

## **Robert Rivers Jones Jr.**

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**Personal** - Born January 5, 1964 - Married with three children

### **Education**

Ph.D. in Physics, University of Virginia, Charlottesville, Virginia, May 1990.  
B.S. in Physics and Math, Univ. of Southwestern Louisiana, Lafayette, LA, May 1985.

### **Honors**

All-University Teaching Award, University of Virginia	2008
American Physical Society Outstanding Referee (Inaugural Group)	2008
Fellow of the American Physical Society	2000
David and Lucile Packard Fellowship	1996-2001
Oak Ridge Associated Universities Physical Science Award	1996
Office of Naval Research Young Investigator Award	1994-1997
ARCS Graduate Fellowship	1989-1990
Presidential Graduate Fellowship	1985-1989
Dupont Graduate Fellowship	1985-1988
Graduated first in class	1985

### **Research and Professional Experience**

Francis H. Smith Professor of Physics, Univ. of Virginia	2006-
Chair, Department of Physics, Univ. of Virginia	2018-2021
Professor of Physics, Univ. of Virginia	2002-2006
Associate Professor of Physics, Univ. of Virginia	1998-2002
Associate Chairman for Graduate Studies, Physics, Univ. of Virginia	1998-2001
Assistant Professor of Physics, Univ. of Virginia	1993-1998
Visiting Fellow NSF Center for Ultrafast Optical Science	1994
Post-Doctoral Research with Prof. P.H. Bucksbaum, Univ. of Michigan	1991-1993
Graduate Research with Prof. T.F. Gallagher, University of Virginia	1987-1990

### **Teaching Experience**

Undergraduate Physics for Non-Scientists – How Things Work II	2004; 2006
Undergraduate Introductory Physics for Engineers I	1996; 1998
Undergraduate Introductory Physics for Engineers II	1999; 2014; 2015; 2016
Undergraduate Introductory Physics for Majors I	2001; 2003; 2005; 2006
Undergraduate Introductory Physics for Majors II	1999; 2000; 2001; 2011-2013; 2022
Undergraduate Introductory Physics for Majors III	2007; 2008; 2009
Undergraduate Problem Solving and Special Topics in Classical Physics	2023; 2024
Undergraduate Classical Mechanics	2010; 2011; 2013
Graduate Ultrafast Laser Spectroscopy	2002; 2005
Graduate Optics	1994; 1998; 2017
Graduate Photonics	2007
Graduate Atomic Physics	1993; 1995; 1997
Faculty Laboratory Assistant for Advanced Undergraduate Lab	1994
Lecturer for undergraduate general laboratory	1985; 1986

### **Professional Societies**

American Physical Society  
Optical Society of America

## Physics Department Service

Member Teaching Committee	1998-2002, 2010-2011, 2014-2015, 2023-
Member Outreach Committee	2023-
Chair, Promotion Committee for Peter Schauss	2023
Chair, Library Committee	2022-
Member Diversity, Equity, and Inclusion Committee	2022-2023
Member External Recognitions Committee	2022-
Member Chairman's Advisory Committee	2010-2018, 2022-2023
Member, Promotion Committee for Cass Sackett	2022
Department Chair	2018-2021
Chair, Long Range Planning Committee	2018-2021
Member Physics Building Renovation Committee	2018-2021
Chair, HEETF Committee	2018-2021
Chair, Promotion Committee for Cass Sackett	2017
Chair, AMO Faculty Search Committee	2017-2018
Member Infrastructure and Safety Committee	2014-2018
Member Colloquium and Special Lectures Committee	1993-1995, 2010-2013, 2015-2018
Member External Review Planning Committee	2016-2017
Chair, Chairman's Advisory Committee	2013-2017
Member Fiscal Manager Search Committee	2015
Member Grants and Contracts Administrator Search Committee	2015
Member Promotion and Tenure Committee for Craig Group	2015
Member 3 <sup>rd</sup> Year Faculty Review Committee for Craig Group	2013
Member Long Range Planning Committee	1999, 2010-2014
Member Condensed Matter Faculty Search Committee	2011-2012
Faculty Judge for Physics Undergraduate Research Symposium	2011, 2012
Faculty Judge for Physics Graduate Poster Competition	2010-2012
Member Promotion and Tenure Committee for Austen Lamacraft	2011
Judge for Graduate Research Poster Competition	2011; 2012
Member 4 <sup>th</sup> Year Faculty Review Committee for Diana Vaman	2010-2011
Member 3 <sup>rd</sup> Year Faculty Review Committee for Israel Klich	2010-2011
Chair Promotion Committee for Olivier Pfister	2010
Member Promotion and Tenure Committee for Keith Williams	2009-2010
Member Honors and Awards Committee	2008-2010
Member HEETF Committee	2008-2009
Chair Grievance Committee	2006-2007
Chair Research Committee	2005-2007
Chair Technical Support Facilities Committee	2004-2007
Chair Promotion and Tenure Committee for Cass Sackett (Physics)	2006
Member Promotion Committee for Simonetta Liuti	2005
Member Tenure and Promotion Committee for Olivier Pfister	2004
Chair Third Year Faculty Review Committee for Cass Sackett (Physics)	2003-2004
Member Third Year Faculty Review Committee for Olivier Pfister (Physics)	2001
Member Third Year Faculty Review Committee for Peter Arnold (Physics)	2000
Member Faculty Research Committee	2000-2002
Chair Graduate Program Committee	1998-2001
Chair Financial Aid Committee	1998-2001
Member Ph.D. Qualifying Exam Committee	1998-2001
Member Graduate Admissions Committee	1998-2001
Society of Physics Students Faculty Advisor	1997-1998
Member Graduate Program Committee	1993-1998

Member Grievance Committee	1993-1994
Member AMO Seminar Committee	1993-2006

**Masters Thesis Defense Committees** (\* indicates primary research advisor):

*A. Wallo (physics)	2006		
K. Baranowski (physics)	2004	B. Deissler(physics)	2003
J. Rudmin (physics)	1996	*N. Tielking (physics)	1996

**Ph.D. Dissertation Defense Committees** (\* indicates primary research advisor):

L. Chai*	2023	M. Turnansky	2023
K. Mayer (chemistry)	2021	*C. He (physics)	2021
S. Bengtsson(Lund,Sweden)	2017	R. Wilson(astronomy)	2021
A. Zhao(Stony Brook)	2017	J. Lee(physics)	2017
M. Li(chemistry)	2017	*B. Richards(physics)	2017
*T. Zhou(physics)	2016	*S. Li(physics)	2016
N. Seifert(chemistry)	2015	R. Horne(physics)	2015
A. Arekelyan(physics)	2015	S. Yang(physics)	2015
C. Bu(physics)	2014	R. Shahrokhshahi	2014
H. Park(physics)	2012	J. Nunkaew(physics)	2011
*K. Betsch(physics)	2011	M. Pysher(physics)	2011
*M. Kutteruf(physics)	2010	R. Bloomer(physics)	2010
J. Gurian(physics)	2009	G. Wu(Electrical Eng.)	2010
P. Johnston(chemistry)	2009	X. Zhang (physics)	2009
*B. Sickmiller(physics)	2008	J. Han(physics)	2009
*D. Pinkham(physics)	2008	*X. Zhang (physics)	2008
R. Pooser(Eng. Physics)	2007	E. Shuman(physics)	2007
S. Yi (physics)	2006	C. Bisgaard(U.Aarhus, phys.)	2006
P. Crum Douglass (chemistry)	2006	*J. Murray-Krezan(physics)	2006
W. Li (physics)	2005	J. Emmert (physics)	2005
S. Feng (physics)	2005	K. DeWitt(chemistry)	2005
J. Crane(astronomy)	2004	Y. Self-Medlin(chemistry)	2004
*S. Pisharody(physics)	2003	H. Yoo (chemistry)	2002
M. Robinson (physics)	2002	*J. Zeibel (physics)	2002
A. Campillo(physics)	2001	D. Stewart(physics)	2001
E. Murgu (physics)	2001	L. Ko (physics)	2000
J. Keske(chemistry)	2001	V. Pugh (chemistry)	1999
*J. Thoma (physics)	1999	*M. Campbell (physics)	1999
D. McWhorter (chemistry)	1998	*T. Bensky (physics)	1998
J. Lowell (physics)	1998	W. Griffith (physics)	1998
C. Butler (physics)	1998	F. Fatemi (physics)	1998
K Gundy (chemistry)	1997	K. Peddanarappagari (EE)	1997
R. Watkins (physics)	1996	R. Anderson (physics)	1996
B. Lyons (physics)	1996	J. Yukich (physics)	1995
D. Duncan (physics)	1995	J. Louderback (physics)	1995
J. Veale (physics)	1994	Y. Lee (physics)	1993

