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3 July 2018

Educational and Professional History

Education

<i>Princeton University</i>	Ph.D.	Plasma Physics	1985
<i>Princeton University</i>	M.A.	Plasma Physics	1982
<i>California Institute of Technology</i>	B.S.	Applied Physics	1980

Positions

The University of Iowa:

<i>Dept. of Physics and Astronomy</i>	Professor	1996 – present
<i>Mechanical Engineering</i>	Professor	2011 – present
<i>Dept. of Physics and Astronomy</i>	Associate Professor	1991 – 1996
<i>Dept. of Physics and Astronomy</i>	Assistant Professor	1985 – 1991

Max-Planck Institut

<i>für Extraterrestrische Physik</i>	Guest Scientist	1998
<i>Garching, Germany</i>	Guest Scientist	1991 – 1992

Professional Society Membership

American Physical Society
Institute for Electrical and Electronic Engineers

Research Interests

Plasma physics experiments and modeling:

Dusty plasmas, strongly-coupled plasmas

Statistical physics and condensed matter experiments and modeling:

Liquids, fluctuation theorems, transport coefficients

Awards

<i>Amer. Physical Society</i>	Distinguished Lecturer in Plasma Physics	2002 – 2003
<i>Amer. Physical Society</i>	Fellow	2001
<i>Univ. of Iowa</i>	Faculty Scholar Award	1995
<i>IBM</i>	Faculty Development Award	1986

News Articles Covering John A. Goree's Research

<i>Science</i> , Vol. 264, p. 29 "A Dusty Road for Space Physics"	1 Apr 1994
<i>Science News</i> , Vol. 146, p. 84 "Forming Electric Crystals in a Dusty Plasma"	Aug 1994
<i>Nature</i> , Vol. 370, p. 411 "Plasma Dust as Model Crystals"	11 Aug 1994
<i>Physics World</i> "Plasma Crystal Opens New Branch of Research"	Oct 1994
<i>Physics News in 1994</i> , pp. 59-61 (<i>American Institute of Physics</i>) "Dusty Plasmas in the Cosmos and in Chip Manufacturing"	1995
<i>Science</i> "Plasma Physics Gets a Home"	28 Mar 1997
<i>Physical Review Focus</i> "Mach Cones: Shock Waves in Dusty Plasmas" http://www.aip.org/enews/physnews/1999/split/pnu455-3.htm	2 Nov 1999
<i>American Physical Society 2000 Calendar</i> Featured image: "Shock Wave in a Dusty Plasma"	2000
<i>CERN Courier</i> "Mach cones studied in plasmas" http://www.cerncourier.com/main/article/40/1/14	Jan/Feb 2000
<i>Science News</i> , Vol. 158, No. 20, Nov. 11, 2000, p. 310 "Science gets a start on the space station"	Nov 2000
<i>Omaha World-Herald</i> , Pg. 1E "2001: A Space Community" by Julie Anderson	18 Feb 2001
<i>NASA Space Research News</i> "Serendipity in the Laboratory: Dust Busters and Dust Seekers Find Common Ground" Vol. 1, No. 2	Mar 2002
<i>European television channel ARTE</i> "L'Astronome et l'Indien," documentary about interstellar dust grains	Jan 2003
<i>Physics Today</i> , Vol. 57, pp. 32-38, featured cover story "Dusty Plasmas in Industry, the Laboratory and Space" circulation: 120,000 including public libraries around the country	July 2004
<i>Parity</i> (Japanese science magazine) "Dusty Plasmas in Industry, the Laboratory and Space"	May 2005
<i>Physics Web Physics News</i> "Plasmas move into dentistry" http://physicsweb.org/articles/news/10/8/12/1	16 August 2006

Science News

"Radiant plasma may combat cavities"

Vol. 170, No. 11, p. 173, 2006.

9 September 2006

IOP Science LabTalk

"Diagnostics for plasma transport on the International Space Station"

<http://iopscience.iop.org/0741-3335/labtalk-article/56090>

7 Feb 2014

Grants

External Grants as Principal Investigator

	<i>award</i>	<i>period</i>	<i>started</i>
IBM			
"Faculty Development Award"	\$60,000	lump sum	1986
Iowa Dept. of Economic Development			
"Plasma Processing Laboratory"	\$1,000,000	lump sum	1987
Lockheed Missiles and Space Co.			
"Dust-Plasma Interaction Experiment"	\$90,000	2 years	1990
NASA Origins of the Solar System Program			
"Plasma Dust Experiments"	\$150,000	3 years	1992
"Plasma Dust Experiments"	\$35,000	1 year	1995
NASA Micro-Gravity Science and Applications Division			
"Plasma Dust Crystallization"	\$330,000	3 years	1993
National Science Foundation Engineering Directorate			
"Particulates in Low-Temperature Plasmas"	\$216,000	3 years	1993
NASA Micro-Gravity Science and Applications Division			
"Graduate Student Researchers Program"	\$88,000	4 years	1994
National Science Foundation Physics			
"Strongly Coupled Dusty Plasmas"	\$669,000	3 years	1997
NASA Micro-Gravity Science and Applications Division			
"Plasma Dust Crystallization"	\$459,000	4 years	1997
Department of Energy			
"Strongly Coupled Dusty Plasmas"	\$540,000	3 years	2000
Department of Energy			
"Ninth Workshop on the Physics of Dusty Plasmas"	\$5,000	1 year	2001
NASA Physical Sciences Research Division			
"Optically-Excited Waves in 3D Dusty Plasmas"	\$700,000	4 years	2002

Department of Energy				
“Strongly Coupled Dusty Plasmas”	\$555,000	3 years	2003	
US Civilian Research & Development Foundation	\$47,000	20 months	2004	
“Mass transfer phenomena in weakly-ionized dusty plasmas” with co-PI Olga S. Vaulina				
NASA Physical Sciences Research Division				
“Self-Structuring in Dusty Plasmas”	\$328,333	2 years	2005	
Department of Energy				
“Strongly Coupled Dusty Plasmas”	\$612,235	3 years	2006	
NASA Physical Sciences Research Division				
“Self-Structuring in Dusty Plasmas”	\$400,000	3 years	2007	
National Science Foundation				
“Strongly Coupled Dusty Plasmas”	\$717,000	3 years	2009	
NASA Physical Sciences Research Division				
“Self-Structuring in Dusty Plasmas”	\$300,000	3 years	2010	
NASA Physical Sciences Research Division				
“PLASMALAB Experiments”	\$120,000	2 years	2010	
National Science Foundation Physics				
“Strongly Coupled Dusty Plasmas”	\$720,000	3 years	2012	
NASA Physical Sciences Research Division				
“PLASMALAB Experiments”	\$246,000	3 years	2012	
NASA Physical Sciences Research Division				
“Self-Structuring in Dusty Plasmas”	\$300,000	3 years	2013	
Department of Energy				
“Strongly Coupled Dusty Plasmas”	\$675,000	3 years	2015	
NASA Physical Sciences Research Division				
“PLASMALAB Experiments”	\$82,000	1 year	2016	
NASA Physical Sciences Research Division				
“Self-Structuring in Dusty Plasmas”	\$100,000	1 year	2016	
NASA Physical Sciences Research Division				
“Nonlinear Wave Experiments in Dusty Plasmas”	\$550,000	4 years	2017	
National Science Foundation Physics				
“Nonlinear Wave Experiments in Dusty Plasmas”	\$20,000	4 years	2017	
Department of Energy				
“Strongly Coupled Dusty Plasmas”	\$675,000	3 years	2018	
Department of Defense				
“New Materials from Dusty Plasmas”	\$1,137,500	5 years	2018	
	total	\$11,880,068		

External Grants as co-Investigator

NASA Physical Sciences Research Division

“Three dimensional dusty plasma experiments” \$386,000 4 years 2017
with Principal Investigator Dr. Bin Liu

Publication Impact

Refereed Publications (published 1999 –2017)

	99	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	tot
Phys. Rev. Lett.	2	2	0	5	2	2	1	3	0	3	0	3	0	2	0	0	0	0	1	26
Phys. Rev. E	2	4	3	1	3	1	1	1	1	3	2	2	2	6	2	4	0	1	0	39
AIP journals	2	1	1	1	1	1	0	4	1	1	1	2	3	0	0	2	1	2	1	25
IEEE, IOP, NPG & other	1	0	0	0	2	0	0	2	1	0	1	1	0	0	1	2	3	2	1	17
<i>Total</i>	7	7	4	7	8	4	2	10	3	7	4	8	5	8	3	8	4	5	3	99

Citations

Total citations 9,642 (8,854 without self-citations), h-index: 49, *Web of Science*, July 8, 2018

