

Schedule at a glance

	Wednesday (13th)	Thursday (14th)	Friday (15th)	Saturday (16th)	
9:00	9:00 UDN Welcome		9:00 - 10:00 Session 6		
10:00	9:15 - 11:15 Session 1	9:00 - 11:30 Session 4	10:00 - 10:30 Bus boarding	9:00 - 12:00 Session 7 (10:30 - 10:45 Break)	
11:00	11:15 - 13:00 Lunch at OIST	11:15 - 12:00 OIST Tour Group 1	10:30 - 17:00 Excursion		
12:00		11:30 - 12:30 FSU Lab Tour Group 1		12:00 - 13:30 Lunch at OIST	
13:00	13:00 - 14:45 Session 2	12:30 - 13:30 Lunch at OIST			
14:00	14:45 - 15:15 Break	13:30 - 15:30 Session 5			13:30 - 15:45 Session 8
15:00	15:15 - 17:30 Session 3	15:30 - 16:30 FSU Lab Tour Group 2		15:45 Closing remarks	
16:00		16:00 - 17:00 OIST Tea Time		16:00 - 17:00 FSU Lab Tour Group 3	
17:00	17:30 Move to Seaside House	17:00 - 19:00 Poster Session	17:00 - 19:00 Rest and recuperate		
18:00	18:00 - 20:00 Sunset BBQ at Seaside House			18:00 - 20:00 Japanese Dinner at OIST	
19:00		19:00 - 21:00 Curry Night Dinner at OIST	19:00 - 21:00 Buffet Dinner at Rizzan Hotel		
20:00					

UDN 2016: Detailed Program

Revision: Jul 07 2016

=====**Day 1: Wednesday, July 13**=====

Shining light on new materials

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13th morning (Welcome 09:00-09:15)
Welcome to UDN 2016: H. Petek

13th morning (Session 1 09:15-11:15), Chair: H. Petek
2D Semiconductors under the spotlight Part I (2h00m)

- Quantum Coherent Dynamics and Coupling of Excitons & Trions in Atomically Thin Semiconductors
 - X. (E.) Li; 45min Invited Talk; UT Austin
- Ultrafast electron dynamics in quasi 2D materials probed by femtosecond time-resolved ARPES
 - M. Wolf; 45min Invited Talk; Fritz Haber Institute
- Coherent Optical Manipulation of Valley Excitons in Monolayer Transition Metal Dichalcogenides
 - E. Sie; 30min Contributed Talk; MIT

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Lunch (11:15-13:00) & OIST Tour Group 1 (11:15-12:00)

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13th afternoon (Session 2 13:00-14:45), Chair: X. (E.) Li
2D Semiconductors under the spotlight Part II (1h45m)

- Electronic Excitations and Dynamics in 2D Semiconductors
 - T. Heinz; 45min Invited Talk; Stanford University
- Dark Excitons in Monolayer Transition Metal Dichalcogenides
 - X. Zhang; 30min Contributed Talk; Columbia University
- Exciton Radiative Lifetime in Transition Metal Dichalcogenides Monolayers
 - C. Robert; 30min Contributed Talk; Université de Toulouse

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Coffee Break (14:45-15:15)

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13th evening (Session 3 15:15-17:30), Chair: K. Ishioka
Ultrafast Interactions and spectroscopies of Novel Materials (2h15m)

- Ultrafast Interactions of Coherent Phonons with Nonequilibrium L and X Valley Plasmons
 - C. Stanton; 45min Invited Talk; University of Florida
- Ultrafast Dynamics in Quantum Materials
 - A. Taylor; 45min Invited Talk; Los Alamos National Laboratory
- Spectroscopic Studies of Charged Water Interfaces
 - Y. R. Shen; 45min Invited Talk; UC Berkley & Fudan University

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Sunset BBQ (18:00-20:00)

=====**Day 2: Thursday, July 14**=====

Shall the 'twain meet...ultrafast and nanoscale?

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14th morning (Session 4 09:00-11:30), Chair A. Leitenstorfer
Here's a tip - bring light to the nanoscale (2h30m)

- Bringing THz Lightwave Electronics to the Atomic Length Scale
 - R. Huber; 45min Invited Talk; University of Regensburg
- Real-Space Control of the Electron Transfer in a Tunnel Junction with Single-Cycle THz Electric Field
 - K. Yoshioka; 30min Contributed Talk; Yokohama National University
- Femtosecond Near-Field Imaging with Plasmonic Nanofocussed Four-Wave Mixing
 - R. Ulbricht; 30min Contributed Talk; University of Colorado, Boulder
- Coherent Nonlinear Optical Spectroscopy in the Single Molecule Limit
 - E. Potma; 45min Invited Talk; UC Irvine

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FSU Lab Tour Group 1 (11:30-12:30) & OIST Tour Group 2+3 (11:30-12:30)
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Lunch (12:30-13:30)
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14th afternoon (Session 5 13:30-15:30), Chair R. Huber
Or use smart, fast electrons to explore the atomic scale (2h00m)

- Attosecond Charge Transport in Atoms and Condensed Matter
 - U. Keller; 45min Invited Talk; ETH Zurich
- Femtosecond Point Projection Microscopy: Imaging Ultrafast Carrier Dynamics on the Nanoscale
 - M. Mueller; 30min Contributed Talk; Fritz Haber Institute
- Optical Spectroscopy of Individual Nano-materials with Defined Atomic Structure
 - K. Liu; 45min Invited Talk; Peking University