**University Committee Service**

Member, Academic Strategy Committee	2022-
Member U.Va. Packard Fellowship Nominee Selection Committee	2004;2007;2009-2013
	2017-2020; 2023-
Faculty Judge, Sigma Pi Sigma Undergraduate Research Symposium	2022
Chair A&S Budget and Development Committee	2018-2019

Faculty Judge Undergraduate Research Network Annual Symposium	2016-2020
Member A&S Committee to Imagine the Future of the Graduate School	2016-2018
Member A&S Budget and Development Committee	2016-2018
Days on the Lawn Faculty Panelist	2015-2018, 2021
Member Promotion Committee for Kelsey Johnson (Astronomy)	2017
Lower Division Advisor (~ 20-25 students per year)	2001-2002; 2005; 2008; 2011; 2012; 2014; 2016; 2017 2022; 2023
Faculty Panelist College Council Science Degree Panel	2014, 2015
Member VPR Internal Review Committee	2013-2015
Member Arts & Sciences Chaired Professors Committee	2012-2015
Member Dolores Zohrab Liebmann Fellowship Review Committee	2014
Member A&S Workgroup on Research Funding	2013-2014
Member A&S Workgroup on Instruction and Research Space	2013-2014
Faculty Judge ACCIAC Fellows in Creativity and Innovation Award	2010; 2011
Chair, Committee to Recommend Next Physics Department Chair	2009-2010
Member V-RISE Planning Committee	2009
Member Jefferson Scholars National Selection Committee	2006; 2007; 2009
Member Provost's Promotion and Tenure Committee	2005-2007
Member Arts & Sciences Third Year Faculty Review Committee	2004
Member Arts & Sciences Steering Committee	2001-2004
Member Quantum- and Nano-Science and Technology Planning Group	2001-2002
Member Search Committee for Assoc. Dean for Graduate Programs and Research	2000-2001
Judge for Arts and Sciences Graduate Research Exhibition	2000
Member Arts and Sciences, Science and Technology Committee	1999-2000
Member Virginia 2020 Science and Technology Commission	1999-2000

### **National Committee and Professional Service**

Member APS Ramsey Prize Committee	2023-
Panelist NSF NeXUS Users Workshop	2022
Member Physics Department Review Committee, Univ of Delaware	2022
Member Physics Department Review Committee, Missouri S&T	2022
Chair APS Division of AMO Physics Nominating Committee	2019
Past Chair APS Division of AMO Physics	2018-2019
Member Advisory Board for The Global Teaching Project	2018-
Member NAS Intelligence Science and Technology Experts Group	2015-
Chair APS Division of AMO Physics	2017-2018
Chair-Elect APS Division of AMO Physics	2016-2017
Vice Chair APS Division of AMO Physics	2015-2016
Chair APS DAMOP Fellowship Committee	2015-2016
Member APS Davisson-Germer Prize Committee	2015-2016
Member APS Rabi Prize Committee	2014-2015
Member NRC Committee on Atomic, Molecular and Optical Science (CAMOS)	2013-2015
Site Reviewer for DOE Argonne National Lab AMO Physics Program	2012; 2015
Member APS Broida Prize Committee	2010-2012
Site Reviewer for NSF EUV Engineering Research Center	2010
Site Reviewer for Oak Ridge National Lab Atomic Physics Program	2010
Member APS Division of Laser Science Executive Committee	2008-2011
Co-Chair Local Committee 2009 APS Div. of AMO Physics Annual Meeting	2007-2009

Member Southeastern Section of the APS Executive Committee	2005-2008
Chair 2006 APS DLS New Laser Scientists Conference	2004-2006
Chair 2006 Gordon Research Conference on Multiphoton Processes	2004-2006
Member 2006 QELS Ultrafast Dynamics Subcommittee	2005-2006
Vice-Chair APS DLS New Laser Scientists Conference	2004
Participant THz Opportunities in Science Workshop Panel	2004
DOE Site Review for Brookhaven National Laboratory Chem. Physics Program	2003
Vice-Chair Gordon Research Conference on Multiphoton Processes	2002-2004
Member Southeastern Section of the APS Annual Meeting Program Committee	2003
Member QELS 2002 Ultra-fast Dynamics Program Subcommittee	2001-2002
Chair 2003 Max Born Award Committee for the Optical Society of America	2002
Member 2002 Max Born Award Committee for the Optical Society of America	2001
Member Nominations Committee for APS Division of AMO Physics	2001-2003
Member Program Committee for APS Division of AMO Physics	2001-2004
Co-Organizer Institute for Theoretical Atomic Physics Workshop on Complex Phenomena Involving Rydberg Atoms and Molecules	2000-2001
Site Reviewer for DOE Argonne National Lab AMO Physics Program	2000
Chair ILS '99 Lasers in Physics Subcommittee	1998-1999
Member QUELS '99 Quantum Optics and Atom Optics Subcommittee	1998-1999
Member OSA Ultrafast Technical Group Panel	1998
Member DOE - AMO Physics Workshop High Field Panel	1997
Member APS DAMOP Publication Committee	1995-1998

#### **Journal Review:**

Science, Nature Physics, Nature Photonics, Nature Communications, Physical Review Letters, Physical Review A, Physical Review E, Optics Letters, Journal of the Optical Society of America B, IEEE Journal of Quantum Electronics, Optics Express, Journal of Physical Chemistry, Journal of Chemical Physics, Journal of Physics B, Physics Letters A, Applied Physics Letters, New Journal of Physics, European Journal of Physics D.

#### **Research Proposal Review:**

Department of Energy, National Science Foundation, Army Research Office, FOM (the Netherlands), Research Corporation, Petroleum Research Corporation, Nebraska EPSCOR First Award, Austrian Science Fund (FWF), Kansas EPSCOR First Award, French Research Agency (ANR), Swiss Federal Institute of Technology Zurich (ETH).

#### **Research Interests**

Interaction of atoms, molecules, and nano-structured materials with strong external fields and ultra-short electromagnetic pulses; optical alignment and orientation of molecules; high harmonic generation; control of coherent few- and many-body interactions among cold atoms; attosecond electron dynamics and charge migration in molecules; electronic wavepacket control and observation, electronic correlation in two-electron atoms.