Total citations 12,995, h-index: 56, [Google Scholar](#), July 8, 2018

Teaching

Theses Supervised

	<i>degree</i>	<i>completed</i>
<i>Chun-liu Han</i>	M.S. Electrical Engineering	1989
<i>Matthew J. Goeckner</i>	Ph.D. Physics	1990
<i>Afan Ottenheimer</i>	M.S. Physics	1995
<i>Richard Quinn</i>	M.S. Physics	1995
<i>Dmitry Samsonov</i>	Ph.D. Physics	1999
<i>Richard Quinn</i>	Ph.D. Physics	2000
<i>Timothy Flanagan</i>	M.S. Physics	2006
<i>Timothy Flanagan</i>	Ph.D. Physics	2010
<i>Yan Feng</i>	Ph.D. Physics	2010
<i>W.D. Suranga Ruhunusiri</i>	Ph.D. Physics	2014
<i>Amit Mukhopadhyay</i>	Ph.D. Physics	2014
<i>Zachary Haralson</i>	Ph.D. Physics	2017
<i>Chun-Shang "Tim" Wong</i>		in progress, supported by RA
<i>Anton Kananovich</i>		in progress, supported by RA
<i>Vitaliy Zhuravlyov</i>		in progress, supported by RA

Courses Taught at The University of Iowa

<i>Basic Physics</i>	29:008	introductory physics for non-majors
<i>College Physics II</i>	29:12	physics for premedical students
<i>Intro. Physics I</i>	29:17	mechanics & heat for physics majors
<i>Intro. Physics III</i>	29:19	modern physics for physics majors
<i>Electronics</i>	29:128	circuits & measurement for science majors
<i>Electricity & Magnetism</i>	29:129	electro- & magnetostatics for physics majors
<i>Electricity & Magnetism</i>	29:130	electrodynamics for physics majors
<i>Plasma Physics I</i>	29:194	introductory plasma physics
<i>Plasma Physics II</i>	29:195	introductory plasma physics
<i>Research: Physics</i>	29:281	graduate students
<i>Adv. Plasma Physics I</i>	29:294	kinetic theory for graduate students
<i>Adv. Plasma Physics II</i>	29:295	MHD & transport for graduate students
<i>Introductory Physics Labs</i>	29:8/11/12/17/18/27/28	new labs & lab manuals

Awards won by thesis students

L.B. Sims Outstanding Master's Thesis Award, The University of Iowa
 Timothy Flanagan

2007

Teaching assignments (since 1996)

<i>Semester</i>		<i>Course</i>	<i>Comment</i>
Spring	1996	29:194 Electronics	Effort included development of lab & lab manual
Fall	1996	none	Faculty Scholar Award
Spring	1997	29:294 Adv. Plasma Physics	
Fall	1997	none	Faculty Scholar Award
Spring	1998	none	Faculty Scholar Award - sabbatical in Germany
Fall	1998	none	Sabbatical in Germany
Spring	1999	29:194 Electronics	Effort included development of lab & lab manual
Fall	1999	29:8/11/12/17/18/27/28	Physics Labs - new labs & lab manuals
Spring	2000	29:194 Electronics	Effort included development of lab & lab manual
Fall	2000	29:8/11/12/17/18/27/28	Physics Labs - new labs & lab manuals
Spring	2001	29:194 Electronics	Effort included development of lab & lab manual
Fall	2001	29:8/11/12/17/18/27/28	Physics Labs - new labs & lab manuals
Spring	2002	29:194 Electronics	Effort included development of lab & lab manual
Fall	2002	29:12 College Physics II	55 students enrolled
Spring	2003	29:194 Electronics	15 students enrolled
			Effort included development of lab & lab manual
Fall	2003	29:294 Adv. Plasma Physics	6 students enrolled
Spring	2004	29:194 Electronics	12 students enrolled
			Effort included development of lab & lab manual
Summer	2004	29:281 Research: Physics	1 student enrolled
Fall	2004	29:129 ElectricityMagnetism	18 students enrolled
Spring	2005	29:194 Electronics	16 students enrolled
			Effort included development of lab & lab manual
		29:281 Research: Physics	1 student enrolled
Summer	2005	29:281 Research: Physics	1 student enrolled
Fall	2005	29:294 Adv. Plasma Physics	5 students enrolled
Spring	2006	29:194 Electronics	16 students enrolled
			Effort included development of lab & lab manual
		29:281 Research: Physics	1 student enrolled
Fall	2006		Career Development Award
		29:281 Research: Physics	1 student enrolled
Spring	2007	29:194 Electronics	16 students enrolled
			Effort included development of lab & lab manual
		29:281 Research: Physics	1 student enrolled
Fall	2007	Adv. Plasma Physics	5 students enrolled
		29:281 Research: Physics	1 student enrolled
Spring	2008	29:194 Electronics	14 students enrolled
			Effort included development of lab & lab manual
		29:281 Research: Physics	2 students enrolled
Fall	2008	29:008 Basic Physics	76 students enrolled
			Effort included supervising honors project
		29:281 Research: Physics	2 students enrolled
Spring	2009	29:128 Electronics	13 students enrolled
			Effort included development of lab & lab manual
		29:281 Research: Physics	1 student enrolled
Fall	2009	29:281 Research: Physics	4 students enrolled

Spring	2010	29:008 Basic Physics	56 students enrolled
		29:128 Electronics	18 students enrolled
			Effort included development of lab & lab manual
		29:281 Research: Physics	4 students enrolled
Summer	2010	29:281 Research: Physics	2 students enrolled
Fall	2010	29:008 Basic Physics	93 students enrolled
			Effort included supervising honors project
		29:281 Research: Physics	1 student enrolled
Spring	2011	29:128 Electronics	17 students enrolled
			Effort included development of lab & lab manual
Fall	2011	Adv. Plasma Physics	8 students enrolled
Spring	2012	29:128 Electronics	26 students enrolled
			Effort included development of lab & lab manual
Summer	2012	29:281 Research: Physics	1 student enrolled
Fall	2012	29:281 Research: Physics	2 students enrolled
Spring	2013	29:128 Electronics	17 students enrolled
			Effort included development of lab & lab manual
Spring	2013	29:281 Research: Physics	2 students enrolled
Summer	2013	29:281 Research: Physics	1 student enrolled
Fall	2013	29:281 Research: Physics	4 students enrolled
			Career Development Award
Spring	2014	29:128 Electronics	21 students enrolled
			Effort included development of lab & lab manual
			Effort included supervising honors project
		29:281 Research: Physics	1 student enrolled
Summer	2014	29:281 Research: Physics	1 student enrolled
Fall	2014	29:008 Basic Physics	95 students enrolled
			Effort included a major change in teaching methods: Flip videos, clickers, online homework
		29:281 Research: Physics	3 students enrolled
Spring	2015	29:128 Electronics	11 students enrolled
			Effort included a major change in teaching methods: Flip videos, peer instruction
			Effort included development of lab & lab manual
Fall	2015	29:281 Research: Physics	3 students enrolled
Spring	2016	29:128 Electronics	15 students enrolled
		29:281 Research: Physics	3 students enrolled
Fall	2016	29:008 Basic Physics	75 students enrolled
		29:281 Research: Physics	3 students enrolled
		7400:0025 Practicum in College Teaching,	1 student enrolled
Spring	2017	29:128 Electronics	11 students enrolled
		29:281 Research: Physics	3 students enrolled
Summer	2017	29:281 Research: Physics	1 student enrolled
Fall	2017	29:008 Basic Physics	88 students enrolled
		29:281 Research: Physics	2 students enrolled
Spring	2017	29:128 Electronics	13 students enrolled
		29:281 Research: Physics	3 students enrolled
Fall	2018	29:008 Basic Physics	
		29:281 Research: Physics	
Spring	2018	29:128 Electronics	
		29:281 Research: Physics	

Innovations in Teaching (since 2011)

Peer Instruction – This practice was adopted in 2011 starting with Advanced Plasma Physics and used in all classes subsequently taught.

Flipped Classroom – This practice was adopted in 2014 starting with Basic Physics and in 2015 with Electronics. Colloquia to train other instructors to use flipping are given. Youtube video channel to train instructors was created.

Computing – Labview programming was added to Electronics in 2016

Supervision of Undergraduate Research and Honors Projects (since 2004)

<i>Jerome Fung</i>	REU Student from Swarthmore College	2004
	“Method of Measuring Charge in a Dusty Plasma”	
<i>Robert Merrill</i>	REU Student from Ohio Northern University	2005
	“Plasma Tweezers Instrument for Dusty Plasmas”	
<i>Sarah Langlas</i>	UI undergraduate honors project	
	“The trajectory of a soccer ball”	2008
<i>Kyle Swanson</i>	UI student in cooperation with College of Dentistry	
	“Plasma Needle Disinfection of Bacteria”	2008 – 2010
<i>Lizhao Ge</i>	UI undergraduate honors project	
	“Measuring speed of waves”	2010
<i>Philipp Hagen Klett</i>	Undergraduate, Department of Physics and Astronomy	
	“Microgravity experiments with dusty plasma”	2010 – 2011
<i>Mia Siebrasse</i>	Undergraduate, Department of Physics and Astronomy	
	“Dusty plasma image analysis”	2011
<i>John Gernon</i>	Undergraduate, Grinnell College	2014
<i>Se Hyun Chun</i>	Undergraduate, Department of Physics and Astronomy	
	“Dusty plasma image analysis”	2014
<i>Tony Ball</i>	Undergraduate, Department of Physics and Astronomy	
	“Dusty plasma image analysis”	2017
<i>Karl Smith</i>	Undergraduate, St. Olaf College	
	“Dusty plasma image analysis”	2017, 2018

