APPLICATION FORM FOR THE ORGANIZATION OF AN IUVSTA SHORT COURSE

TITLE OF THE SHORT COURSE:

Gas flows under vacuum conditions: from theory to applications

NATIONAL VACUUM SOCIETY: French Vacuum Society (SFV)

VENUE: Marseille, France

Address: Congress Center Marseille Chanot, 114 Rond-Point du Prado, 13008 Marseille

DATES: 1-2 June 2021 included in EVC 16

LANGUAGE: English

OBJECT OF THE COURSE:

The Short Course aims to fill the gap between complicated specialised literature and practical needs, to guide in field of rarefied gas dynamics and to show relevant method for practical applications.

MAIN TOPICS:

Main concepts and terminology of rarefied gas dynamics, State of art of modern gas dynamics, Methods of numerical and analytical modelling of gas dynamics processes in vacuum chambers, Experimental methods of rarefied gas dynamics, Design of large vacuum systems, Modeling of pumps, gauges, industrial processes related to vacuum.

COURSE OUTLINE ATTACHED: Yes

EXPECTED JOB LEVEL OF THE PARTICIPANTS:

Participants will come from Academia, Research centres and Industry. They will be scientists and engineers who need and use gas dynamic in their work but are not experts in Rarefied Gas Dynamics.

EXPECTED AVERAGE NUMBER OF PARTICIPANTS:

15 onsite participants are expected (5 standard participants and 10 students) and 5 on line participants.

IMPORTANT REMARK:

In this short course we will pay attention to meet the recommendations of IUVSTA concerning the organization of short courses, conferences, ... in the COVID-19 situation. For this purpose we have foreseen a possible electronic participation for some of the participants. The proportion of online attendants may change according to the health situation.

FINANCES

The 2000 euros requested IUVSTA contribution will be used for students and instructors partial funding.

PROVISIONAL BUDGET ATTACHED: Yes

IUVSTA SCIENTIFIC SPONSORING DIVISIONS:

Vacuum Science and Technology Division (VSTD)

NAMES AND NATIONALITIES OF ORGANIZERS:

Co-chairman: **Prof. Felix Sharipov** (Brazil), email: sharipov@fisica.ufpr.br, Departamento de Física, Universidade Federal do Parana, Caixa Postal 19044, Curitiba, 81531-990, Brazil.

Co-chairman: **Dr. Oleg B. Malyshev** (UK), email: oleg.malyshev@stfc.ac.uk, Accelerator Science and Technology Centre, STFC Daresbury Laboratory, Warrington, WA4 4AD, UK.

Co-chairman and Local organizer: **Prof. Irina Graur Martin** (France), email: irina.martin@univ-amu.fr, Department of Mechanical Engineering, Aix-Marseille University, 13453 Marseille, France.

IUVSTA member: **Mr. Jean-Louis Bersier** (VSTD member)

NAMES OF LECTURERS:

Prof. Felix Sharipov

Dr. Oleg B. Malyshev

Prof. Irina Graur

Dr. Roberto Kersevan

UNDERWRITING: Who will underwrite any financial loss?

French Vacuum Society (SFV)

CHECKLIST FOR APPLICANTS

Organizers must undertake to fulfill the conditions below. Financial contributions from IUVSTA are conditional upon this undertaking.

We agree to

PROVIDE full information of event to the IUVSTA Scientific Secretary

PROVIDE a tentative budget for the event at the STD meeting when asking for approval

PROVIDE Dedicated Website for the event. Give url if known (this information must be passed to the Scientific Secretary before any IUVSTA funds will be released):

Web site of the French Vacuum Society (SFV): https://www.vide.org/french-vacuum-society/

Name and e-mail address of person who will maintain the site:

Gweltaz HIREL, French Vacuum Society (SFV)

PROVIDE a report of the event after its completion for the IUVSTA web site:

Name and e-mail address of person who will provide this report:

Prof. Irina Graur Martin, email: irina.martin@univ-amu.fr

AGREE to include IUVSTA name and logo on all event announcements: Yes

I agree to fulfill all the points of above: Yes

Signatures:

Prof. Irina Graur Martin Prof. Felix Sharipov Dr. Oleg B. Malyshev

Date: 29/09/2020

Gas Flows under Vacuum conditions: from theory to applications

Each lecture is 1h30 and coffee break 30min

First day

Morning 9h-12h30
Fundamentals of kinetic theory (FS)
Coffee break
Simulations of gas flows under vacuum conditions (overview) + DVM (IG)

Lunch 12h30-14h

Afternoon 14h-17h30
Basis of DSMC method and examples of its applications (FS)
Coffee break
Collisionless Flows & TPMC (RK)

Second day

Morning 9h-12h30
Gas-surface interaction (FS or IG)
Coffee break
Practical applications: Gas dynamics calculations for a design of vacuum system (OM)

Lunch 12h30-14h

Afternoon 14h-17h30
Practical applications: TPMC realization with Molflow+ code (RK)
Coffee break
Practical applications: Vacuum Gas Dynamics for Particle Accelerators (OM)

Discussion 17h30-18h00

Lecturers:
Felix Sharipov (FS)
Irina Graur (IG)
Roberto Kersevan (RK)
Oleg Malyshev (OM)

EVC-16: IUVSTA GFV short course
VENUE: Marseille, France
DATE: 1-2 June 2021

Income	Unit cost (EUR)	Quantity	Sub-Total (EUR)	Remarks
Registration Fee (per standard person)	400	5	2 000	
Registration Fee (per student)	250	10	2 500	
Online Registration Fee	150	5	750	
IUVSTA funding	2 000	1	2 000	
Total (EUR)		**20**	**7 250**	

Expenditures	Unit cost (EUR)	Quantity	Sub-Total (EUR)	Remarks
Meals (per person)	80	15	1 200	Lunch breaks & coffee breaks
Meeting Room (per day)	700	2	1 400	Including video
Temporary Labors (per day)	500	2	1 000	Inscriptions, welcome, …
Miscellaneous	400	1	400	Including short course material, participant bag, …
on-line connection system	200	2	400	including wifi network
Student partial funding	80	15	1 200	
Instructors partial funding (flights & accommodation)	1 000	1	1 000	partial funding for the instructors
Total (EUR, VAT excl.)			6 600	
VAT (9%)			650	
Total (EUR)			**7 250**	