#### **High School Research Students:**

J.T Booth (St. Anne's-Belfield High School)	2011
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#### **Undergraduate Research Students:**

Briana Wood (REU summer student from SUNY Geneseo)	1996
Andrew Stortz (REU summer student from Williams College)	1997
Dan Usher                      2000-2001                      Daniel Pinkham	2000-2002
Kristin Luery                      2001                      John Kelly	2001

Chris Maranto	2001-2002	Martha Rodeheaver	2002
Hussain Zaidi	2005	Joshua Myers	2005
T.J. Rodigas	2006	Stephen Rogers	2008
D. Gold	2010	Anshuman Pal	2010-2011
Sherwood Richers	2011	Alec Landow	2011
David Van Petten	2012-2013	Michael Viray	2012-2013;2015
Anna Yanchenko	2012-2015	Emily Cubbage	2015-2016
Elizabeth Larson	2016-2017	Kat Maddock	2018-2019
Sam Nadjari	2019-2020	Tahmid Mahi	2024-

### Graduate Research Students:

N. Tielking (received M.S.)	1994-1996	T. Bensky (received Ph.D.)	1994-1998
J. Thoma (received Ph.D.)	1998-1999	M. Campbell (received Ph.D.)	1995-1999
J. Zeibel (received Ph.D.)	1997-2002	S. Pisharody (received Ph.D.)	1997-2003
S. Tkachenko	1998-1999	S. Jaiswal (received M.S.)	1999-2000
J. Murray-Krezan (received Ph.D.)	2002-2006	D. Pinkham (received Ph.D.)	2002-2008
B. Sickmiller (received Ph.D.)	2002-2008	D. Pole	2003-2004
P. Gee	2003-2004	M. Kutteruf (received Ph.D.)	2003-2010
X. Zhang (received Ph.D.)	2003-2008	M. Larsen	2003-2004
J. Huber	2004	S. Cho	2004
A. Wallo (received M.S.)	2005-2006	J. Mulholland	2005
M. Commisso	2005	K. Mooney	2005
K. Betsch (received Ph.D.)	2006-2011	J. White	2006
E. Askanazi	2009	S. Li (received Ph.D.)	2010-2016
L. Levac	2010-2011	T. Zhou (received Ph.D.)	2010-2016
A. Rajan	2011	B. Richards (received Ph.D.)	2011-2017
S. Khatri	2015-	S. Tafti	2015-2016
M. Gordon (received M.A.)	2015-2019	C. He (received Ph.D.)	2016-2021
L. Chai (received Ph.D.)	2017-2023		

### Post-doctoral Researcher Associates:

A. Azarm	2019-2022
S. Sharma	2018-2020
P. Sándor	2016-2018
K. Egodapitya	2012-2015
M. Kutteruf	2010-2011
T. Vogt	2007-2008
R. Minns	2004-2006
L. Ko	2003-2006
M. DeWitt	2000-2002
E. Wells	2000-2003
R. van Leeuwen	1997-2000

### Research Funding

Department of Energy (1 of 6 PIs)	\$2,250,000 (\$675,000 to Jones)	2022-2025
National Science Foundation (co-PI)	\$126,974 (\$0 direct to Jones)	2020-2023
Department of Energy (1 of 6 PIs)	\$2,250,000 (\$675,000 to Jones)	2018-2022
Department of Energy	\$450,000	2016-2021
National Science Foundation	\$455,000	2016-2021
Department of Energy (1 of 6 PIs)	\$2,025,000 (\$600,000 to Jones)	2014-2018
National Science Foundation	\$360,000	2013-2016

Department of Energy	\$435,000	2012-2016
Department of Energy	\$586,000	2009-2012
National Science Foundation	\$560,000	2008-2012
Air Force Office of Scientific Research	\$360,000	2007-2010
Air Force Office of Scientific Research	\$300,000	2005-2008
National Science Foundation	\$405,000	2004-2008
Department of Energy	\$705,000	2003-2009
Air Force Office of Scientific Research	\$111,430 (1 of 2 PIs)	2002-2003
Air Force Office of Scientific Research	\$228,000	2001-2004
University of Virginia – FEST	\$327,617	2001-2004
Department of Energy	\$270,000	2000-2003
National Science Foundation	\$385,000	2000-2003
Air Force Office of Scientific Research	\$135,000	1999-2001
Packard Foundation Fellowship	\$575,000	1996-2001
National Science Foundation	\$660,000 (1 of six PIs)	1996-1999
ORAU Junior Faculty Enhancement Award	\$ 10,000	1996
Air Force Office of Scientific Research	\$180,000	1996-1999
University of Virginia AEP	\$622,100 (1 of five PIs)	1995-1998
Office of Naval Research	\$224,000	1994-1997

### **Invited Talks and Colloquia**

101. R.R. Jones, “A Broadband RF/Microwave Field Sensor Based on Non-Resonant, Non-Linear Field-Mixing in Rydberg Atoms,” Physics of Quantum Electronics Conference (PQE 2024), Snowbird, UT, January 8, 2024.

100. R.R. Jones, “It Doesn’t Get Any Better Than This,” Phil Bucksbaum Symposium, Stanford University, Aug. 4, 2023.

99. R.R. Jones, “Observation of Dipole-Dipole Driven Rabi Oscillations in a Random Many-Atom Rydberg Gas,” Physics of Quantum Electronics Conference (PQE 2023), Snowbird, UT, January 9, 2023.

98. R.R. Jones, “Exploiting Rotational Coherences to Probe Strong-Field Molecular Ionization Dynamics,” Physics of Quantum Electronics Conference (PQE 2022), Snowbird, UT, January 14, 2022.

97. R.R. Jones, “Probing Electronic Binding Potentials with Attosecond Photoelectron Wavepackets,” Colloquium (virtual via Zoom), Max Born Institute, Berlin, October 20, 2021.

96. R.R. Jones, “Exploiting Coherences to Probe Strong-Field Molecular Ionization Dynamics,” Annual Meeting of the APS Division of Atomic, Molecular, and Optical Physics (DAMOP), Virtual, June 4, 2021.

95. R.R. Jones, “Viewing Correlated Electron Dynamics and Quantum Radio,” Physics Colloquium, University of Central Florida, September 27, 2019.

94. R.R. Jones, “Probing Electronic Binding Potentials with Attosecond Photoelectron Wavepackets,” CLEO 2019, San Jose, CA, May 10, 2019.

93. R.R. Jones, “Controlled Transfer of Electronic Wavepacket Motion Between Distant Atoms,” AMO Seminar, University of Connecticut, April 23, 2018.

94. R.R. Jones, "Probing Matter with Attosecond Photo-Electron Wavepackets," Physics Seminar, University of Mary Washington, Fredricksburg, VA, April 12, 2018.
93. R.R. Jones, "Controlled Transfer of Electronic Wavepacket Motion Between Distant Atoms," AMO and Condensed Matter Seminar, University of Michigan, Ann Arbor, MI, March 24, 2018.
92. R.R. Jones, "High-Energy Electron Emission from Metallic Nano-tips Driven by Intense Single-Cycle THz Pulses," Physics of Quantum Electronics (PQE) 2018, Snowbird, UT January 11, 2018.
91. R.R. Jones, "Ultrafast Light Pulses for Controlling Atoms and Molecules," Public Lecture, Lund University, Lund, Sweden, December 1, 2017.
90. R.R. Jones, "Probing Electronic Binding Potentials with Attosecond Photoelectron Wavepackets," AMO Physics Seminar, Lund University, Lund, Sweden, November 30, 2017.
89. R.R. Jones, "Probing Electronic Binding Potentials with Attosecond Photoelectron Wavepackets," International Symposium on Ultrafast Intense Laser Science, Lijiang, China, October 29, 2017.
88. R.R. Jones, "High-Energy Electron Emission from Metallic Nano-tips Driven by Intense Single-Cycle THz Pulses," 14<sup>th</sup> International Conference on Multiphoton Processes, Budapest, Hungary, September 24, 2017.
87. R.R. Jones, "Probing Electronic Binding Potentials with Attosecond Photoelectron Wavepackets," Trends in Ultrafast Science, Boulder, CO, August 17, 2017.
86. R.R. Jones, "Ultrafast Atomic, Molecular, and Nano Physics: Strong Fields, Quantum Dynamics, Imaging and Control," Quantum Symposium, Virginia Tech, Blacksburg, VA, August 12, 2016.
85. R.R. Jones, "Control and Manipulation of Matter using Intense Single-Cycle THz Pulses," Annual Meeting of the APS Division of Atomic, Molecular, and Optical Physics (DAMOP), Columbus, OH, June 11, 2015.
84. R.R. Jones, "Strong-Field Physics with Single-Cycle THz Pulses," Chemical Dynamics Seminar, Lawrence Berkeley National Laboratory, March 26, 2015.
83. R.R. Jones, "THz Induced, Field-Free Orientation of Coherently Prepared Molecules," High Harmonic Spectroscopy Workshop, Louisiana State University, March 3, 2015.
82. R.R. Jones, "Dynamics in Intense Laser Fields: Sometimes a Molecule is not Quite an Atom," Physics Department Colloquium, Purdue University, February 12, 2015.
81. R.R. Jones, "Strong-Field Physics with Single-Cycle THz Pulses," International Workshop on Atomic Physics, Max Planck Institute for Complex Systems, Dresden, Germany, Nov. 26, 2014.
80. R.R. Jones, "Strong-Field Physics with Single-Cycle THz Pulses," Multiphoton Processes



Gordon Research Conference, Bentley University, Waltham, MA, June 16, 2014.