Supervision of Postdoctoral Scientific Personnel

<i>Assistant Research Scientist</i>	Terrence E. Sheridan, Jr.	1988 – 1991
<i>Research Investigator</i>	Matthew J. Goeckner	1991
<i>Research Investigator</i>	Chunshi Cui	1993 – 1995
<i>Research Investigator</i>	G. Praburam	1993 – 1995
<i>Research Investigator</i>	John B. Pieper	1995 – 1996
<i>Postdoctoral Research Associate</i>	Volodymyr Nosenko	2000 – 2002
<i>Assistant Research Scientist</i>	Volodymyr Nosenko	2002 – 2006
<i>Associate Research Scientist</i>	Terrence E. Sheridan, Jr.	2000 – 2001
<i>Postdoctoral Research Associate</i>	Shota Nunomura	2001 – 2002
<i>Postdoctoral Research Associate</i>	Bin Liu	2001 – 2007
<i>Assistant Research Scientist</i>	Bin Liu	2007 – 2017
<i>Associate Research Scientist</i>	Bin Liu	2017 – present
<i>Postdoctoral Research Associate</i>	Yan Feng	2010 – 2012
<i>Postdoctoral Research Associate</i>	Zian Wei	2017 – 2018

Supervision of Engineering Personnel

<i>Mechanical Engineer</i>	Allen Cooper	2002 – 2003
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Hosting of Visiting Scientific Personnel

<i>Prof. Frank Melandsø</i>	University of Tromsø, Norway	1994 – 1995
<i>Prof. André Melzer</i>	University of Kiel, Germany	1999
<i>Dr. Shota Nunomura</i>	University of Nagoya, Japan	1999 – 2001
<i>Prof. Alexander Piel</i>	University of Kiel, Germany	May 2001
<i>Prof. Avinash Khare</i>	Inst. for Plasma Res., Gandhinagar, India	2002 – 2003
<i>Prof. Alexander Piel</i>	University of Kiel, Germany	May 2005
<i>Prof. Terrence E. Sheridan, Jr.</i>	Ohio Northern University	August 2005
<i>Dr. Oliver Arp</i>	University of Kiel, Germany	2006
<i>Mr. Mukhit Muratov</i>	Al-Farabi Kazakh National University, Kazakhstan	2012
<i>Prof. Alexander Piel</i>	University of Kiel, Germany	May 2013

Service

Service to Department

Departmental Committees

Educational Operations	1987 – 1990
Faculty Search	1992 – 1993
Comprehensive Exam	1993 – 1994
Faculty Search	1997 – 1998
Review of Tenured Faculty	1999, 2001, 2015
Executive Committee	1999 – 2001
Promotion and Tenure Committee	1999
Search Committee for Lab Coordinator	2000
Graduate Brochure & Website Committee	2001 – 2002
Recruiting and Admissions Committee	2002 – 2003
Promotion and Tenure Committee	2004
Review of Untenured Faculty	2007, 2012
Recruiting and Admissions Committee	2008 – 2009
Recruiting and Admissions Committee (Chair)	2009 – 2010
Recruiting and Admissions Committee (Chair)	2011 – 2012
Faculty Search	2011 – 2012
Recruiting and Admissions Committee (Chair)	2012 – 2013
Recruiting and Admissions Committee	2017
Lab Curriculum and Floor Renovation	Feb 2018

Departmental ad-hoc service since 2000

Colloquium organization	AY 1992/93, 2000/01
Writing departmental self study	2000
Updating lab manuals, when not assigned as teaching	2000 – 2003
Plasma seminar organization	most years
Qualifier exam grading	
Updating web pages for recruiting graduate students	2008 – 2017

Exam committees since 2008

Comprehensive exam committee, Yan Feng	2009
Comprehensive exam committee, Timothy Flanagan	2010
PhD Thesis defense committee, Yan Feng	2010
Comprehensive exam committee, Jonathan Heinrich	2010
PhD Thesis defense committee, Timothy Flanagan	2010
PhD Thesis defense committee, Jonathan Heinrich	2011
PhD Thesis defense committee, Xiayu Xu (Biomedical Engineering)	2012
Comprehensive exam committee, Suranga Ruhunusiri	2013
Comprehensive exam committee, Amit Mukhopadhyay	2013
PhD Thesis defense committee, Suranga Ruhunusiri	2014
PhD Thesis defense committee, Amit Mukhopadhyay	2014

Comprehensive exam committee, John Meyer	2014
PhD Thesis defense committee, John Meyer	2015
Comprehensive exam committee, Feng Chu	2015
Comprehensive exam committee, Jorge Berumen	2015
Comprehensive exam committee, Sean Mattingly	2016
Comprehensive exam committee, Zachary Haralson	2017
Comprehensive exam committee, Jianan Zhang (Mechanical Engineering)	2017
PhD Thesis defense committee, Jianan Zhang (Mechanical Engineering)	2017
PhD Thesis defense committee, Zachary Haralson	2017
PhD Thesis defense committee, Sean Mattingly	2017
Comprehensive exam committee, Chun-Shang Wong	2018
PhD Thesis defense committee, Feng Chu	2018
PhD Thesis defense committee, Jorge Berumen	2018
PhD Thesis defense committee, Chun-Shang Wong	2018

Recruiting of graduate students since 2000

Graduate recruiting visit to MIPT, Moscow, Russia	Sep 2000
Graduate College Open House representative of department	15 Nov 2001
Focus-group participant to review brochure and website	28 Nov 2001
Produced all-new web site, the largest of its kind nationwide	2001–2002
Photographed dozens of subjects for recruiting website, brochure, talks	2001–2002
Edited over 100 photos for recruiting website, brochure, talks	2001–2002
Produced all-new recruiting brochure	2001–2002
Produced all-new slides for recruiting talks	2002
Co-produced all-new pamphlet to recruit women graduate students	2002
Met with prospective graduate students visiting our campus	2001–2002
Graduate recruiting visit to Lawrence University, Appleton WI	15 Oct 2002
Graduate recruiting visit to Iowa State University	13 Jan 2003
Graduate recruiting visit to Grinnell College	21 Jan 2003
Graduate recruiting visit to Case Western Reserve University	13 Feb 2003
Graduate recruiting visit to Augustana College	17 April 2003
Graduate recruiting visit to Carleton College	25 Apr 2003
Graduate recruiting visit to Sonoma State College	12 May 2003
Graduate recruiting visit to Swarthmore College	26 Sep 2003
Graduate recruiting visit to California State University at Sacramento	23 Oct 2003
Graduate recruiting visit to Brigham Young University	7 Dec 2004
Graduate recruiting visit to Grinnell College	28 April 2009
Presentation at Ohio Section of the American Physical Society Meeting	24 April 2009
Presentation at American Association Physics Teachers Summer Meeting	28 Jul 2009
Graduate recruiting visit to St. Olaf College	21 Oct 2009
Graduate recruiting visit to Illinois State University	20 April 2011
Graduate recruiting visit to University of Science and Technology of China	9 Oct 2015

Recruiting of undergraduate students since 2000

Focus-group participant to review brochure and website	Dec 2002
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Service to University and College

Vice President for Research Committees

Advisory Committee on Physical and Mathematical Sciences 1992

Committee for Conflict of Interest in Sponsored Programs 1999 – 2002

College of Liberal Arts Committees

Review Committee for Dept. of Chemistry 1994

Commencement Platform Official 2016

Service to Profession

Guest Editor

IEEE Transactions on Plasma Science
Special Issue on Charged Dust in Plasmas 1993 – 1994
Contributions to Plasma Physics 2014 - 2015

Journal Referee

Applied Physics Letters
Contributions to Plasma Physics
Europhysics Letters
IEEE Transactions on Plasma Science
Icarus
Journal of Applied Physics
Journal of Biological Physics
Journal of Geophysical Research (Space Physics)
Journal of Physics D
Journal of Vacuum Science and Technology
Nature
Nature Physics
New Journal of Physics
Physica A
Physica Scripta
Physical Review
Physical Review Letters
Physics Letters A
Physics of Fluids
Physics of Plasmas
Plasma Physics and Controlled Fusion
Plasma Sources Science & Technology
Royal Society of Chemistry