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FSU Lab Tour Group 2 (15:30-16:30)
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OIST Tea Time (16:00-17:00)
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14th evening: Poster Session (17:00-19:00)
OIST Restaurant Level B; see page 6 for presenter list

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Curry Night at the OIST Restaurant (19:00-21:00)
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=====**Day 3: Friday, July 15**=====

Life in Okinawa, OIST and the Femtosecond Spectroscopy Unit

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15th morning (Session 6 09:00-10:00), Chair: C. Stanton

** Session in C209, Center Building*

The inner workings of OIST and the Femtosecond Spectroscopy Unit (1h00m)

- Into the rabbit hole – tracking electrons through energy, momentum, space and time
 - K. M. Dani; OIST

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All Aboard (the Bus) (10:00-10:30)
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15th afternoon (Excursion 10:30-17:00)

This is how we do it –physics in a tropical paradise (6h30m)

- Excursion: Talking physics while eating, swimming, and snorkeling at Ikei-jima
 - We hope all participants will attend.
 - Travel guests are welcome.
 - There's a small fee to cover some expenses.
 - Confirmation/Reservation for attendance needed by Wednesday noon.
 - Please see the last page of this booklet or the UDN website (<https://groups.oist.jp/fsu/udn-2016>) for further details about the excursion.

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Rest and Recuperate (17:00-19:00)
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Dinner at the Rizzan (19:00-21:00)
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Day 4: Saturday, July 16
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Towards new quantum and coherent light...
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16th morning (Session 7 09:00-12:00), Chair: R. Shen
Quantum leaps in Quantum light (2h45m +15m break in between)

- Time Domain Quantum Electrodynamics
 - A. Leitenstorfer; 45min Invited Talk; University of Konstanz
- THz Cavity Quantum Electrodynamics
 - J. Kono; 45min Invited Talk; Rice University

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Short Break (10:30-10:45)
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- Polaritons in Coupled Microcavities: Self Trapping & Multistability
 - S.R.K. Rodrigues; 30min Contributed Talk; CNRS
- The Coulomb Interaction Beats the Uncertainty Principle
 - H. Petek; 45min Invited Talk; University of Pittsburgh

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Lunch (12:00-13:30)
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16th afternoon (Session 8 13:30-15:45), Chair: J. Kono
Manipulating light states with nanostructures (2h15m)

- Coherent Photonics with Quantum Dots
 - U. Woggon; 45min Invited Talk; Technische Universität Berlin
- Circular Polarization Effects in Artificial Nanostructure
 - K. Konishi; 45min Invited Talk; The University of Tokyo
- Quantum Computing - The New Hardware and Applications
 - Y. Yamamoto; 45min Invited Talk; Cabinet Office, Govt. of Japan & Stanford University

16th evening (Conclusion 15:45-16:00)
Closing Remarks: J. Kono

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FSU Lab Tour Group 3 (16:00-17:00)
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Japanese Dinner at Chura Hall, Seaside House (18:00-20:00)
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Poster Session

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- Ultrafast Coherence Manipulation in the Single Molecule Limit
 - K.T. Crampton; UC Irvine
- Ultrafast Auger-Mediated Hole Trapping and Coherent Phonon Dynamics in CdSe/CdS Core/Shell Colloidal Semiconductor Nanoplatelets
 - S. Dong; NTU Singapore
- Ultrafast Properties of Atomically Thin Black Phosphorus
 - T.Harada; OIST
- Ultrafast Dynamics of van der Waals Heterostructured Laminates
 - M.B.M. Krishna; OIST
- Unraveling the Photophysics of Perovskites by Use of Terahertz Spectroscopy
 - C. La-o-vorakiat; King Mongkut's University of Technology Thonburi
- Towards the Imaging of Memory Formation in *C. Elegans* using a Wide-Field Temporally Focussed Two-Photon Microscope
 - V. Lisicovas; OIST
- Patch Antenna Microcavity Terahertz Quantum Cascade Sources
 - J. Madéo; OIST
- Protecting the Properties of Monolayer MoS₂ on Silicon Based Substrates with an Atomically Thin Buffer
 - M.K.L. Man; OIST
- Transient Exciton Tweezing in Semiconductor Quantum Wells
 - E.W. Martin; University of Michigan
- Transient Band Gap Enhancement in the Photoexcited Excitonic Insulator Phase in Quasi-1D Ta₂NiSe₅
 - S. Mor; Fritz Haber Institute
- Ultrafast Spin Density Wave Transition in Chromium Governed by Thermalised Electron Gas
 - C.W. Nicholson; Fritz Haber Institute
- Ultrafast Charge Transfer in MoS₂ - Organic van der Waals Heterojunctions Using Plasmonic Metasurfaces
 - C.E.Petoukhoff; OIST
- Momentum Space Dynamics of Excited Electrons at Hybrid Interfaces
 - B. Stadtmüller; University of Kaiserslautern
- Ultrafast Conductivity of Conserved Dirac Fermions with Markedly Reduced Surface Scattering Revealed via THz pump and THz probe spectroscopy
 - J. Wang; Iowa State University
- Flipping the Flow of Charge with Light in a PN Junction
 - E. L.Wong; OIST