79. R.R. Jones, "Manipulating and Viewing Electron Dynamics Using Single- and Half-Cycle Pulses," Ultrafast Atomic and Molecular Physics with Cutting Edge Light Sources: New Opportunities and Challenges, Institute for Theoretical Atomic, Molecular, and Optical Physics and Kansas State University, Manhattan, KS, November 6, 2013.

78. R.R. Jones, "Strong Field Physics with Intense Single-Cycle THz Pulses," Atomic Physics and Quantum Optics Seminar, Institute of Optics and Quantum Electronics, Friedrich-Schiller Universitat, Jena, Germany, August 22, 2013.

77. R.R. Jones, "Controlled Dipole-Dipole Interactions in a Cold Rydberg Gas," 79<sup>th</sup> Annual Meeting of the APS Southeastern Section, Tallahassee, FL, November 15, 2012.

76. R.R. Jones, "Manipulating and Probing Atomic and Molecular Dynamics with Intense THz Pulses," Frontiers of THz Science, SLAC National Accelerator Facility, September 5, 2012.

75. R.R. Jones, "Combined Ion and Laser Field Effects in Intense Laser Ionization of Atoms and Molecules," Annual Meeting of the APS Division of Atomic, Molecular, and Optical Physics (DAMOP), Orange County, CA June 5, 2012.

74. R.R. Jones, "Probing Correlated Electron Dynamics and Other Fundamental Quantum Processes in the Attosecond Regime," Attosecond Science and Engineering Workshop, University of Central Florida, Orlando, FL, April 17, 2012.

73. R.R. Jones, "Electronic coherence in a gas of dipole-dipole coupled Rydberg atoms," Modern Optics and Spectroscopy Seminar, MIT, Cambridge, MA February 28, 2012.

72. R.R. Jones, "Steering Molecular Dynamics with Strong Asymmetric Laser Fields," Lew Coker Symposium, Kansas State University, Manhattan, KS, April 18, 2011.

71. R.R. Jones, "Directional Coulomb Explosion of Small Molecules in Intense Asymmetric Laser Fields," AMO Seminar, Department of Physics, The Ohio State University, Columbus, OH, December 17, 2010.

70. R.R. Jones, "Exploration and Control of Molecular Dissociation in Strong Asymmetric Laser Fields," Annual Meeting of the APS Division of Atomic, Molecular, and Optical Physics (DAMOP), Houston, TX May 26, 2010.

69. R.R. Jones, "Pulsed-Field Control of Coherent Interactions Within and Between Rydberg Atoms," Workshop on Cold and Ultracold Plasma and Rydberg Physics II, Institute for Theoretical Atomic and Molecular Physics, Harvard University, Cambridge, MA, September 23, 2009.

68. R.R. Jones, "Ultrafast Atomic Physics," Physics and Astronomy Department Colloquium, University of Delaware, Newark DE, April 8, 2009.

67. R.R. Jones, "Controlled Electron Dynamics in Atoms and Small Molecules," Light Matter Interaction Symposium, College of Science and Technology, Temple University, Philadelphia, PA, November 19, 2008.

66. R.R. Jones, "Which Way is Up: Inducing and Probing Dynamics Using Asymmetric Pulses," Multiphoton Processes Gordon Conference, Tilton, NH June 12, 2008.
65. R.R. Jones, "Inducing and Probing Dynamics Using Asymmetric Pulses," Theoretical Challenges in Attosecond Laser Science, Institute for Theoretical Atomic and Molecular Physics, Harvard University, Cambridge, MA, May 14, 2008.
64. R.R. Jones, "Using Wavepackets to Explore and Control Non-Perturbative Interactions," Annual Meeting of the APS Division of Laser Science, San Jose, CA, September 16, 2007.
63. R.R. Jones, "Quantum Control of Rydberg Wavepackets in One- and Two-Electron Atoms," Ninth Rochester Conference on Coherence and Quantum Optics, Rochester, NY, June 10, 2007.
62. R.R. Jones, "The Atomic Chameleons: Rydberg Wavepackets," Annual Meeting of the APS Division of Atomic, Molecular and Optical Physics (DAMOP), Calgary, Alberta, Canada, June 8, 2007.
61. R.R. Jones, "Rydberg Wavepacket Metrology and Dynamics," Conference on Lasers and Electro-Optics (CLEO) 2007, Baltimore, MD May 7, 2007.
60. R.R. Jones, "The Rydberg Wavepacket: An Atomic Jack of All Trades," Physics Department Colloquium, University of Tennessee, Knoxville, TN April 16, 2007.
59. R.R. Jones, "Cartoon Atoms", Physics Department Colloquium, Auburn University, Auburn, AL, April 6, 2007.
58. R.R. Jones, "The Atomic Circus: Using Lasers to Manipulate and View Electron Motion in Atoms," Virginia Military Institute, Lexington, VA, October 3, 2006.
57. R.R. Jones, "Strong-Field Physics with Coherently Prepared Molecules," Chemistry Division Colloquium, Argonne National Laboratory, November 14, 2005.
56. R.R. Jones, "Strong-Field Physics with Coherently Prepared Molecules," Quantum Control of Light and Matter Gordon Conference, Colby College, Waterville, ME, August 3, 2005.
55. R.R. Jones, "Manipulating and Viewing Rydberg Wavepackets," International Conference on Photon, Electron, and Atomic Collisions, Rosario, Argentina, July 20, 2005.
54. R.R. Jones, "Using Wavepackets to Explore Non-Perturbative Dynamics in Atoms and Molecules", Atomic Physics Gordon Conference, Tilton, N.H. June 27, 2005.
53. R.R. Jones, "Probing 2-Electron Dynamics at the Classical Limit of an Atom," APS Division of Laser Science, Annual Meeting, Rochester, NY, Oct. 13, 2004.
52. R.R. Jones, "Probing 2-Electron Dynamics at the Classical Limit of an Atom," APS Division of Atomic Molecular and Optical Physics Annual Meeting, Tucson, AZ, May 28, 2004.
51. R.R. Jones, "Probing 2-Electron Dynamics at the Classical Limit of an Atom," International Workshop on Rydberg Physics, Max Planck Institute for the Physics of Complex Systems, Dresden Germany, May 7, 2004.