Service to Professional Societies

<i>Executive Committee</i>	American Vacuum Society Div. Plasma Science Tech.	1988 – 1990
<i>Program Committee</i>	American Vacuum Society National Symposia	1989 – 1991
<i>Program Committee</i>	Non-neutral Plasma Workshop	1997
<i>Program Committee</i>	Second International Conference on Dusty Plasmas	1999
<i>American Institute of Physics committee: update plasma physics PACS codes</i>		1999 – 2000
<i>Program Committee</i>	Non-neutral Plasma Workshop	2000
<i>Co-organizer</i>	Ninth Dusty Plasma Workshop	2001
<i>Program Committee</i>	Third International Conference on Dusty Plasmas	2002
<i>Nomination Committee</i>	American Physical Society Div. of Plasma Physics	2002
<i>Chairman, Nomination Committee</i>		
	American Physical Society Div. of Plasma Physics	2003
<i>Program Committee</i>	Non-neutral Plasma Workshop	2003
<i>Fellowship Committee</i>	American Physical Society Div. of Plasma Physics	2005
<i>International Committee</i>		
	Fourth International Conference on Dusty Plasmas	2005
<i>Vice Chair</i>	Marshall Rosenbluth Thesis Award Committee	
	American Physical Society Div. of Plasma Physics	2005 - 2006
<i>Chair</i>	Marshall Rosenbluth Thesis Award Committee	
	American Physical Society Div. of Plasma Physics	2006 - 2007
<i>Organizing Committee</i>	Workshop: Faraday Discussion 137	
	Spectroscopy and Dynamics of Microparticles	2006 - 2007
<i>Scientific Advisory Committee</i>		2007 - 2008
	Fifth International Conference on Dusty Plasmas	
<i>Fellowship Committee</i>	American Physical Society Div. of Plasma Physics	2008
<i>Scientific Advisory Committee</i>		2010 - 2011
	Sixth International Conference on Dusty Plasmas	
<i>International Advisory Board</i>		
	Intl. Conference Strongly-Coupled Coulomb Systems	2010 - 2014
<i>Executive Committee</i>	American Physical Society Div. of Plasma Physics	2011 – 2014
<i>Executive Committee</i>	Intl. Conference Strongly-Coupled Coulomb Systems	2012– present
<i>Search Committee</i>	Editor, Physical Review E, American Physical Society	2012
<i>Maxwell Prize Committee</i>		
	American Physical Society Div. of Plasma Physics	2013 - 2014
<i>Scientific Advisory Committee</i>		
	8th Intl. Conference on the Physics of Dusty Plasmas	2016-2017

Service to Government Organizations

<i>Review Panel</i>	National Science Foundation	1994, 2000, 2005, 2007, 2009, 2010, 2014, 2016
<i>Review Panel</i>	NASA	1997, 2008, 2013
<i>Review Panel</i>	Swedish Research Council	2005
<i>Proposal Referee</i>	U.S. Department of Energy	various years
	NASA	various years
	National Science Foundation	various years
	National Institutes of Health	2009
	Grant Agency of the Academy of Sciences, Czech Republic	2008
	Hungarian Scientific Research Fund	2011

Service to International Organizations

<i>Chairman</i>	<i>International Advisory Board</i>	
	International Microgravity Plasma Facility	1999 – 2003
	Meetings of the advisory board, organized and run:	
	Hakone, Japan	25 May 1999
	Munich, Germany	10 -11 Aug 1999
	Munich, Germany	7 - 8 Dec 1999
	Santa Fe, New Mexico, USA	25 Apr 2000
	Lisbon, Portugal	3 Jun 2000
	Garching, Germany	7 Nov 2000
	Iowa City, USA	23 - 24 May 2001
	Moscow, Russia	4 - 5 Dec 2001
	Durban, South Africa	24 May 2002
	Garching, Germany	17 Dec 2002
<i>Vice-Chairman</i>	<i>European Space Agency Facility Science Team</i>	
	PK-4 Instrument (International Space Station)	2009 – 2014
<i>Chairman</i>	<i>European Space Agency Facility Science Team</i>	
	PK-4 Instrument (International Space Station)	2014 – present
<i>Thesis exam committee</i>	PhD, Eindhoven University	2006
	PhD, Eindhoven University, L.C.J. Heijmans	2017
	PhD, Institute for Plasma Research, India, Akanksha Gupta	2017
<i>Thesis review:</i>	Habilitation, University of Kiel, Germany, Dr. Andre Melzer	2008
	Habilitation, University of Kiel, Germany, Dr. Dietmar Block	2012
	Habilitation, University of Kiel, Germany, Dr. Hanno Kahlert	2017
	PhD, Institute for Plasma Research, India, Akanksha Gupta	2017

Outreach

Science Fair Judging:

Eastern Iowa Science & Engineering Fair Judge	1991 1993 1997 1999 2000 2001 2002 2007
Eastern Iowa Science & Engineering Fair Finalist Judge	2009 2010 2015 2016
Solon Science Fair	2002 2007

Presentations at “Family Science Adventures”

(for children and parents of Iowa City area)

Gravity and Weightlessness in Space	2000 2001
Sound Waves and How We Know the Earth’s Core is Molten	2006

K12 Presentations at Horn Elementary School, Iowa City:

Volcanoes, 1 st and 2 nd grade. Horn Elementary, Iowa City	2001 2004
Pulleys and Levers, presented to four classes, 3 rd and 4 th grades	2002
Physics of Sound, presented to two classes, 3 rd and 4 th grades	2002
Buoyancy experiments, presented to three classes, 5 th and 6 th grades	2004
Chess Club – taught advanced class, for 16 students with 6 meetings	2004
Physics of Sound, presented to two classes, 3 rd and 4 th grades	2007
Buoyancy experiments, presented to three classes, 5 th and 6 th grades	2008

K12 Presentations at Lemme Elementary School, Iowa City:

Buoyancy experiments, presented to two classes, 5 th grade	June 2014
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K12 Presentations at Horn Elementary School, Iowa City:

Eclipse, presented to three classes, 5 th grade	May 2017
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Organizer of “Take our daughters to work day” event

(for children of faculty and staff, Department of Physics and Astronomy)	2002
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College Fair Night, Iowa City, Representing Caltech	2001 2002 2007
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Consulting Experience

<i>Norand Corp.</i>	Plasma processing	1985 – 1988
<i>Eastman Kodak Co.</i>	Computer simulation of magnetron erosion	1989 – 1990
<i>Applied Materials</i>	Computer simulation of magnetron erosion	1995 – 1996
<i>Catalina Coatings</i>	Magnetron design	1997
<i>Applied Films Corp.</i>	Computer simulation of magnetron erosion	1998
<i>Veeco Instruments Inc.</i>	Particle control and plasma cleaning	2006
<i>Des Moines Police Department</i>	Expert witness	2016

Patents

Provisional patent application: *Light Based Medical Device*

Inventors: Kimberly Ann Morio, David Ray Drake, John Arlin Goree, Fatima Toor

Application Serial No. 62/359,569, deposited July 7, 2016.

Provisional patent application: *Apparatus and Method of Detecting Mass of Small Particles*

Inventors: Chun-Shang Wong and John Arlin Goree

Application Serial No. 62/490,139, deposited April 26, 2017.

Technology Transferred to Industrial Use

Palo Alto Research Corp

"Double Lock-in Technique" used in model PAR 100 Lock-In Extender/Enhancer

Eastman Kodak Co.

Consulting project led to a new magnetron design for web coaters

External Talks

Invited Talks at Major Conferences

“Fast-Wave Current Drive in Toroidal Plasmas” <i>IEEE International Conference on Plasma Science Canada</i>	May 1986
“Dust Shedding by Bodies in a Plasma” <i>COSPAR World Space Conference Washington, D.C.</i>	Aug 1992
“The Plasma-Crystal Project” <i>Fifth Dusty Plasma Workshop Huntsville, AL</i>	Mar 1993
“Ion Trapping by a Charged Dust Grain in a Plasma” <i>NATO Advanced Research Workshop on Formation, Transport and Consequence of Particles in Plasma Processing France</i>	Sep 1993
“Dusty Plasmas” <i>Non-neutral Plasmas Workshop Berkeley, CA</i>	Jul 1994
“Dusty Plasma Experiments using the GEC Reference Cell” <i>Gaseous Electronics Conference</i>	Oct 1994
“Experiments with Strongly-Coupled Dusty Plasmas” <i>International Conf. on the Physics of Strongly Coupled Plasmas</i>	Sep 1995
“Dynamics of a Carbon Particle Cloud in a Sputtering Plasma” <i>Workshop on Dusty Plasmas 1995 Wickenburg, AZ</i>	Oct 1995
“Experiments with Strongly-Coupled Dusty Plasmas” <i>International Conference on Dusty Plasmas Goa, India</i>	Oct 1996
“Experiments with Strongly-Coupled Dusty Plasmas” <i>International Conf. on Superlattices, Microstructures and Microdevices Lincoln, NE</i>	Jul 1997
“Void and filamentary instabilities in a dusty plasma” <i>Seventh Dusty Plasma Workshop Boulder, CO</i>	Apr 1998
“Mach Cones in a Dusty Plasma” <i>URSI National Radio Science Conference Boulder, CO</i>	Jan 1999
“Monolayer Plasma Crystals: Experiments and Simulations” <i>Second International Conference on Dusty Plasmas Hakone, Japan</i>	May 1999
“Experiments with Coulomb-Crystal Dusty Plasmas” <i>Second Symposium on Non-conventional Plasmas Niigata Japan</i>	Aug 1999

