

Regional Lab Immersion Program 2016

December 17-22, 2016

Scientific Program

Saturday, 17th December 2016		
Time		Activity
8:00 am	9:00 am	<i>Registration & logistics</i>
9:00 am	11:00 am	Venue: Physlab, 2nd Floor, SSE Building. Will include: Overview of the Physlab by Dr. Muhammad Sabieh Anwar, LUMS, Lahore (20 minutes) Experimental Physics: An Artistic Life from Teaching to Research by Dr. Hanan Mah'd Ahmad Sa'adeh, Jordan University, Amman, Jordan (20 minutes) Interesting hands-on approach to teaching mechanics by Dr. Samya Zain, Associate Professor & Department Chair, Physics, Susquehanna University, Pennsylvania, USA (60 minutes)
11:00 am	11:30 am	<i>Tea break</i>
11:30 am	12:30 pm	Measurement matters by Dr. Sabieh Anwar. All activities will take place in the Physlab, first floor, SSE Building.
12:30 pm	2:00 pm	<i>Lunch and prayer break</i>
2:20 pm	7:00 pm	Experiment 1 (See the supplementary document.)

Sunday, 18th December 2016

Time		Activity
9:00 am	12:00 pm	Experiment 1 (Participants will finalize their assigned experiments.)
12:00 pm	12:20 pm	Physics virtual labs by Sara Maher Mohammad Aburugia, Jordan University, Amman, Jordan
12:20 am	12:40 pm	Trends of mass measurements in Kenya by Wilson Ombati Nyangau, Kenya Bureau of Standards, Nairobi, Kenya
12:40 pm	2:00 pm	<i>Lunch and prayer break</i>
2:00 pm	4:00 pm	Smart physics with video tracking by Umar Hasan, LUMS
4:00 pm	4:30 pm	Refreshment
4:30 pm	5:30 pm	<p><i>Presentations by LUMS students of the PHY300 course:</i></p> <p>Smartphone physics by Syed Waqar Ahmad and Usman Ghani Subhani (10 min)</p> <p>Harnessing cosmic ray muons by Junaid Saif (10 min)</p> <p>Superconducting Quantum Interference Devices (SQUIDs) by Bilal Ahmad and Hassan Khan (10min)</p> <p>Nonlinear experiments by Sehrish Iqbal and Bilal Ahmad (10 min)</p> <p>Quantum erasure by Obaidullah Khalid (10 min)</p>

Monday, 19th December 2016

Time		Activity
10:00 am	10:00 pm	<p>Excursion to Lahore. Notable attractions include:</p> <p>Lahore Museum, Badshahi Mosque, Inner Walled City and Wazir Khan Mosque, Anarkali</p> <p>Bazar, lunch and dinner at traditional sites</p>

Tuesday, 20th December 2016

Time		Activity
9:00 am	11:00 am	Making computers talk to the external world by Adnan Khan and Ahmed Khalid, National Instruments, Islamabad
11:00 am	11:20 am	<i>Tea break</i>
11:20 am	12:20 pm	Practical Examples of enlivening classrooms with real demonstrations by Dr. Sabieh Anwar, LUMS
12:20 pm	2:00 pm	<i>Lunch</i>
2:00 pm	2:30 pm	Observational Astronomy in Lahore by Umair Asim, Zeds Astronomical Observatory, Lahore Astronomical Society and Khwarizmi Science Society, Lahore. The venue is 10-201, second floor, SSE building.
2:30 pm	3:30 pm	ICTP, Light and Life , A Public Lecture by Dr. Joe Niemela, Head of Applied Physics, Abdus Salam International Centre for Theoretical Physics, Trieste, Italy. The venue is 10-201, second floor, SSE building. (Tentative)
3:30 pm	4:00 pm	Refreshment
4:00 pm	6:30 pm	The participants will divide in groups of 4-5 people, and will propose a design experiment. They will brainstorm, prepare a storyboard and submit their required equipment and components to the Physlab staff.

Wednesday, 21st December 2016

Time		Activity
9:00 am	12:30 pm	Experiment 2 (in the meantime Physlab staff will collect and prepare the equipment for the design experiments.)
12:30 pm	2:00 pm	<i>Lunch</i>
2:00 pm	4:00 pm	Implementing the design experiment (episode 1)
4:00 pm	4:30 pm	<i>Tea break</i>
4:30 pm	5:30 pm	Ibn Al-Haytham's Camera Obscura at the University of Jordan by Islam Majed Abdelmajid Albazlamit, University of Jordan, Amman, Jordan (20 min) Physics with video analysis by Hasan Khan, Østerbro International School, Denmark (20 min) Graphical presentation of data: do's and don't's by Dr. Sabieh Anwar, LUMS (20 min) Video microscopy of Brownian motion by Asad Hussain (10 min)
5:30 pm	7:00 pm	Implementing the design experiment (episode 2)

Thursday, 22nd December 2016

Time		Activity
9:00 am	12:30 pm	Implementing the design experiment (episode 3)
12:30 pm	2:00 pm	<i>Lunch</i>
2:30 pm	4:30 pm	Final presentations on design ideas and closing ceremony
4:30 pm	5:00 pm	<i>Refreshment and closure</i>