



Nobel Symposium on Free Electron Laser Research June 14-18, 2015 at Sigtunahöjden, Sigtuna

Speaker : Speakers from Sweden, USA, Italy, Germany, Switzerland, The Netherlands, Japan, UK

Abstract :

Nobel Symposium 158: Free Electron Laser Research is sponsored by the Nobel Foundation through its Nobel Symposia Fund and the Knut and Alice Wallenberg Foundation, and organised by Stockholm University.

The aim of the Nobel Symposium is to give an overview of free electron lasers from an accelerator physics point of view, and their use in research in the natural sciences.



NOBEL SYMPOSIA



Invited speakers:

Nora Berrah, University of Connecticut, Storrs, USA
Phil Bucksbaum, Stanford University, USA
Claudio Pellegrini, UCLA, USA
Linda Young, Argonne National Laboratory, USA
Justin Wark, Oxford University, UK
Janos Hajdu, Uppsala University, Sweden
Jerry Hastings, SLAC, Palo Alto, USA
Steve Johnson, ETH Zurich, Switzerland
Claudio Masciovecchio, Elettra, Trieste, Italy
John Madey, University of Hawaii at Manoa, USA
Alex van der Meer, FELIX, Nijmegen, The Netherlands
Thomas Möller, Technical University Berlin, Germany
Shaul Mukamel, UC Irvine, USA
Masaki Takata, Tohoku University/ RIKEN SPring-8 Center
Kiyoshi Ueda, Tohoku University, Japan
Evgeny Saldin, European XFEL, Hamburg, Germany
John Spence, Arizona State University, Phoenix, USA
Roger Falcone, Lawrence Berkeley National Laboratory, USA
Richard Neutze, Göteborg University
Nina Rohringer, Max Planck Institute for the Structure and Dynamics of Matter, Hamburg, Germany
Wilfried Wurth, Center for Free-Electron Laser Science, DESY, and University of Hamburg, Germany
Robin Santra, Center for Free-Electron Laser Science, DESY, and University of Hamburg, Germany
Andrea Cavalleri, Max Planck Institute for the Structure and Dynamics of Matter, Hamburg, Germany
Henry Chapman, Center for Free-Electron Laser Science, DESY, and University of Hamburg, Germany
Robert Schoenlein, Lawrence Berkeley National Laboratory, USA

Session chairs:

Vitali Zhaunerchyk, Göteborg University
Sandra Biedron, Colorado State University, Fort Collins
Thomas Tschentscher, European XFEL, Hamburg
Jon Marangos, Imperial College London
Anders Nilsson, SLAC and Stockholm University
Christoph Quitmann, MAX IV, Lund
Marie-Emmanuelle Couprie, SOLEIL

Local organizing committee:

Mats Larsson, Stockholm University
Ingolf Lindau, Stanford University
Joseph Nordgren, Uppsala University

International committee:

Massimo Altarelli, XFEL
John Galayda, SLAC
Jon Marangos, Imperial College London
Nora Berrah, University of Connecticut

Time	Sunday, 14 June 2015	Monday, 15 June 2015	Tuesday, 16 June 2015	Wednesday, 17 June 2015	Thursday, 18 June 2015
9.00-10.00	Arrival, registration	New approaches to biology using hard X-ray lasers: John Spence	Coherent multidimensional attosecond nonlinear x-ray spectroscopy of molecules: Shaul Mukamel	X-ray-probed ultrafast electron and nuclear dynamics in molecules: Phil Bucksbaum	Progresses in XFEL Science via SACLA: Masaki Takata
10.00-10.30	Coffee	Coffee	Coffee	Coffee	Coffee
10.30-11.30	Arrival, registration	Diffraction Before Destruction: Janos Hajdu	Stimulated Electronic X-Ray Raman Scattering in atomic and molecular gases: Nina Rohringer	Femtosecond dynamics of long-range order in solids: coupling of the lattice, spins, charge and orbitals: Steve Johnson	X-Ray Free-electron Lasers: from dream to reality : Claudio Pellegrini
11.30-12.30	Lunch	Lunch	Lunch	Lunch	Lunch
13.00-14.00	Free Electron Lasers as Tools for Discovery: John Madey	The Physics of Solid-Density Plasmas Created by Intense X-Ray Free-Electron-Lasers: Justin Wark		Time-Resolved X-Ray Spectroscopy with Free-Electron Lasers: Following Electron Dynamics on Surfaces and in Solids in Real-Time: Wilfried Wurth	
14.00-15.00	Progress and Prospects of X-ray Free Electron Lasers: Evgeny Saldin	In-elastic scattering as a probe of elementary excitations in matter: Jerry Hastings		Structure and dynamics of nanoparticles in intense short wavelength light pulses: Thomas Möller	
15.00-15.30	Coffee	Coffee	Coffee	Coffee	
15.30-16.30	Harnessing ultraintense x-rays: from atomic response to applications: Linda Young	Using X-Rays to Study Materials Under Extreme Pressure and Temperature: Roger Falcone	FEL based Four Wave Mixing: Claudio Masciovecchio	Determining molecular structures using short intense X-ray pulses: Henry Chapman	
16.30-17.30	SACLA and FERMI: new opportunities for atomic, molecular and cluster science: Kiyoshi Ueda	Femtosecond X-ray Induced Dynamics of Fullerenes using FELs: Nora Berrah	Science challenges and opportunities for the LCLS-II X-ray lasers: Robert Schoenlein	Time resolved diffraction and scattering studies of membrane protein dynamics using XFEL radiation: Richard Neutze	
18.00-19.30	Dinner	Dinner	Dinner	Conference dinner	
20.00-21.00	Aspects and applications of IR-FELs: Alex van der Meer	Electronic structure in high-intensity x-ray fields: Robin Santra	Light control of superconductivity and non-equilibrium emergence probed with Free Electron Laser pulses: Andrea Cavalleri		