<p>“Coulomb crystals in a monolayer dusty plasma” <i>Gaseous Electronics Conference</i> <i>Norfolk, VA</i></p>	Oct 1999
<p>“Coulomb Crystals made from Dusty Plasmas” <i>American Physical Society Division of Plasma Physics</i> <i>Seattle, WA</i></p>	Nov 1999
<p>“Experiments with two-dimensional crystallized dusty plasmas” <i>American Physical Society Division of Plasma Physics</i> <i>Seattle, WA</i></p>	Nov 1999
<p>“Shear Transverse Wave in a Complex Plasma” <i>European Physical Society Division of Plasma Physics, Section on Dusty Plasmas</i> <i>Workshop, Lisbon Portugal</i></p>	Jun 2000
<p>“Plasma Dust Crystallization” <i>NASA Fifth Microgravity Fluid Physics and Transport Phenomena Conference</i> <i>Cleveland, OH</i></p>	Aug 2000
<p>“Coulomb Crystal Experiments in Dusty Plasmas” <i>American Physical Society April Meeting</i> <i>Washington D.C.</i></p>	Apr 2001
<p>“International Microgravity Plasma Facility (IMPF) – Physics” <i>AIAA Conference on Space Station Utilization,</i> <i>Cape Canaveral, FL</i></p>	Oct 2001
<p>“International Microgravity Plasma Facility (IMPF) – Engineering” <i>AIAA Conference on Space Station Utilization,</i> <i>Cape Canaveral, FL</i></p>	Oct 2001
<p>“Waves in 2D Dusty Plasma Crystals” <i>International Conference on Strongly Coupled Coulomb Systems (SCCS)</i> <i>Santa Fe, NM</i></p>	Sep 2002
<p>“A Plasma that Acts Like a Crystal” <i>American Physical Society April Meeting,</i> <i>Philadelphia, PA</i></p>	Apr 2003
<p>“Transverse optical mode in a one-dimensional Yukawa chain” <i>Non-neutral plasma workshop 2003</i> <i>Santa Fe, NM</i></p>	Jul 2003
<p>“Strongly-Coupled Dusty Plasmas” <i>International Conference on Dusty Plasmas in Applications</i> <i>Odessa, Ukraine</i></p>	Aug 2004
<p>“Review of Dust Particle Formation, Charging, and Transport” <i>Dust in Fusion Plasmas Workshop</i> <i>Napa, CA</i></p>	Apr 2005
<p>“Waves in Dusty Plasmas” <i>International Conference on Dusty Plasmas</i> <i>Orleans, France</i></p>	Jun 2005

- “Wave Experiments in Dusty Plasmas: Linear and Nonlinear”
APS April Meeting mini-conference on Laboratory Experiments on Plasma Astrophysics
 Dallas, TX Apr 2006
- “Dusty Plasmas that Behave like Liquids or Solids”
European Physical Society Conference on Plasma Physics
 Rome Italy Jun 2006
- “Diffusion and super-diffusion in strongly-coupled dusty plasmas”
48th Annual Meeting of the APS Division of Plasma Physics
 Philadelphia, PA Oct 2006
- “Diffusive Transport of Microparticles in an Rf Glow Discharge Plasma”
2007 IEEE Conference on Plasma Sciences
 Albuquerque, NM Jun 2007
- “Comparison of Dusty Plasma and Colloidal Suspension”
2008 International Conference on Strongly Coupled Coulomb Systems.
 Camerino, Italy, July 29 - August 2, 2008
- “The electrical charge and motion of objects inserted into a plasma”
2009 American Association of Physics Teachers Summer Meeting
 Ann Arbor, Michigan 28 July 2009
- “Experiments to observe release of lunar simulant from surfaces exposed to plasma”
Lunar Dust, Plasma and Atmosphere: The Next Steps Workshop
 Boulder, Colorado 27 – 29 Jan 2010
- “Imaging Charged Dust in Laboratory Plasmas”
American Astronomical Society Summer Meeting
 Miami, Florida 23 – 27 May 2010
- “Physics of liquid-phase dusty plasmas”
14th International Conference on the Physics of Non-Ideal Plasmas
 Rostock, Germany 9 – 14 Sep 2012
- “Transport phenomena in strongly-coupled dusty plasmas”
European Physical Society Conference on Plasma Science
 Helsinki, Finland 1 – 5 Jul 2013
- “The Spitzer potential and where it has taken us in dusty plasmas”
100th Birthday Celebration for Lyman Spitzer
 Princeton University, Princeton, New Jersey 19-20 Oct 2013
- “The University of Iowa’s Dusty Plasma Projects for PK-4”
Fundamental Physics Workshop
 Pasadena, California 17-18 Nov 2014
- “Determining transport coefficients for dusty plasmas in experiments and simulations”
Diagnostics and Simulation of Dusty Plasmas Workshop 4
 Kiel, Germany Sep 2015
- “Particle-level experiments in nonequilibrium statistical physics performed using dusty plasmas.”
International School on Complexity
 Erice, Italy 27 Jul – 3 Aug 2015

<p>“Statistical Physics Experiments Using Dusty Plasmas” <i>58th Annual Meeting of the APS Division of Plasma Physics</i> <i>San Jose, California</i></p>	31 Oct 2016
<p>“Statistical Physics Experiments Using Dusty Plasmas” <i>NSF/DOE Partnership in Basic Plasma Science and Engineering</i> <i>Arlington, VA</i></p>	Jan 2017
<p>“Statistical Physics Experiments Using Dusty Plasmas” <i>8th International Conference on the Physics of Dusty Plasmas</i> <i>Prague, Czech Republic</i></p>	May 2017
<p>“Dusty Plasma Research under Microgravity Conditions on the ISS” <i>APS March Meeting</i> <i>Los Angeles, California</i></p>	March 2018

Invited Talks at Regional Conferences

<p>“The electrical charge and motion of objects inserted into a plasma produced by ionizing gas” <i>Ohio Section of the American Physical Society</i> <i>Ada, Ohio</i></p>	24 Apr 2009
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Invited Talks given by group members working under the supervision of John A. Goree:

<p>“Thermally Excited Waves in a 2D Plasma Crystal” given by S. Nunomura S. Nunomura, <u>J. Goree</u>, S. Hu, X. Wang and A. Bhattacharjee <i>5th European Workshop on Dusty and Colloidal Plasmas</i> <i>Potsdam, Germany</i></p>	Aug 2001
<p>“Thermally-Excited Wave Experiments in a Strongly-Coupled Plasma” given by S. Nunomura <i>American Physical Society Division of Plasma Physics</i> <i>Long Beach, CA</i></p>	Nov 2001
<p>“Plasma Diagnostics Using Microparticle Motion in a Dusty Plasma Under Microgravity Conditions” given by Bin Liu <i>IEEE International Conference on Plasma Science</i> <i>Norfolk, Virginia</i></p>	20 – 24 Jun 2010
<p>“Experimental Measurement of Viscoelasticity of Strongly-Coupled Dusty Plasma” given by Yan Feng <i>American Physical Society Division of Plasma Physics Annual Meeting</i> <i>Chicago, Illinois</i></p>	Nov 2010
<p>“Viscosity Quantified in a 2D Dusty Plasma Experiment” given by Yan Feng <i>IEEE International Conference on Plasma Science</i> <i>Chicago, Illinois</i></p>	28 Jun 2011
<p>“Synchronization of the Dust Acoustic Wave” given by W. D. Suranga Ruhunusiri <i>IEEE International Conference on Plasma Science</i> <i>San Francisco, CA</i></p>	21 Jun 2013

Contributed Talks since 2000

- “Mach cones in a two-dimensional colloidal dusty plasma”
J. Goree
APS March Meeting
Minneapolis, MN Mar 2000
- “Microscopic observations of shocks in a two-dimensional Yukawa system”
J. Goree
APS March Meeting
Minneapolis, MN Mar 2000
- “Laser-Excited Mach Cones in a Plasma Crystal”
A. Melzer, S. Nunomura, D. Samsonov, Z. W. Ma and J. Goree
8th Workshop on the Physics of Dusty Plasmas
Santa Fe, NM Apr 2000
- “Transverse Shear Waves in a 2-D Dusty Plasma Crystal”
S. Nunomura, D. Samsonov and J. Goree
8th Workshop on the Physics of Dusty Plasmas
Santa Fe, NM Apr 2000
- “Mach Cones in a Two-Dimensional Complex Plasma”
D. Samsonov, H. M. Thomas, G. E. Morfill and J. Goree
8th Workshop on the Physics of Dusty Plasmas
Santa Fe, NM Apr 2000
- “Simulations of Transverse Shear Waves in a Two-Dimensional Plasma Crystal”
Z. W. Ma, A. Bhattacharjee and J. Goree
8th Workshop on the Physics of Dusty Plasmas
Santa Fe, NM Apr 2000
- “Direct Measurements of the Coulomb Coupling Parameter in a Plasma Crystal Experiment”
R. A. Quinn and J. Goree
8th Workshop on the Physics of Dusty Plasmas
Santa Fe, NM Apr 2000
- “Motion of Fast Particles in an Incomplete Second Layer of a Plasma Crystal”
V. Nosenko, S. Nunomura and J. Goree
8th Workshop on the Physics of Dusty Plasmas
Santa Fe, NM Apr 2000
- “International Microgravity Plasma Facility”
J. Goree
NASA Fifth Microgravity Fluid Physics and Transport Phenomena Conference
Cleveland, OH Aug 2000
- “Laser-excited shear and compressional waves in a crystallized dusty plasma”
S. Nunomura, V. Nosenko, D. Samsonov and J. Goree
10th International Congress on Plasma Physics
Quebec, Canada Oct 2000
- “Laser-excited pulse propagation in a crystallized complex plasma”
V. Nosenko, S. Nunomura and J. Goree
10th International Congress on Plasma Physics
Quebec, Canada Oct 2000

