

2018 Joint AFOSR-ARO Attosecond MURI Reviews



Dr. Riq Parra | November 15-16, 2018 | Arlington, VA

Basic Research Innovation and Collaboration Center
4100 North Fairfax Drive, Suite 450 |
Arlington, VA 22203

Agenda Day 1 | Thursday, November 15, 2018

Time	Topic	Speaker
8:00	Registration	
MURI-9 Studying ultrafast electron dynamics in condensed matter with next generation attosecond x-ray sources		
Session 1 Chair: Steve Leone		
8:30	Opening remarks	Enrique Parra (AFOSR)
8:40	New generation attosecond X-rays driven by MIR lasers	Zenghu Chang (Lead PI), University of Central Florida
9:20	High harmonic absorption and emission studies in solids	Louis DiMauro and Greg Smith, Ohio State University
9:50	Femtosecond and attosecond dynamics in condensed phases	Daniel Neumark, University of California Berkeley
10:20	BREAK	
Session 2 Chair: Mark Stockman		
10:50	Attosecond core level dynamics in solids	Steve Leone, University of California Berkeley
11:20	Attosecond waveform metrology in solids	Nick Karpowicz, Max Planck Institute of Quantum Optics
11:50	Group photo	
12:00	Lunch and student poster presentations	
Session 3 Chair: Nick Karpowicz		
1:30	Ultrafast strong-field processes in transition metal dichalcogenides and topological insulators	Mark Stockman, Georgia State University
2:00	Re-collision electron dynamics in solids	Paul Corkum, University of Ottawa
2:30	BREAK	

Start of MURI-1 Post-Born-Oppenheimer dynamics using isolated attosecond pulses		
Session 4 Chair: Dan Neumark		
3:00	Coupled electron-nuclear dynamics following ionization of propiolic acid	Lorenz Cederbaum/Alexander Kuleff, University of Heidelberg
3:30	Time-dependent Coupled-Cluster Spectra for Core Excitations	Rodney J. Bartlett, University of Florida
4:00	Discussion of MURI-9	
4:30	End of the first day	

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Agenda Day 2 Friday, November 16, 2018		
Time	Topic	Speaker
8:00	Registration	
MURI-1 continued		
Session 5 Chair: Zenghu Chang		
8:30	Opening remarks	Jim Parker/Richard Hammond (ARO)
8:40	Electronic coherences and attosecond molecular dynamics	Steve Leone, University of California Berkeley
9:20	Non-adiabatic dynamics and strong-field effects in ultrafast molecular processes	Arvinder Sandhu, University of Arizona
9:50	Attosecond dynamics in atomic and molecular systems	Daniel Neumark, University of California Berkeley
10:20	BREAK	
Session 6 Chair: Arvinder Sandhu		
10:50	Theory of attosecond processes in atoms and molecules	C. William McCurdy, University of California Davis
11:20	Attosecond transient spectroscopy using "water window" X-rays	Zenghu Chang, University of Central Florida
11:50	Pump-probe metrology for attosecond dynamics in atoms and molecules	Paul Corkum, University of Ottawa, Canada
12:20	Discussion of MURI-1 and close out	Jim Parker/Richard Hammond (ARO), Enrique Parra (AFOSR)
12:20	MEETING ADJOURN	