



2019 Joint AFOSR – ARO Attosecond MURI Review

Dr. Andrew Stickrath and Dr. James Parker | November 21-22, 2019 | Arlington, VA

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

Agenda Day 1 | Thursday, November 21, 2019

Time	Topic	Speaker
8:00	Registration	
Thursday, Nov. 21 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	Andrew Stickrath (AFOSR)
8:40	High power MIR lasers for generating Attosecond water window X-rays	Zenghu Chang (Lead PI), University of Central Florida
9:20	Two-source transient absorption spectroscopy	Stephen Hageman, for Lou DiMauro, Ohio State University
9:50	Femtosecond dynamics in the liquid phase	Blake Erickson, for Daniel Neumark, University of Calif. Berkeley
10:20	Group Photo	
10:30	Lunch	
Session 2 Chair: Mark Stockman		
12:00	Attosecond materials dynamics	Steve Leone, University of California Berkeley
12:30	Attosecond waveform metrology in solids	Matthew Weidman, for Ferenc Krausz, Max Planck Institute of Quantum Optics
1:00	Break and Poster Session	
Session 3 Chair: Matthew Weidman		
1:30	Ultrafast strong-field processes in transition metal dichalcogenides and topological insulators	Mark Stockman, Georgia State University
2:00	Towards attosecond pump-probe measurement of plasmon dynamics	Paul Corkum, University of Ottawa

2:30	Break and Poster Session	
Start of MURI-1 Post-Born-Oppenheimer dynamics using isolated attosecond pulses		
Session 4 Chair: Bill McCurdy		
3:00	Ultrafast non-adiabatic relaxation in XUV excited molecule	Alexander Kuleff for Lenz Cederbaum, University of Heidelberg
3:30	Nonadiabatic Transitions via Conical Intersections at Ultralow Temperatures	Svetlana Kotochigova, Temple University
4:00	Discussion of MURI-9	
4:30	End of the first day	

Agenda Day 2 Friday, November 22, 2019		
Time	Topic	Speaker
8:00	Registration	
Friday Nov. 22 MURI-1 continued		
Session 5 Chair: Zenghu Chang		
8:30	Opening remarks	Jim Parker/Richard Hammond (ARO)
8:40	MURI-1 Overview and attosecond XUV probing of potential-crossing molecular dynamics	Steve Leone, University of California Berkeley
9:20	Multielectron excitations and nonadiabatic processes	Arvinder Sandhu, University of Arizona
9:50	Tracking electronic-coherence dynamics with attosecond transient absorption spectroscopy	Yuki Kobayashi, for Daniel Neumark, University of California Berkeley
10:20	Break and Poster Session	
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 absorption spectroscopy at nitrogen K edge	Zenghu Chang, University of Central Florida

11:50	From atto-science to generating large isolated magnetic fields transients	Paul Corkum, University of Ottawa, Canada
12:20	Discussion of MURI-1 and close out by Jim Parker/Richard Hammond (ARO), Andrew Stickrath (AFOSR)	