50. R.R. Jones, "Strong Electric Field Manipulation of Atomic and Molecular Dynamics," Workshop on Optical Arbitrary Waveform Generation, DARPA, Arlington, VA, April 7, 2004.
49. R.R. Jones, "Physics at THz Frequencies: Atoms to Cosmology," DOE-NSF-NIH Workshop on Opportunities in THz Science, Arlington, VA Feb. 12, 2003.
48. R.R. Jones, "Using Wavepackets to Explore Non-Perturbative Dynamics in Atoms and Small Molecules," Third International Workshop on Optimal control of Quantum Dynamics, Ringberg Castle, Munich, Germany, December 8, 2003.
47. R.R. Jones, "Electron Dynamics in a 3-Body Coulomb System: A New Look at an Old Problem," Physics Department Colloquium, Stony Brook University, Stony Brook, NY, October 21, 2003.
46. R.R. Jones, "Closed-Loop Control of Intense Laser Fragmentation of Small Clusters," Physics of Quantum Electronics XXXII, Snowbird, UT, January 6, 2003.
45. R.R. Jones, "Using Electronic Wavepackets to Probe Dynamical Processes in Atoms," Joint Atomic Physics Seminar, Harvard Physics/Institute for Theoretical Atomic Physics (ITAMP), Harvard University, Cambridge, MA, November 6, 2002.
44. R.R. Jones, "Using Short Light Pulses to Manipulate and View Quantum Dynamics in Atoms," Modern Optics and Spectroscopy Seminar, MIT, Cambridge, MA November 5, 2002.
43. R.R. Jones, "Feedback Control of Laser Fragmentation and Ionization of Small Clusters," Laser Science XVIII, Orlando, FL, October 3, 2002.
42. R.R. Jones, "Wavepacket Engineering, 3-Body Recombination in Cool Plasmas, Rydberg Dynamics in Fields, Half-Cycle Pulses and More," Workshop on Complex Phenomena Involving Rydberg Atoms and Molecules, Institute for Theoretical Atomic and Molecular Physics, Cambridge, MA April 28, 2001.
41. R.R. Jones, "Using Short Electromagnetic Pulses to Manipulate and View Electronic Wavefunctions," Physics Department Colloquium, University of Missouri, Rolla, MO, March 22, 2001.
40. R.R. Jones, "Manipulation of Differential Electron Yields via Autoionizing Wavepacket Control," PacifiChem 2000, Honolulu Hawaii, December 17, 2000.
39. R.R. Jones, "Using Short Electromagnetic Pulses to Manipulate and View Electronic Wavefunctions," Physics Department Colloquium, Old Dominion University, Norfolk VA, November 10, 2000.
38. R.R. Jones, "Using Short Electromagnetic Pulses to Manipulate and View Electronic Wavefunctions," Physics Department Colloquium, College of William and Mary, Williamsburg VA, October 20, 2000.
37. R.R. Jones, "Manipulation of Differential Electron Yields via Autoionizing Wavepacket Control," International Workshop on Photoionization, Carry le Rouet, France, October 11, 2000.
36. R.R. Jones, "Using Short Electromagnetic Pulses to Manipulate and View Electronic

Wavefunctions," Physics Department Colloquium, University of Colorado, Boulder CO, October 3, 2000.

35. R.R. Jones, "Using Short Electromagnetic Pulses to Manipulate and View Electronic Wavefunctions," Physics Department Colloquium, Kansas State University, Manhattan KS, October 2, 2000.

34. R.R. Jones, "Altering Electron Dynamics in Atoms," Annual Meeting of the Southeastern Section of the American Physical Society," Chapel Hill, NC, Nov. 8, 1999.

33. R.R. Jones, "Wavepacket Dynamics," Gordon Conference on Atomic and Molecular Motion, Plymouth, New Hampshire, August 1, 1999.

32. R.R. Jones, "Using Half-Cycle Pulses to Manipulate Wavefunctions and Mimic Collision Processes in Rydberg Atoms," Atomic Physics Gordon Conference, Plymouth, New Hampshire, July 5, 1999.

31. R.R. Jones, "Strong-Field Manipulation of Electronic Wavefunctions," Univ. of Connecticut Physics Department Colloquium, Storrs, CT, April 23, 1999.

30. R.R. Jones, "Coherent Manipulation of Electronic Wavefunctions," APS Centennial Spring Meeting, Atlanta, GA, March 1999.

29. R.R. Jones, "Manipulating Electronic Wavefunctions," Department of Energy Atomic, Molecular, and Optical Physics Research Meeting, Ellicott City, MD, October 1998.

28. R.R. Jones, "Manipulating Electronic Wavefunctions," Laser Physics '98, Berlin, Germany July 6-10, 1998.

27. R.R. Jones, "Rydberg Wavepacket Dynamics," Multiphoton Gordon Conference, Tilton, NH, June 14-19, 1998.

26. R.R. Jones, "Building Electronic Wavepackets from Scratch," International Quantum Electronics Conference 1998, San Francisco, CA, May 3-8, 1998.

25. R.R. Jones, "Kicking Big Atoms with Short Light Pulses," Physics Department Colloquium, Ohio State University, Columbus OH, November 18, 1997.

24. R.R. Jones, "Kicking Big Atoms with Short Light Pulses," Physics Department Colloquium, University of Virginia, Charlottesville, VA, October 31, 1997.

23. R.R. Jones, "Electron Dynamics in Rydberg Atoms Exposed to Intense THz Radiation," Atomic Physics Gordon Conference, Henniker, NH, July 2, 1997.

22. R.R. Jones, "Half-cycle, Terahertz Manipulation of Wavepackets," 12th Interdisciplinary Laser Science Conference, Rochester, NY, October 22, 1996.

21. R.R. Jones, "Kicking Big Atoms Using Short Light Pulses," Physics Colloquium, Auburn University, Auburn, AL, October 4, 1996.

20. R.R. Jones, "Creating and Probing Electronic Wavepackets Using Half-Cycle Pulses," APS Division of Atomic, Molecular, and Optical Physics, Ann Arbor, MI, May 1996.

19. R.R. Jones, "Studying Quantum Atoms Using Classical Physics," Colby College, Physics Colloquium, Waterville, ME, March 11, 1996.
18. R.R. Jones, "Creating and Probing Dynamic States in Atoms," Univ. of Virginia, Physics Colloquium, Charlottesville, VA, March 8, 1996.
17. R.R. Jones, "Creating and Probing Wavepackets Using Half-Cycle Pulses," Univ. of Maryland, Chemical Physics Seminar, College Park, MD, March 6, 1996.
16. R.R. Jones, "Kicking Big Atoms With Short Pulses," FOM-AMOLF Institute, General Colloquium, Amsterdam, The Netherlands, January 8, 1996.
15. R.R. Jones, "Bound-State Interferometry," Eleventh Interdisciplinary Laser Science Conference, Portland, OR, September 1995.
14. R.R. Jones, "Creating and Probing Dynamic States in Atoms," Ohio Section of the APS, Youngstown, OH, May 1995.
13. R.R. Jones, "Terahertz-Atom Interactions," Annual Meeting of the Optical Society of America, Dallas, TX, October 1994.
12. R.R. Jones, "Quantum and Classical Behavior of Rydberg Atoms Exposed to Ultra-Short Half-Cycle Pulses," APS Division of Atomic, Molecular and Optical Physics, Crystal City, Virginia, April 1994.
11. R.R. Jones, "Atomic Physics With Intense, Short Electromagnetic Pulses," College of William and Mary, Physics Department Colloquium, Williamsburg, VA, September 23, 1993.
10. R.R. Jones, "Ramsey Interference in Strongly-Driven Atomic Systems," Atomic Physics Gordon Conference, Wolfeboro, NH, July 1993.
9. R.R. Jones, "Femtosecond Ramsey Fringes in Strongly-Driven Rydberg Systems," Eleventh International Conference on Laser Spectroscopy, Hot Springs, VA, June 1993.
8. R.R. Jones, "Atomic Physics with Intense, Sub-picosecond Half-Cycle Pulses," APS Division of Atomic, Molecular, and Optical Physics, Reno, Nevada, May 1993.
7. R.R. Jones, "Atomic Physics with Intense, Half-Cycle Far Infrared Pulses," Super Intense Laser Atom Physics Conference, Han sur Lesse, Belgium, Jan. 1993.
6. R.R. Jones, "Population Trapping in Atoms Exposed to Intense Laser Fields," Interdisciplinary Laser Science Conference VIII, Albuquerque, NM, September 1992.
5. R.R. Jones, "Population Trapping in Atoms in Intense Laser Fields," MIT, Atomic Physics Seminar, Cambridge, MA, Spring 1992.
4. R.R. Jones, "Population Trapping in Atoms in Intense Laser Fields," Yale University, Atomic Physics Seminar, New Haven, CN, Spring 1992.

3. R.R. Jones, "Population Trapping in Atoms in Intense Laser Fields," University of Virginia, Physics Department Colloquium, Charlottesville, VA, Spring 1992.
2. R.R. Jones, "Double Circular States of Ba," Workshop on Correlations in Two- Electron States, Orsay, France, 1990.
1. R.R. Jones, "Effects of Electric Fields on Autoionization and Implications for Dielectronic Recombination," Seventh A.P.S. Topical Conference on Atomic Processes in Plasmas," NIST, Gaithersburg, MD, October 1989.

