The School was organized in the framework of the IUVSTA 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 IUVSTA School. Among the co-chairmen of the school, from IUVSTA (SED) there was Prof. Paolo Ossi, Milano, Italy (Italian representative to IUVSTA). The 15th IUVSTA 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 IUVSTA, delivered by Prof. P. Schaaf, Ilmenau, Germany (Vice president of IUVSTA-SED) presenting its structure and its scientific and educational activities. The structure, divisions, conferences, and publications of IUVSTA 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 laser-materials 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. Prices 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.

The financial report is submitted separately.
Some pictures of the school are attached. More can be found on the school website http://www.slims.polimi.it/

Paolo Ossi

Pictures of the 15th IUVSTA School

The lecture hall

Group picture of LANES-2016 attendees
Fireworks at the end of LANES-2016 (Redimeer Festivity in Venice)
LANES Schedule

15th IUVSTA School on Lasers for the Nano Engineering of Surfaces - LANES
10-17 July 2016, Isola di San Servolo, Venice, Italy

Sunday, July 10
16.00-19.30: Registration

Monday, July 11
07:30: Breakfast
08.45-09.15: Opening Ceremony
   CHAIR: Reif
09.30-10.15: Lecture 1 Haglund
10.30-11.15: Lecture 2 Sugioka
11.30-12.30: Oral presentations by students 1 (5 presentations, 10 min. each)
   CHAIR: Kautek
12.35: Lunch
14.00-15.00: Poster Session I
   CHAIR: Stagira
15.15-16.30: Lecture 3 Kautek
   CHAIR: Phipps
16.45-17.30: Lecture 4 Bulgakova
17.50-18.50: Oral presentations by students 2 (5 presentations, 10 min. each)
   CHAIR: Castillejo
19.00: Dinner

Tuesday, July 12
07:30: Breakfast
   CHAIR: Sugioka
09.00-9.45: Lecture 5 Reif
10.00-10.45: Lecture 6 Stagira
11.00-12.00: Oral presentations by students 3 (5 presentations, 10 min. each)
   CHAIR: Haglund
12.10: Lunch
13.30-14.50: Poster Session II
   CHAIR: Stagira
15.00-15.45: Lecture 7 Zhigilei
   CHAIR: Bulgakova
16.00-17.30: Classroom 1 (for Lectures 1-7; in two locations, for lectures 1-4 and 5-7)
17.45-18.50: Oral presentations by students 4 (5 presentations, 10 min. each) CHAIR: Zhigilei
19.00: Dinner

Wednesday, July 13
07.30: Breakfast
09.00-09.45: Lecture 8 Phipps
10.00-10.45: Lecture 9 Schaaf
11.00-11.45: Lecture 10 Leborgne
12.00-13.00: Oral presentations by students 5 (4 presentations, 10 min. each) CHAIR: Miotello
13.15: Lunch
Afternoon: Free
19.00: Dinner

Thursday, July 14
07.30: Breakfast
09.00-9.45: Lecture 11 Dinescu
Leborgne
10.00-10.45: Lecture 12 Caricato
11.00-11.45: Lecture 13 Castillejo
12.45: Lunch
14.00-15.30: Oral presentations by students 6 (5 presentations, 10 min each) CHAIR: Dinescu
15.45-16.30: Lecture 14 Lippert
Castillejo
16.45-17.30: Lecture 15 Geohegan
17.45-18.45: Classroom 2 (for Lectures 8-14; in two locations, for lectures 8-11 and 12-14)
19.30: Barbecue and Social activity at S. Servolo

Friday, July 15
07.30: Breakfast
09.00-9.45: Lecture 16 Dinescu
10.00-10.45: Lecture 17 Castillejo
11.00-11.45: Lecture 18 Geohegan
12.45: Lunch
14.00-15.30: Oral presentations by students 7 (5 presentations, 10 min each) CHAIR: Dinescu
15.45-16.30: Lecture 19 Lippert
Castillejo
16.45-17.30: Lecture 20 Geohegan
17.45-18.45: Classroom 2 (for Lectures 8-14; in two locations, for lectures 8-11 and 12-14)
19.30: Barbecue and Social activity at S. Servolo
09.00-09.45: Lecture 16  Mihailescu
10.00-10.45: Lecture 17  Ossi
11.00-11.45: Lecture 18  Miotello
12.00: Lunch

13.30-14.10: Oral presentations by students 7 (3 presentations, 10 min each)  CHAIR: Geohegan
14.45: SLIMS visit at the Exhibition “Accrochage”, Punta della Dogana
vaporetto to Venice leaves at 14.50
to come back to S. Servolo for dinner take vaporetto either at 18.30 or at 19.10
19.30: Dinner

Saturday, July 16
07.30: Breakfast

09.00-09.45: Classroom 3 (for Lectures 15-18; in two locations for lectures 15-16 and 17-18)
10.00-10.45: Questionnaire compilation by students
11.15-12.30: R. Kelly Award Ceremony and Closing Remarks  CHAIR: Co-Directors
12.40: Lunch

END of LANES 2016
LANES 2016 Lecturers and topics!

R. Haglund: Lasers and Optical Physics for Materials Science
W. Kautek: Laser Energy Deposition: Non-thermal Processes (including Surgery)
J. Reif: Laser Energy Deposition: Thermal+ Hypert. Processes
S. Stagira: High-order Harmonic Generation and Applications to Molecular Orbital Tomography
A.P. Caricato: Fundamentals and Applications of MALDI and MAPLE
N.M. Bulgakova: Models of Pulsed Laser Ablation Based on Continuum Methods
L.V. Zhigilei: MD Simulations of Laser-Materials Interactions
M. Castillejo: Nonlinear Optics in Laser Ablation Plasmas
C. Bouler-Melborgne: Diagnostics of Laser Induced Plasmas
I. Mihailescu: Pulsed Laser Synthesis of Biomaterial Thin Films for Biomedical Applications
T. Lippert: PLD of Functional Oxides—Back to the Basics
M. Dinescu: Lasers in Soft Material Processing: Laser Direct Writing via Multi Photon Absorption and Laser Induced Forward Transfer
K. Sugioka: Ultrafast Laser Micro and Nano-Processing—Basics and Applications
P. Schaar: Industrial Applications of Laser-Materials Processing+
A. Miotello: Laser vs Ion Induced Sputtering
D. B. Geohegan: Gas-Phase Laser Synthesis of Nanomaterials
P.M. Ossi: Nanoparticles from Laser-Generated Plasmas
C. Phipps: High Power Lasers to Remove Orbitating Debris
15th IUVSTA School on Lasers for the Nano Engineering of Surfaces – LANES
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Final balance

Income (Euros)

Student fees : 31200
IUVSTA sponsorship : 2500
IEEE Photonics sponsorship: 900
LLE sponsorship : 3000
Total : 37600

Expenses (Euros)

Lecturers lodging : 7250
Students lodging : 12050
Meals : 7790
Didactic facilities (VIU) : 7650
Student awards + Lecturers gifts : 580
Tickets for the Guided tour at the Exhibition “Accrochage”, Punta della Dogana: 300
Barbecue at S. Servolo (Thursday, July 14, dinner) : 1790

Total : 37410

Grand Total

37600 – 37410 = +190 (2016)