is that IUVSTA is seeking proposals for “all-remote/virtual” events that have scientific impact and clear and detailed budget.

Finally, if you have a good idea, don’t hesitate to ask! IUVSTA wants to encourage you, the creative scientist to figure out new and improved ways for us to engage in scientific cross-fertilization of ideas, outreach, education, and learning.

These proposals are due September 29th, 2020 and shall be submitted directly to Katsuyuki Fukutani (Scientific Secretary, fukutani@iis.u-tokyo.ac.jp) and Jay Hendricks (Scientific Director, jayh@nist.gov). Proposals submitted on/before or on this date will be discussed and voted on ECM-133.

Jay Hendricks, IUVSTA Scientific Director

Katsuyuki Fukutani, IUVSTA Scientific Secretary

Alberto Tagliaferro, IUVSTA Chair of Education Committee

	WS Workshops	SCH Schools	TCC Technical Training Course	SC Short Course (may adapted to webinar)
Submission:	TO: Scientific Secretary CC: SD + organizers	TO: Scientific Secretary CC: SD + organizers	TO: Scientific Secretary CC: ECC/ECVC/ECS/SD + organizers	TO: Scientific Secretary CC: ECC/ECVC/ECS/SD + organizers
Summary/ Purpose:	To advance scientific knowledge in a field; rather than be educational of existing knowledge	To educate on existing knowledge	To educate at the beginner level , generally not same topic in sequential years	To educate on existing knowledge “state of the art “in a specific field
Organized by/Underwriter	Organized IUUSTA Division(s)/National Vacuum Society or university	Organized IUUSTA Division(s)/National Vacuum Society or university	Organized IUUSTA Division(s)/National Vacuum Society or university	Organized IUUSTA Division(s)/National Vacuum Society or university
Format:	Format should be like that of a “ Gordon Conference ” with no publication of proceedings.	Format is a school with Intense instruction on a specific topic with learning/educational materials provided.	Format Example: Practical vacuum science for the regional technician /engineer	Held in conjunction with existing scientific meeting. Example AVS Short Courses
Location:	Remote location (not large city) in a hotel, hostel, university campus, or small town.	Typically, University campus	Regional	Regional to Main scientific meeting
Size/Duration	40-50 delegates 4-6 days	40-80 students 1 to 2 weeks	Any 1-3 days	any 1-2 days
Participation:	Organizers invite 10-20 talks of International experts	International teaching experts in the field	Regional experts and students	Regional experts and students
Program:	Dominated by single session oral presentations by invited speakers. Lots of unstructured discussion space in program and time for questions (opposite of a conference style with little time for questions).	Intense instruction/school on a specific topic with learning/ educational materials provided often in the form of textbook	Dominated by regional experts in the field and often taught in the local language.	1-2 days held in conjunction with a main scientific meeting.
Funding:	6,000-9,000 Euro	6,000-9,000 Euro	2,500 Euro maximum	2,000 Euro maximum
Language:	Typically, English (French/German permitted)	Typically, English (French/German permitted)	Local/regional language is encouraged	English (French/German permitted), maybe regional if main conference is regional language (unusual).
Approval Route	STD→ECM	STD→ECM	EC→STD→ECM	EC→STD→ECM

AGENDA STD ECM-133

1. Opening and welcome (Jay Hendricks)
2. Attendance (Katsuyuki Fukutani)
3. Adoption of Agenda (all)
4. Approval Minutes of previous ECM132 (link below)

https://iuvsta.org/iuvsta2/assets/docs/meantime/ECM_133/ECM_132_%20STD_STD%20minutes_ECM132_20200322.pdf

5. Divisional reports

- ASSD-Applied Surface Science Division **Leszek Markowski**
- BI-Biointerfaces Division **Dmitri Petrovykh**
- EMPD-Electronic Materials & Processes Division **Ivana Capan**
- NSD-Nanometer Structures Division **Ana Gomes Silva**
- PSTD-Plasma Science & Techniques Division **Satoshi Hamaguchi**
- SED-Surface Engineering Division **Ivan G. Petrov**
- SSD-Surface Science Division **María Carmen ASENSIO**
- TFD-Thin Film Division **Mile Ivanda**
- VSTD-Vacuum Science and Technology Division **Marcelo J. Ferreira**