### **Contributed Presentations**

116. Lingyun Chai and Robert R Jones, "Self-Calibrating broadband electrometer for radio frequency and microwave fields detection utilizing non-resonant, non-linear electric field-mixing in Rydberg atoms," Annual Meeting of the APS Division of Atomic, Molecular, and Optical Physics (DAMOP), Spokane, WA, June 7, 2023.
115. Kenneth Lopata, Aderonke S Folorunso, Francois Mauger, Kyle A Hamer, Denawakage D Jayasinghe, Imam S Wahyutama, Justin R Ragains, Robert R Jones, Louis F DiMauro, Mette B Gaarde, Kenneth J Schafer, "Attochemistry Principles of Charge Migration," Annual Meeting of the APS Division of Atomic, Molecular, and Optical Physics (DAMOP), Spokane, WA, June 7, 2023.
114. Zifan Wang, Daniel R Tuthill, Louis F DiMauro, Mette B Gaarde, Robert R Jones, Francois Mauger, Kenneth Lopata, Kenneth J Schafer, "Resolving Molecular Electron Dynamics with Attosecond Spectroscopy Using Visible Light," Annual Meeting of the APS Division of Atomic, Molecular, and Optical Physics (DAMOP), Spokane, WA, June 6, 2023.
113. A. Folorunso, F. Mauger, K. A. Hamer, D. Jayasinghe, R. R. Jones, L. F. DiMauro, M. B. Gaarde, K. J. Schafer, and K. Lopata "Chemical Control of Attosecond Charge Migration," 8th International Conference on Attosecond Science and Technology (ATTO VIII), University of Central Florida, Orlando, FL, July 2022.
112. Madeline Killian, Robert Jones, Varun S. Makhija, "A Quantum Rattleback Effect in Rationally Asymmetric Molecules," Annual Meeting of the APS Division of Atomic, Molecular, and Optical Physics (DAMOP), Orlando, FL, June 2022.
111. Aderonke S. Folorunso, François Mauger, Kyle A. Hamer, Denawakage D. Jayasinghe, Robert R. Jones, Louis F. DiMauro, Mette B. Gaarde, Kenneth J. Schafer, and Kenneth Lopata, "Chemical Regulation of Attosecond Charge Migration," Annual Meeting of the APS Division of Atomic, Molecular, and Optical Physics (DAMOP), Orlando, FL, June 2022.
110. F. Mauger, K.A. Hamer, A.S. Folorunso, K. Lopata, R.R. Jones, L.F. DiMauro, K.J. Schafer, and M.B. Gaarde, "Probing molecular charge migration with high-harmonic sideband spectroscopy," Annual Meeting of the APS Division of Atomic, Molecular, and Optical Physics (DAMOP), Orlando, FL, June 2022.
109. Aderonke Folorunso, Francois Mauger, Kyle Hamer, Robert Jones, Louis DiMauro, Mette Gaarde, Kenneth Schafer, and Kenneth Lopata, "Molecular Modes of Attosecond Charge Migration," Annual Meeting of the APS Division of Atomic, Molecular, and Optical Physics (DAMOP), Virtual, June 2, 2021.
108. Chengxing He and R.R. Jones, "Active Suppression of Dephasing and Observation of Rabi

Oscillations in Near Resonant Dipole-Dipole Interactions,” Annual Meeting of the APS Division of Atomic, Molecular, and Optical Physics (DAMOP), Virtual, June 3, 2021.

107. Lingyun Chai and R.R. Jones, “Demonstration of an rf Electrometer Based on EIT Spectroscopy of Non-Resonantly Dressed Rydberg Atoms,” Conference on Lasers and Electro-Optics (CLEO) 2021, Virtual, May 11, 2021.

106. S. Khatri and R.R. Jones, “Characterization of Field-Free Orientation of OCS,” Annual Meeting of the APS Division of Atomic, Molecular, and Optical Physics (DAMOP), Online, June 3, 2020.

105. L. Chai and R.R. Jones, “Demonstration of a rf Electrometer Based on EIT Spectroscopy of Non-Resonantly Dressed Rydberg Atoms in a Vapor Cell,” Annual Meeting of the APS Division of Atomic, Molecular, and Optical Physics (DAMOP), Online, June 4, 2020.

104. S. Sharma and R.R. Jones, “A Nano-Tip THz Field-Probe,” Annual Meeting of the APS Division of Atomic, Molecular, and Optical Physics (DAMOP), Online, June 4, 2020.

103. C. He and R.R. Jones, “Quantum Control Operations in a Non-Hermitian Atomic System,” Annual Meeting of the APS Division of Atomic, Molecular, and Optical Physics (DAMOP), Milwaukee, WI, May 30, 2019.

102. S. Khatri and R.R. Jones, “THz enhanced surface Second Harmonic Generation,” Annual Meeting of the APS Division of Atomic, Molecular, and Optical Physics (DAMOP), Fort Lauderdale, FL, May 31, 2018.

101. P. Sandor, M.W. Gordon, R.R. Jones, A. Sissay, P. Abanador, F. Mauger, M. Gaarde, K.J. Schafer, and K. Lopata, “Angle-dependence of strong-field ionization of singly-charged chloromethane and bromomethane,” Annual Meeting of the APS Division of Atomic, Molecular, and Optical Physics (DAMOP), Fort Lauderdale, FL, May 29, 2018.

100. T. Gorman, T. Scarborough, P. Sandor, S. Khatri, F. Mauger, P. Abanador, R.R. Jones, M. Gaarde, K.J. Schafer, P. Agostini, and L.F. DiMauro, “High-harmonic Spectroscopy of Two-center Interference in Aligned OCS and CO<sub>2</sub>,” Annual Meeting of the APS Division of Atomic, Molecular, and Optical Physics (DAMOP), Fort Lauderdale, FL, June 1, 2018.

99. S. Khatri and R.R. Jones, “Exploring the Effect of Intense THz Fields on Optical Harmonic Generation,” Trends in Ultrafast Science, Boulder, CO, August 17, 2017.

98. F. Mauger, A.S. Bruner, A. Sissay, K. Lopata, P.M. Abanador, M.B. Gaarde, K.J. Schafer, T. Gorman, T. Scarborough, P. Agostini, L.F. DiMauro, S. Khatri, M. Gordon, P. Sandor, R.R. Jones, “Time-Resolving Electron Dynamics in Molecules Using Strong Laser Fields,” FEMTO13, Cancun, Mexico, August 15, 2017.

97. P. Sandor, R.R. Jones, A. Sissay, P. Abanador, F. Mauger, M. Gaarde, K.J. Schafer, and K. Lopata, “Angle-dependence of strong-field ionization of singly- and doubly-charged carbonyl sulfide,” Annual Meeting of the APS Division of Atomic, Molecular, and Optical Physics (DAMOP), Sacramento, CA, June 9, 2017.

96. B.G. Richards and R.R. Jones, “Dipole-dipole Resonance Line Shapes in a Cold Rydberg Gas,” Southeastern Section of the APS Annual Meeting, Charlottesville, VA, November 11, 2016.