- “Caged particle motion in a crystallized complex plasma”
R. A. Quinn and J. Goree
10th International Congress on Plasma Physics
Quebec, Canada Oct 2000
- “Linear and Nonlinear Mach Cones in Yukawa Crystals Formed in a Dusty Plasma”
J. Goree, A. Bhattacharjee, Z. W. Ma, A. Melzer and S. Nunomura
10th International Congress on Plasma Physics
Quebec, Canada Oct 2000
- “Laser-excited shear and compressional waves in a crystallized dusty plasma”
S. Nunomura, V. Nosenko, D. Samsonov and J. Goree
53rd Gaseous Electronics Conference
Houston, TX Oct 2000
- “Laser-excited pulses in a crystallized dusty plasma”
V. Nosenko, S. Nunomura and J. Goree
53rd Gaseous Electronics Conference
Houston, TX Oct 2000
- “Dispersion relations of compressional and shear waves in
2D crystallized dusty plasmas”
S. Nunomura, J. Goree, S. Hu, X. Wang and A. Bhattacharjee
Plasma Physics Symposium
Nagoya Japan Jan 2001
- “2D Yukawa triangular lattice: linear and nonlinear experiments”
V. Nosenko, S. Nunomura and J. Goree
APS March Meeting
Seattle, WA Mar 2001
- “PKE-Nefedov: The First Basic Science Experiment on the International Space Station”
P. Nefedov, H. M. Thomas, G. E. Morfill, V. E. Fortov, T. Hagl, A. Ivlev,
U. Konopka, H. Rothermel, M. Zuzic, V. I. Molotkov, O. Petrov, A. Lipaev,
J. A. Goree, A. Ivanov, S. Krikalev, Y. Gidzenko and W. Sheperd
9th Workshop on the Physics of Dusty Plasmas
Iowa City, IA May 2001
- “Thermally Excited Waves in a 2D Plasma Crystal”
S. Nunomura, J. Goree, S. Hu, X. Wang and A. Bhattacharjee
9th Workshop on the Physics of Dusty Plasmas
Iowa City, IA May 2001
- “Mach Cones in Two-Dimensional Yukawa Crystals: Linear and Nonlinear Properties”
Z. W. Ma, A. Bhattacharjee and J. Goree
9th Workshop on the Physics of Dusty Plasmas
Iowa City, IA May 2001
- “Shear Wave Mach Cones in a 2D Dusty Plasma Crystal”
V. Nosenko and J. Goree
9th Workshop on the Physics of Dusty Plasmas
Iowa City, IA May 2001
- “Nonlinear Compressional Pulses in a 2D Dusty Plasma Crystal”
V. Nosenko, S. Nunomura and J. Goree
9th Workshop on the Physics of Dusty Plasmas
Iowa City, IA May 2001

- “Wave Dispersion Relations in a 2D Plasma Crystal”
S. Nunomura, J. Goree, S. Hu, X. Wang and A. Bhattacharjee
9th Workshop on the Physics of Dusty Plasmas
Iowa City, IA May 2001
- “Waves in a 2D Dusty Plasma Crystal”
J. Goree
2001 Workshop on Non-neutral Plasmas
San Diego, CA Jul 2001
- “Compressional and Shear Wakes in a 2D Dusty Plasma Crystal”
V. Nosenko, J. Goree, Z. W. Ma, A. Piel and D. Dubin
5th European Workshop on Dusty and Colloidal Plasmas
Potsdam, Germany Aug 2001
- “Waves in a 2D Dusty Plasma Crystal”
J. Goree, S. Nunomura and V. Nosenko
54th Gaseous Electronics Conference
State College, PA Oct 2001
- “Compressional and Shear Wakes in a 2D Dusty Plasma Crystal”
V. Nosenko, J. Goree, Z. W. Ma and D. H. E. Dubin
54th Gaseous Electronics Conference
State College, PA Oct 2001
- “Mach cones and wakes in a 2D dusty plasma crystal”
V. Nosenko, J. Goree, Z. W. Ma and D. H. E. Dubin
43rd Meeting of the APS Division of Plasma Physics
Long Beach, CA Oct 2001
- “Dynamical phase transitions in dusty crystals”
I. V. Schweigert, V. A. Schweigert, V. Nosenko and J. Goree
3rd International Conference on the Physics of Dusty Plasmas
Durban, South Africa May 2002
- “Experiments and simulation of elastic waves in a plasma crystal radiated from a point-dipole source”
A. Piel, V. Nosenko and J. Goree
3rd International Conference on the Physics of Dusty Plasmas
Durban, South Africa May 2002
- “Waves in a 2-D Plasma Crystal”
J. Goree, S. Nunomura, V. Nosenko, S. Hu, Z. W. Ma, X. Wang and A. Bhattacharjee
3rd International Conference on the Physics of Dusty Plasmas
Durban, South Africa May 2002
- “Dispersion relations of compressional waves in a plasma crystal determined from a wakefield”
V. Nosenko, D. H. E. Dubin and J. Goree
9th EPS Conference on Plasma Physics and Controlled Fusion
Montreux, Switzerland Jun 2002
- “Radiation pressure and gas drag forces on a melamine-formaldehyde microsphere in a dusty plasma”
Bin Liu, John Goree, Vladimir Nosenko and Laifa Boufendi
55th Gaseous Electronics Conference, Minneapolis, MN Oct 2002

- “Dispersion relations of compressional waves in a plasma crystal determined from a wakefield”
V. Nosenko and J. Goree
55th Gaseous Electronics Conference
Minneapolis, MN Oct 2002
- “Nonlinear compressional waves in a 2D dusty plasma crystal: Theory”
J. Goree, K. Avinash, Bin Liu and V. Nosenko
44th Annual Meeting of the APS Division of Plasma Physics
Orlando, FL Nov 2002
- “Nonlinear compressional waves in a 2D dusty plasma crystal: Experiment”
V. Nosenko, K. Avinash, Bin Liu and J. Goree
44th Annual Meeting of the APS Division of Plasma Physics
Orlando, FL Nov 2002
- “Nonlinear compressional waves in a 2D dusty plasma crystal: Simulation”
Bin Liu, K. Avinash, J. Goree and V. Nosenko
44th Annual Meeting of the APS Division of Plasma Physics
Orlando, FL Nov 2002
- “Elastic Waves in a Dusty Plasma Crystal Radiated from a Point-Dipole Source”
J. Goree, V. Nosenko and A. Piel
44th Annual Meeting of the APS Division of Plasma Physics
Orlando, FL Nov 2002
- “Nonlinear longitudinal waves in a two-dimensional screened Coulomb crystal”
S. Nunomura, S. Zhdanov, G. E. Morfill and J. Goree
International Workshop on the Physics of Nonideal Plasmas - PNP11
Valencia, Spain Mar 2003
- “Flight Hardware for KC-135 Parabolic Flights”
John Goree
10th Workshop on the Physics of Dusty Plasmas, St. Thomas
US Virgin Islands Jun 2003
- “Transverse optical mode in a one-dimensional chain”
Bin Liu, John Goree and K. Avinash
10th Workshop on the Physics of Dusty Plasmas, St. Thomas
US Virgin Islands Jun 2003
- “Nonlinear interaction of compressional waves in a 2D dusty plasma crystal”
V. Nosenko, K. Avinash, J. Goree and Bin Liu
10th Workshop on the Physics of Dusty Plasmas, St. Thomas
US Virgin Islands Jun 2003
- “Nonlinear longitudinal waves in a two-dimensional screened Coulomb crystal”
S. Nunomura, S. Zhdanov, G. E. Morfill and J. Goree
European Physical Society Conference
St Petersburg, Russia Jul 2003
- “Nonlinear mixing of compressional waves in a 2D dusty plasma crystal”
V. Nosenko, K. Avinash, J. Goree and Bin Liu
56th Gaseous Electronics Conference
San Francisco, CA Oct 2003

- “Transverse optical mode in a one-dimensional dusty plasma lattice”
J. Goree, Bin Liu and K. Avinash,
56th Gaseous Electronics Conference
San Francisco, CA Oct 2003
- “Sheath diagnostics using particles in a dusty plasma”
 Bin Liu, J. Goree and K. Avinash
56th Gaseous Electronics Conference
San Francisco, CA Oct 2003
- “Transverse optical mode in a one-dimensional dusty plasma lattice”
 Bin Liu, John Goree, and Khare Avinash
45th Annual Meeting of the APS Division of Plasma Physics
Albuquerque, NM Oct 2003
- “Electrostatic Release of Fine Particles Adhered to Surfaces on the Moon or Mars”
J. Goree and V. Nosenko
Conference-Workshop on Strategic Research to Enable NASA’s
Exploration Missions
Cleveland, OH Jun 2004
- “Shear viscosity measurements in a liquid strongly-coupled dusty plasma”
 V. Nosenko and J. Goree
31st European Physical Society Conference on Plasma Physics
London, UK Jun 2004
- “Voids imaged under microgravity conditions”
J. Goree
31st European Physical Society Conference on Plasma Physics
London, UK Jun 2004
- “Nonlinear mixing of compressional waves in a 2D dusty plasma crystal”
 V. Nosenko, K. Avinash, J. Goree and Bin Liu
31st European Physical Society Conference on Plasma Physics
London, UK Jun 2004
- “Modes in a one-dimensional dusty plasma chain”
 Bin Liu and J. Goree
31st European Physical Society Conference on Plasma Physics
London, UK Jun 2004
- “Measuring particle charge in an rf dusty plasma”
 Jerome Fung, Bin Liu, John Goree and Vladimir Nosenko
46th Annual Meeting of the APS Division of Plasma Physics
Savannah, GA Nov 2004
- “Shear viscosity measurements in a liquid strongly-coupled dusty plasma”
 V. Nosenko and J. Goree
46th Annual Meeting of the APS Division of Plasma Physics
Savannah, GA Nov 2004
- “MD simulation of a 2D liquid dusty plasma”
 Bin Liu and John Goree
46th Annual Meeting of the APS Division of Plasma Physics
Savannah, GA Nov 2004