Division/ Reports		Chair	Presenting	Vice Chair	Secretary
ASSD	(5 min)	Leszek Markowski	Leszek	John T. Grant	--
BI	(5 min)	Dmitri Petrovykh	Dmitri	Miguel Manso	Carlos R. Grandini
EMPD	(5 min)	Ivana Capan	Monika	Monika Kwoka	Reinhard Schwarz
NSD	(5 min)	Ana Gomes Silva	Ana	Shuji Hasegawa	Carla Bittencourt
PSTD	(5 min)	Satoshi Hamaguchi	Satoshi	Miran Mozetič	Deborah O'Connell
SED	(5 min)	Ivan G. Petrov	Ivan	Peter Schaaf	Monika Jenko
SSD	(5 min)	María Carmen ASENSIO	María	Mario Rocca	Fumio Komori
TFD	(5 min)	Mile Ivanda	Mile	Papken Hovsepian	Diederik Depla
VSTD	(5 min)	Marcelo J. Ferreira	Marcelo	Martin Wüest	Joe Herbert
Education	(10 min)	Alberto Tagliaferro*	Alberto	Ana Silva	Sylvie Bourgeois

6. Proposals of Workshops (WS) and Schools (SCH) for approval (5 min. Presentation, 5 min Discussion each)

Proposal filename	Place/Country	Date	Organizer (underwriter)	IUVSTA Division	Presenter	Title	Requested Funding (€)
#1-WS-Proposal_1	Online (only)	Jan 20-22, 2021	PlasmAdvance AB	SE, NSD	Ulf Helmersson	HiPIMS Today-Recent Development of High-Power-Impulse Magnetron Sputter	3200



7. Proposals from Education Committee, for approval

Proposal filename	Place/ Country	Date	Organizer (underwriter)	IUVSTA Division	Presenter	Title	Requested Funding (€)
#2_SC_proposal_1	Marseille France	June 1,2 2021 included in EVC 16	French Vacuum Society(SFV)	(EC)	Sylvie Bourgeois	Gas flows under vacuum conditions: from theory to applications	2000
#3_TTC_proposal_1	Virtual (Quezon City, Philippines)	Mar 18-19 ,2021	Vacuum Society of the Philippines	(EC)	Kathrina Lois Taaca	Plasma and Society	2000



8. Status of existing WS from ECM 132 and Earlier

title	Place/ Country	Status/Date	Organizer (underwriter)	IUVSTA Division	Primary Contact	Title	Requested Funding (€)
WS 90	Spain	second semester 2021		SSD	Juan.F.Sanchez@uv.es	Tuning properties of advanced energy materials using modern theoretical and experimental methods	6000
WS 91		February 27th - March 3rd 2022		NSD	baran.eren@weizmann.ac.il	Surface Chemistry of Catalytic Systems	6000
WS 92	Okinawa Japan	Postpone to sept 2021	Japan Society of Vacuum and Surface Science	NSD, SSD	shuji@surface.phys.s.u-tokyo.ac.jp	Workshop on Advanced Spectroscopy and Transport for 2D Materials at Surfaces	6000
WS 93	Castle Seggau, Austria	postpone it to spring 2022	Austrian Vac. Soc.	SE NSD, TFD, ASSD	petrov@illinois.edu	Advances in the characterization of surface engineering structures, coatings, and thin films	6000
WS 94	Cerklje na Gorenjskem Slovenia	7-12, March 2021	Slovenian Vacuum Society	PSTD	Miran Mozetič	Reliable sensing and control of reactive plasmas	9000
WS 95	Guimarães Portugal	4-7, Oct. 2021	University of Minho	TFD	Joel Borges	Plasmonic Thin Films: Theory, Synthesis and Applications	6000

8. Status of existing Proposals from Education Committee

title	Place/ Country	Status/Date	Organizer (underwriter)	IUVSTA Division	Primary Contact	Title	Requested Funding (€)
TTC 21	Štrbské Pleso, Hotel Trigan	Postpone to October 2021	Slovak Vacuum Society	(EC)	Andy Vincze	Vacuum technology, principles and applications	2500
TTC 22	Islamabad Hotel, Islamabad, Pakistan	Postponed to ???	Pakistan Vacuum Society	(EC)	Javaid Ahsan Bhatti	IIUVSTA TTC on Vacuum Technology Applications	2500
TTC 23	Universidad Nacional de San Martin, Argentina	Postpone to February and May 2021. Virtual?	Asociación Física Argentina	(EC)	Miguel Sanchez	Intro to Vac Sci, Tech, and Application: from Nano sci to outer space	2500
SC	Córdoba, Spain	Sept. 27, 2021 https://leempeem12.secv.es/ Virtual?	Vacuum Society- Spain	(EC)	miguel.manso @uam.es	Low Energy and PhotoEmission Electron Microscopy	1000

5:45 PM —6:00 PM call for new reports on past WS, SCH, TTC, SC? CEST (Paris)

8. Status Reports on planned or past Workshops and Schools, TTC, SC?

9. Endorsements?

10. New Business?

11. Adjourn

6:00 PM —6:35 PM CEST (Paris) Conference Planning Committee (CPC)

6:35-6:45 PM CEST— IYBSSD 22

6:45 PM CEST-Connection Terminates.

Jay Hendricks, Scientific Director, October 9th , 2020

Jay Hendricks

Scientific Director, 2019-2022

IUVSTA



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Technology
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