95. Sha Li and R.R. Jones, "THz induced keV Electron Emission from Metallic Nanotips," International Conference on Ultrafast Phenomena 2016, Santa Fe, NM, July 19, 2016.
94. Tao Zhou, B.G. Richards, and R.R. Jones, "Controlled Transfer of Electronic Wavepacket Motion Between Distant Atoms," Multiphoton Processes Gordon Conference, Proctor Academy, Andover, NH, June 20, 2016.
93. Sha Li and R.R. Jones, "THz induced keV Electron Emission from Metallic Nanotips," Multiphoton Processes Gordon Conference, Proctor Academy, Andover, NH, June 20, 2016.
92. Tao Zhou, B.G. Richards, and R.R. Jones, "Observation of Wavepacket Coherence Transfer between Atoms through Dipole-Dipole Interactions," Annual Meeting of the APS Division of Atomic, Molecular, and Optical Physics (DAMOP), Providence, RI, May 25, 2016.
91. Sha Li and R.R. Jones, "THz-Induced, High-Energy Electron Emission from Tungsten Nanotips," Frontiers in Optics 2015, San Jose, CA, October 23, 2015.
90. Sha Li, Anna Yanchenko, and R.R. Jones, "THz-Induced, High-Energy Electron Emission from Nano-Structured Metals," Annual Meeting of the APS Division of Atomic, Molecular, and Optical Physics (DAMOP), Columbus, OH, June 10, 2015.
89. Tao Zhou, B.G. Richards, and R.R. Jones, "Absence of Collective Decay in a Cold Rydberg Gas," Annual Meeting of the APS Division of Atomic, Molecular, and Optical Physics (DAMOP), Columbus, OH, June 10, 2015.
88. B.G. Richards and R.R. Jones, "Lineshapes of Dipole-Dipole Resonances in a Cold Rydberg Gas," Annual Meeting of the APS Division of Atomic, Molecular, and Optical Physics (DAMOP), Columbus, OH, June 10, 2015.
87. D. Kiewewetter, S. Schoun, A. Camper, P. Agostini, L.F. DiMauro, and R.R. Jones, "Influence of the Atomic Potential on Near-Threshold RABBITT Measurements," Annual Meeting of the APS Division of Atomic, Molecular, and Optical Physics (DAMOP), Columbus, OH, June 9, 2015.
86. X. Gong, M. Kunitski, K.J. Betsch, Q. Song, L. Ph. H. Schmidt, T. Jahnke, Nora G. Kling, O. Herrwerth, B. Bergues, A. Senfleben, J. Ullrich, R. Moshhammer, G.G. Paulus, I. Ben-Itzhak, M. Lezius, M.F. Kling, H. Zeng, R.R. Jones, and J. Wu, "Dissociative Triple Ionization of N<sub>2</sub> in Strong Laser Fields: Does Charge Transfer Play a Role?" Gordon Conference on Multiphoton Processes, Bentley University, Waltham, MA, July 15, 2014.
85. K.N. Egodapitiya, Sha Li, and R.R. Jones, "Dynamic Orientation of OCS Molecules," Gordon Conference on Multiphoton Processes, Bentley University, Waltham, MA, July 15, 2014.
84. K.N. Egodapitiya, Sha Li, and R.R. Jones, "Dynamic Orientation of OCS Molecules," Gordon Conference on Quantum Control of Light and Matter, Mount Holyoke College, South Hadley, MA July 28-Aug. 2, 2013.
83. Tao Zhou, Sha Li, and R.R. Jones, "Rydberg Wavepacket Evolution in an Ensemble of Cold



Dipole-Dipole Coupled Atoms,” Annual Meeting of the APS Division of Atomic, Molecular and Optical Physics, Quebec City, Quebec, Canada, June 6, 2013.

82. Sha Li and R.R. Jones, “Ionization of Polar Atoms by Intense, Single-Cycle Fields,” Annual Meeting of the APS Division of Atomic, Molecular and Optical Physics, Quebec City, Quebec, Canada, June 6, 2013.

81. Kisra Egodapitiya, Sha Li, and R.R. Jones, “Dynamic Orientation of OCS Induced by Intense THz Pulses,” Annual Meeting of the APS Division of Atomic, Molecular and Optical Physics, Quebec City, Quebec, Canada, June 5, 2013.

80. M. Kubel, Nora G. Kling, K. J. Betsch, N. Camus, A. Kaldun, U. Kleineberg, I. Ben-Itzhak, R.R. Jones, G.G. Paulus, T. Pfeifer, J. Ullrich, R. Moshhammer, M.F. Kling, and B. Bergues, “Non-Sequential Double-Ionization in a Single Laser-Cycle,” ATTO2013 Paris, July 8-12 (2013).

79. F. Robicheaux, X. Zhang and R.R. Jones, “Time-Dependent Electron Interactions in Double-Rydberg Wavepackets,” Annual Meeting of the APS Division of Atomic, Molecular and Optical Physics, Orange County, CA, June 7, 2012.

78. Sha Li and R.R. Jones, “Ionization of Excited Atoms in Intense, Low Frequency Single-Cycle Fields,” Annual Meeting of the APS Division of Atomic, Molecular and Optical Physics, Orange County, CA, June 7, 2012.

77. Nora G. Johnson, Matthias Kübel, K. J. Betsch, I. Ben-Itzhak, R.R. Jones, G.G. Paulus, R. Moshhammer, J. Ullrich, Boris Bergues, and M.F. Kling, Annual Meeting of the APS Division of Atomic, Molecular and Optical Physics, Atlanta, GA, June 16, 2011.

76. Boris Bergues, Matthias Kubel, Nora Johnson, Kelsie Betsch, Robert Jones, Gerhard Paulus, Robert Moshhammer, Joachim Ullrich, Ferenc Krausz, and Matthias Kling, “Sub-cycle double ionization dynamics of argon and neon,” European Conference on Lasers and Electro-Optics and the XII<sup>th</sup> European Quantum Electronics Conference, Munich, Germany May 22, 2011.

75. Matthias Kübel, Boris Bergues, Nora G. Johnson, Kelsie J. Betsch, Robert R. Jones, Gerhard G. Paulus, Robert Moshhammer, Joachim Ullrich, Ferenc Krausz, and Matthias F. Kling, “Two Electron Control in Nonsequential Double Ionization,” 75th Annual Meeting of the Deutsche Physikalische Gesellschaft (DPG) and DPG Spring Meeting, Dresden, Germany, March 13, 2011.

74. Boris Bergues, Matthias Kübel, Nora G. Johnson, Kelsie J. Betsch, Robert R. Jones, Gerhard G. Paulus, Robert Moshhammer, Joachim Ullrich, Ferenc Krausz, and Matthias F. Kling, “Carrier-Envelope-Phase Effects in Non-Sequential Double Ionization of Rare Gases,” DPG Spring Meeting of the Divisions of Plasma and Short Time-Scale Physics,” Kiel, Germany, March 28, 2011.

73. A.M. Sayler, T. Rathje, W. Müller, K. Rühle, G.G. Paulus, Nora G. Johnson, O. Herrwerth, A. Wirth, S. De, I. Ben-Itzhak, M. Lezius, B. Bergues, A. Senftleben, C.D. Schröter, R. Moshhammer, J. Ullrich, K.J. Betsch, R.R. Jones, and M. Kling, “Single-shot carrier-envelope phase tagged non-sequential double ionization of argon in intense 4-fs laser fields,” 75th Annual Meeting of the Deutsche Physikalische Gesellschaft (DPG) and DPG Spring Meeting, Dresden, Germany, March 13-18, 2011.