- “Phonon spectrum measured in a 1D Yukawa chain”
J. Goree and Bin Liu
APS March Meeting
Los Angeles, CA Mar 2005
- “Shear viscosity measurements in a 2D Yukawa liquid”
 V. Nosenko and J. Goree
APS March Meeting
Los Angeles, CA Mar 2005
- “Iowa Dust Mitigation Scheme for EVA Suits in a Lunar Habitat”
J. Goree
NASA Dust Mitigation Technology Focus Group Workshop
Golden, CO Jun 2005
- “Shear viscosity of a liquid strongly-coupled dusty plasma”
 V. Nosenko, Bin Liu and J. Goree
International Conference on Dusty Plasmas,
Orleans, France Jun 2005
- “Iowa Mitigation Scheme for Dust Removal”
 T. Flanagan, J. Goree and V. Nosenko
International Conference on Dusty Plasmas,
Orleans, France Jun 2005
- “Viscosity of strongly-coupled dusty plasmas in a liquid state”
J. Goree, Z. Donko, P. Hartmann and K. Kutasi
47th Annual Meeting of the APS Division of Plasma Physics
Denver, CO Oct 2005
- “Disinfection of *S. Mutans* Bacteria Using a Plasma Needle at Atmospheric Pressure”
J. Goree, Bin Liu, David Drake and E. Stoffels
Microplasmas Workshop
Greifswald, Germany May 2006
- “A Biological Diagnostic for Atmospheric-Pressure Plasmas”
J. Goree, Bin Liu and David Drake
IEEE Conference on Plasma Science
Traverse City, MI Jun 2006
- “Disinfection of *S. Mutans* Bacteria Using a Plasma Needle at Atmospheric Pressure”
J. Goree, Bin Liu, David Drake, and E. Stoffels
IEEE Conference on Plasma Science
Traverse City, MI Jun 2006
- “Molecular-Dynamics Simulations of Viscosity and Diffusion in a 2D Dusty Plasma”
 Bin Liu and J. Goree
IEEE Conference on Plasma Science
Traverse City, MI Jun 2006
- “Random fluctuations and release of dust particles from surfaces in a plasma”
 Tim Flanagan and John Goree
11th Workshop of the Physics of Dusty Plasmas
Williamsburg, VA Jun 2006

- “Self-diffusion and superdiffusion in 2D liquid dusty plasmas”
 Bin Liu, John Goree and Yan Feng
11th Workshop of the Physics of Dusty Plasmas
 Williamsburg, VA Jun 2006
- “Transport coefficients in 2D liquid dusty plasmas”
John Goree and Bin Liu
11th Workshop of the Physics of Dusty Plasmas
 Williamsburg, VA Jun 2006
- “Cutoff wave number for shear waves in a 2D dusty plasma”
 V. Nosenko, J. Goree and A. Piel
11th Workshop of the Physics of Dusty Plasmas
 Williamsburg, VA Jun 2006
- “Pixel-locking errors in measuring particle positions in dusty plasmas”
 Yan Feng, John Goree and Frederick Skiff
11th Workshop of the Physics of Dusty Plasmas
 Williamsburg, VA Jun 2006
- “Cutoff wave number for shear waves in a 2D dusty plasma”
 V. Nosenko, J. Goree A. Piel
48th Annual Meeting of the APS Division of Plasma Physics
 Philadelphia, PA Oct 2006
- “Thermal conductivity measurements in a 2D Yukawa system”
 V. Nosenko, A. Ivlev, S. Zhdanov, G. Morfill, J. Goree and A. Piel
March Meeting of the APS
 Denver, CO Mar 2007
- “Zelluläre Zweiphasenstroemung in komplexen Plasmen“
 Oliver Arp and John Goree
German Physical Society Section Plasma Physics Meeting,
 Düsseldorf, Germany May 2007
- “Disinfection of S. Mutans Bacteria Using a Plasma Needle at Atmospheric Pressure”
 S. Hansen, J. Goree, Bin Liu and D. Drake
2007 IEEE Conference on Plasma Science
 Albuquerque, NM Jun 2007
- “Heating and cooling in dusty plasmas”
 Y. Feng, J. Goree, Bin Liu
49th Annual Meeting of the APS Division of Plasma Physics
 Orlando, FL Nov 2007
- “Self-diffusion and random motion in a strongly-coupled dusty-plasma: experiment”
 Bin Liu and J. Goree
49th Annual Meeting of the APS Division of Plasma Physics
 Orlando, FL Nov 2007
- “Laser manipulation of dust particles in Coulomb balls”
 T.M. Flanagan and J. Goree
49th Annual Meeting of the APS Division of Plasma Physics
 Orlando, FL Nov 2007

- “Disinfection of S. Mutans Bacteria Using a Plasma Needle at Atmospheric Pressure”
S. Hansen, J. Goree, Bin Liu and D. Drake
49th Annual Meeting of the APS Division of Plasma Physics
Orlando, FL Nov 2007
- “Self-diffusion and random motion in a strongly-coupled dusty-plasma: MD simulation”
J. Goree, Bin Liu, Z. Donkó and P. Hartmann
49th Annual Meeting of the APS Division of Plasma Physics
Orlando, FL Nov 2007
- “Superheating of a dusty plasma crystal”
J. Goree, Yan Feng and Bin Liu
50th Annual Meeting of the APS Division of Plasma Physics
Dallas, TX Nov 2008
- “Detection of solid superheating in 2D dusty plasmas”
J. Goree, Yan Feng and Bin Liu
12th Workshop on the Physics of Dusty Plasmas
Boulder, CO May 2009
- “Experimental Investigation of Dust Density Waves and Plasma Glow”
O. Arp, D. Caliebe, K. Menzel, A. Piel and John A. Goree
12th Workshop on the Physics of Dusty Plasmas
Boulder, CO May 2009
- “Time dependence of shear-induced melting and subsequent solidification
in a 2D dusty plasma”
Yan Feng, J. Goree and Bin Liu
12th Workshop on the Physics of Dusty Plasmas
Boulder, CO May 2009
- “Using dusty plasma to detect thermal creep gas flow”
Tim Flanagan and John Goree
12th Workshop on the Physics of Dusty Plasmas
Boulder, CO May 2009
- “Transverse oscillations in a single-layer dusty plasma under microgravity”
Bin Liu, John Goree, V.E. Fortov, A.M. Lipaev, V.I. Molotkov, O. F. Petrov,
G.E. Morfill, H.M. Thomas, H. Rothermel and A. Ivlev
12th Workshop on the Physics of Dusty Plasmas
Boulder, CO May 2009
- “Improving the accuracy of the moment method for measuring particle positions”
W. D. Suranga Ruhunusiri, Y. Feng, J. Goree and Bin Liu
12th Workshop on the Physics of Dusty Plasmas
Boulder, CO May 2009
- “Oscillatory Particle Motion Observed in Dusty Plasma under Microgravity Conditions”
John Goree, Bin Liu, V.E. Fortov, A.M. Lipaev, V.I. Molotkov, O. Petrov,
G. E. Morfill, H.M. Thomas, H. Rothermel and A. Ivlev
2009 IEEE Conference on Plasma Science
San Diego, CA Jun 2009