72. N. G. Johnson, K. J. Betsch, B. Bergues, O. Herrwerth, A. Senftleben, A. M. Sayler, T. Rathje, A. Wirth, S. De, I. Ben-Itzhak, R. Moshhammer, J. Ullrich, F. Krausz, M. Lezius, R. R. Jones, G. G. Paulus, M. F. Kling, "Measurement Beats Control: 3D Momentum Imaging Combined with Single Shot Carrier Envelope Phase Detection," Pacificchem 2010, Honolulu, HI, December 15, 2010.
71. K. J. Betsch, Nora G. Johnson, O. Herrwerth, B. Bergues, A. Senftleben, A. M. Sayler, T. Rathje, G. G. Paulus, I. Ben-Itzhak, R. Moshhammer, J. Ullrich, F. Krausz, M. Lezius, R. R. Jones, and M. F. Kling, "Exploration of time-dependent enhanced ionization of N<sub>2</sub> and O<sub>2</sub> via few-cycle laser pulses," 2010 Gordon Research Conference on Multiphoton Processes, Tilton, NH, June 7, 2010.
70. Nora G. Johnson, O. Herrwerth, B. Bergues, K. J. Betsch, A. Senftleben, A. M. Sayler, T. Rathje, G. G. Paulus, I. Ben-Itzhak, R. Moshhammer, J. Ullrich, F. Krausz, M. Lezius, R. R. Jones, and M. F. Kling, "3D Momentum Imaging of the Dissociative Ionization of NO Combined with Single Shot Carrier Envelope Phase Detection," 2010 Gordon Research Conference on Multiphoton Processes, Tilton, NH, June 7, 2010.
69. M.R. Kutteruf and R.R. Jones, "Probing Coherence in a Cold Rydberg Gas," Annual Meeting of the APS Division of Atomic, Molecular and Optical Physics, Houston, TX, May 28, 2010.
68. E. Shuman, T.F. Gallagher, and R.R. Jones, "Multiphoton Assisted Recombination: Beyond the Simpleman's Model," Annual Meeting of the APS Division of Atomic, Molecular and Optical Physics, Charlottesville, VA May 23, 2009.
67. M.R. Kutteruf and R.R. Jones, "Using Population Echoes to Explore Coherent Interactions in a Nearly Frozen Rydberg Gas," Annual Meeting of the APS Division of Atomic, Molecular and Optical Physics, Charlottesville, VA May 21, 2009.
66. E.S. Shuman, R.R. Jones, and T.F. Gallagher, "Multiphoton Assisted Recombination: Beyond the Simpleman's Model," Multiphoton Processes Gordon Conference, Tilton, NH, June 2008.
65. M.R. Kutteruf and R.R. Jones, "Transform-limited Rydberg-Rydberg Collisions in a Thermal Atomic Beam," Annual Meeting of the APS Division of Atomic, Molecular and Optical Physics, State College, PA, May 30, 2008.
64. D.W. Pinkham, T. Vogt, and R.R. Jones, "Extracting the polarizability anisotropy from transient alignment of HBr," Annual Meeting of the APS Division of Atomic, Molecular and Optical Physics, State College, PA, May 29, 2008.
63. B. Sickmiller and R.R. Jones, "High Harmonic Generation from Non-symmetric Molecular Targets in a Hollow-Core Waveguide," Annual Meeting of the APS Division of Atomic, Molecular and Optical Physics, Calgary, Alberta, Canada, June 8, 2007.
62. D.W. Pinkham and R.R. Jones, "Phase-Sensitive Coulomb Explosion of CO Prepared by a 2-Color Pump Field," Annual Meeting of the APS Division of Atomic, Molecular and Optical Physics, Calgary, Alberta, Canada, June 7, 2007.

61. R.S. Minns, M.R. Kutteruf, H. Zaidi, L. Ko and R.R. Jones, "Preserving Coherence in Rydberg Qubits," Multiphoton Processes Gordon Research Conference, Tilton, NH June 14, 2006.
60. D.W. Pinkham and R.R. Jones, "Optimizing dynamic alignment in diatomic molecules by pulse shaping," Multiphoton Processes Gordon Research Conference, Tilton, NH June 14, 2006.
59. Brett Sickmiller and R.R. Jones, "Exploring High Harmonic Generation in N<sub>2</sub> in a Hollow Core Waveguide," Multiphoton Processes Gordon Research Conference, Tilton, NH June 14, 2006.
58. D.W. Pinkham and R.R. Jones, "Optimizing dynamic alignment in diatomic molecules by pulse shaping," Multiphoton Processes Gordon Research Conference, Tilton, NH June 12, 2006.
57. R.S. Minns, M.R. Kutteruf, H. Zaidi, L. Ko and R.R. Jones, "Preserving Coherence in Rydberg Qubits," Meeting of the APS Division of Atomic, Molecular and Optical Physics, Knoxville, TN May 17, 2006.
56. X. Zhang and R.R. Jones, "Probing Time-Dependent Electron Interactions in Double-Rydberg Wavepackets," Meeting of the APS Division of Atomic, Molecular and Optical Physics, Knoxville, TN May 17, 2006.
55. J. Murray-Krezan and R. R. Jones, "Probing the Momenta of Stark Eigenstates," Meeting of the APS Division of Atomic, Molecular and Optical Physics, Knoxville, TN May 17, 2006.
54. J. Murray-Krezan, J. Kelly, M.R. Kutteruf, and R.R. Jones, "Orbital dynamics of two-electron atoms in a static electric field probed by scaled energy spectroscopy," Meeting of the APS Division of Atomic, Molecular and Optical Physics, Knoxville, TN May 17, 2006.
53. D.W. Pinkham, K. Mooney, and R.R. Jones, "Optimizing dynamic alignment in diatomic molecules by pulse shaping," Meeting of the APS Division of Atomic, Molecular and Optical Physics, Knoxville, TN May 17, 2006.
52. R.S. Minns, M.R. Kutteruf, H. Zaidi, L. Ko and R.R. Jones, "Preserving Coherence in Rydberg Qubits," Laser Science XXI, Tucson, AZ, October 18, 2005.
51. M. Shiddiq, C.E. Lucas, M.D. Havey, C.I. Sukenik, R.R. Jones, D. Cho, J.Y. Kim, C.Y. Park, "Comparison of Pulsed and Continuous-wave Dipole Traps for Confining Ultracold Rubidium Atoms", Laser Science XXI, Tucson, AZ, October 19, 2005.
50. R.S. Minns, M.R. Kutteruf, H. Zaidi, L. Ko and R.R. Jones, "Preserving Coherence in Rydberg Qubits," Atomic Physics Gordon Conference, Colby College, Waterville, ME July 31-August 5, 2005.
49. M.R. Kutteruf, R.S. Minns, H. Zaidi, L. Ko and R.R. Jones, "Preserving Coherence in Rydberg Qubits," Atomic Physics Gordon Conference, Tilton NH, June 26-30, 2005.
48. B. Sickmiller and R.R. Jones, "Molecular Alignment Effects on High Harmonic Generation in N<sub>2</sub> in a Hollow Core Waveguide," Joint Conference on Lasers and Electro-

Optics/Quantum Electronics and Laser Science, Baltimore, MD, May 27, 2005.

47. M. Shiddiq, C.E. Lucas, M.D. Havey, C.I. Sukenik, R.R. Jones, D. Cho, J.Y. Kim, C.Y. Park, "Comparison of Pulsed and cw Dipole Traps for Confining Ultracold Rubidium", DAMOP Conference, Lincoln, Nebraska, May 2005.

46. B. Sickmiller and R.R. Jones, "Molecular Alignment Effects on High Harmonic Generation in N<sub>2</sub> in a Hollow Core Waveguide," Annual Meeting of the Atomic, Molecular and Optical Physics Division of the American Physical Society, Lincoln, Nebraska, May 18, 2005.

45. D. Pinkham and R.R. Jones, "Intense Laser Ionization of Transiently Aligned Diatomic Molecules," Annual Meeting of the Atomic, Molecular and Optical Physics Division of the American Physical Society, Lincoln, Nebraska, May 18, 2005.

44. C.I. Sukenik, M.D. Havey, S.L. Frierson, C.E. Lucas, M. Shiddiq, R.R. Jones, D. Cho, J.Y. Kim, and C.Y. Park, "Progress on Developing a Pulsed FORT Using IR Radiation from a Free Electron Laser," SESAPS Conference, Wilmington, North Carolina, November 22, 2003.

43. S.N. Pisharody and R.R. Jones, "Using Electronic Wavepackets to Probe 3-Body Coulomb Dynamics," Annual Meeting of the Atomic, Molecular and Optical Physics Division of the American Physical Society, May 24, 2003.

42. E. Wells, D. Pinkham, C.W.S. Conover, and R.R. Jones, "Selective Fragmentation In Intense Field Ionization of Clusters" March Meeting of the American Physical Society, 2003.

41. M.J. DeWitt, E. Wells, and R.R. Jones, "The Role of Molecular Structure in Intense-Field Ionization of Hydrogen Molecules," Annual Meeting of the Atomic, Molecular and Optical Physics Division of the American Physical Society, Williamsburg, VA May 29, 2002.

40. E. Wells, R.R. Jones, and C.W.S. Conover, "Controlling the Fragmentation Branching Ratios in Intense Field Ionization of Clusters," Annual Meeting of the Atomic, Molecular and Optical Physics Division of the American Physical Society, Williamsburg, VA May 30, 2002.

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### **Patents and Provisional Patents**

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