- “Oscillatory Particle Motion in Dusty Plasma under Microgravity Conditions”
John Goree, Bin Liu, V.E. Fortov, A.M. Lipaev, V.I. Molotkov, O.F. Petrov,
G.E. Morfill, H.M. Thomas, H. Rothermel and A.V. Ivlev
51st Annual Meeting of the APS Division of Plasma Physics
Atlanta, GA Nov 2009
- “Laboratory Observation of Naturally Occurring Dust Density Waves”
Tim Flanagan and John Goree
IEEE Conference on Plasma Science,
Norfolk, Virginia Jun 2010
- “Viscoelasticity of 2D Dusty Plasmas”
Yan Feng, John Goree and Bin Liu
IEEE Conference on Plasma Science
Norfolk, Virginia Jun 2010
- “Plasma Diagnostics Using Microparticle Motion in a Dusty Plasma under
Microgravity Conditions”
J. Goree, Bin Liu, V. E. Fortov, A. M. Lipaev, V. I. Molotkov, O. F. Petrov,
G. E. Morfill, H. M. Thomas and A. V. Ivlev
EPS (European Physical Society) Plasma Conference
Dublin, Ireland Jun 2010
- “Viscoelasticity of 2D Dusty Plasmas”
Yan Feng, John Goree, and Bin Liu
Gordon Research Conference on Plasma Processing Science
New London, NH Jul 2010
- “Non-Gaussian Velocity Distribution of Microparticles in Plasma under
Microgravity Conditions”
Amit K. Mukhopadhyay, J. Goree, Bin Liu, V. E. Fortov, A. M. Lipaev,
V. I. Molotkov, O. F. Petrov, G. E. Morfill, H. M. Thomas and A. V. Ivlev
American Physical Society Division of Plasma Physics Annual Meeting
Chicago, Illinois Nov 2010
- “Mode coupling for waves in a single-layer dusty plasma crystal”
Bin Liu, John Goree and Yan Feng,
American Physical Society Division of Plasma Physics Annual Meeting
Chicago, Illinois Nov 2010
- “Laboratory observation of naturally occurring dust density waves”
Tim Flanagan and J. Goree
American Physical Society Division of Plasma Physics Annual Meeting
Chicago, Illinois Nov 2010
- “Tiling analysis of melting in strongly coupled dusty plasma”
W. D. Suranga Ruhunusiri, J. Goree, Yan Feng and Bin Liu
American Physical Society Division of Plasma Physics Annual Meeting
Chicago, Illinois Nov 2010
- “Complex viscosity of 3D Yukawa liquids”
Z. Donkó, J. Goree and P. Hartmann
International Conference on the Physics of Dusty Plasmas
Garmisch, Germany May 2011

- “Tiling analysis of melting in strongly coupled dusty plasma”
W. D. Suranga Ruhunusiri, J. Goree, Yan Feng and Bin Liu
IEEE Conference on Plasma Science
Chicago, Illinois Jun 2011
- “Viscosity Quantified in a 2D Dusty Plasma Experiment”
Yan Feng, J. Goree and Bin Liu
American Physical Society Division of Plasma Physics Annual Meeting
Salt Lake City, UT Nov 2011
- “Growth and nonlinearity in a self-excited dust-density wave”
J. Goree and T.M. Flanagan
American Physical Society Division of Plasma Physics Annual Meeting
Salt Lake City, UT Nov 2011
- “Synchronization of self-excited dust acoustic waves”
W.D. Suranga Ruhunusiri and J. Goree
Workshop on the Physics of Dusty Plasmas
Waco, Texas May 2012
- “Complex shear viscosity”
Yan Feng, J. Goree and Bin Liu
Workshop on the Physics of Dusty Plasmas
Waco, Texas May 2012
- “Waves and instabilities in One-Dimensional Crystals”
Bin Liu, Yan Feng and J. Goree
Workshop on the Physics of Dusty Plasmas
Waco, Texas May 2012
- “Center-of-mass and breathing modes in a cluster of two microparticles”
Amit Mukhopadhyay and John Goree
Workshop on the Physics of Dusty Plasmas
Waco, Texas May 2012
- “Proposed Dusty Plasma Physics Facility for the International Space Station”
John Goree and Inseob Hahn
Workshop on the Physics of Dusty Plasmas
Waco, Texas May 2012
- “Dusty plasmas under microgravity conditions”
John Goree and Inseob Hahn
International Space Station (ISS) Research and Development Conference
Denver, CO Jun 2012
- “Synchronization of dust acoustic waves under microgravity conditions”
W. D. Suranga Ruhunusiri and J. Goree
International Space Station (ISS) Research and Development Conference
Denver, CO Jun 2013
- “Transport Measurements in Dusty Plasmas under Microgravity Conditions”
John Goree and Bin Liu
International Space Station (ISS) Research and Development Conference
Denver, CO Jun 2013

“Oscillatory modes of two particulates levitated in an rf plasma”
 Amit K. Mukhopadhyay , John Goree, and Bin Liu
Gaseous Electronics Conference
 Princeton, NJ Oct 2013

“Transport Measurements in Dusty Plasmas under Microgravity Conditions”
John Goree and Bin Liu
American Society for Gravitational and Space Research 2013 Annual Meeting
 Orlando, FL Nov 2013

“Synchronization of dust acoustic waves under microgravity conditions”
 W. D. Suranga Ruhunusiri and J. Goree
American Society for Gravitational and Space Research 2013 Annual Meeting
 Orlando, FL Nov 2013

“Dust acoustic instability in a strongly coupled dusty plasma”
 M. Rosenberg, G. J. Kalman, P. Hartmann and J. Goree
American Society for Gravitational and Space Research 2013 Annual Meeting
 Orlando, FL Nov 2013

“Dusty Plasma Physics Facility for the International Space Station”
John Goree and Inseob Hahn
American Society for Gravitational and Space Research 2013 Annual Meeting
 Orlando, FL Nov 2013

“Improved laser heating technique for melting dusty plasma crystals”
 Zach Haralson and John Goree
American Physical Society Prairie Section Fall 2013 Meeting
 Columbia, MO Nov 2013

“Experimental test of the Fluctuation Theorem using a microsphere in a rarefied gas”
 Chun-Shang Wong, John Goree and Bin Liu
American Physical Society Prairie Section Fall 2013 Meeting
 Columbia, MO Nov 2013

“Dusty Plasma Physics Facility for the International Space Station”
John Goree and Inseob Hahn
American Physical Society Division of Plasma Physics Annual Meeting
 Denver, CO Nov 2013

“Observation of temperature peaks due to strong viscous heating in a dusty plasma flow”
John Goree, Yan Feng and Bin Liu
American Physical Society Division of Plasma Physics Annual Meeting
 Denver, CO Nov 2013

“Diffusion of 2D Yukawa liquids under a magnetic field”
 Yan Feng, T. Intrator, J. Goree and Bin Liu
American Physical Society Division of Plasma Physics Annual Meeting
 Denver, CO Nov 2013

“Dust acoustic instability in a strongly coupled dusty plasma”
 M. Rosenberg, G. J. Kalman, P. Hartmann and J. Goree
American Physical Society Division of Plasma Physics Annual Meeting
 Denver, CO Nov 2013

- “Synchronization of the dust acoustic wave under microgravity”
W. D. Suranga Ruhunusiri and J. Goree
American Physical Society Division of Plasma Physics Annual Meeting
Denver, CO Nov 2013
- “Dusty Plasma Physics Facility for the International Space Station”
John Goree and Inseob Hahn
International Conference on the Physics of Dusty Plasmas
New Delhi, India Mar 2014
- “Experimental measurement of velocity correlations for two microparticles with ion wakes”
Amit K. Mukhopadhyay and J. Goree
IEEE Conference on Plasma Science
Washington, D.C May 2014
- “Mobility in a strongly coupled dusty plasma”
J. Goree and Bin Liu
IEEE Conference on Plasma Science
Washington, D.C May 2014
- “Is the compressibility positive or negative in a strongly-coupled dusty plasma?”
John Goree and W. D. Suranga Ruhunusiri
Strongly Coupled Coulomb Systems 2014
Santa Fe, N.M. July 2014
- “Localized viscous heating observed in a two-dimensional strongly coupled dusty plasma”
Yan Feng, John Goree and Bin Liu
Strongly Coupled Coulomb Systems 2014
Santa Fe, N.M. July 2014
- “Superdiffusion of 2D Yukawa Liquids due to a Perpendicular Magnetic Field”
Yan Feng, J. Goree, B. Liu, T. Intrator, and M. Murillo
Strongly Coupled Coulomb Systems 2014
Santa Fe, NM July 2014
- “Synchronization of dust acoustic waves under microgravity conditions”
J. Goree, W. D. Suranga Ruhunusiri, and Bin Liu
American Society for Gravitational and Space Research 2014 Annual Meeting
Pasadena, CA Oct 2014
- “The Dusty Plasma Physics Facility”
J. Goree and Inseob Hahn
American Society for Gravitational and Space Research 2014 Annual Meeting
Pasadena, CA Oct 2014
- “Is the compressibility positive or negative in a strongly-coupled dusty plasma?”
John Goree and W. D. Suranga Ruhunusiri
American Physical Society Division of Plasma Physics Annual Meeting
New Orleans, LA Oct 2014
- “Localized viscous heating observed in a two-dimensional strongly coupled dusty plasma”
John Goree, Yan Feng, and Bin Liu
Workshop on the Physics of Dusty Plasmas, Auburn, AL May 2015
- “Improved two-beam method for heating of dusty plasma crystals”
Zach Haralson and John Goree
Workshop on the Physics of Dusty Plasmas, Auburn, AL May 2015

- “Perpendicular diffusion of a dilute beam of charged particles under PK-4 conditions”
Bin Liu and John Goree
Workshop on the Physics of Dusty Plasmas, Auburn, AL May 2015
- “Structure characterization of three-dimensional dusty plasmas using two-dimensional images”
Bin Liu, John Goree, and W. D. Suranga Ruhunusiri
Workshop on the Physics of Dusty Plasmas, Auburn, AL May 2015
- “Study of a two-dimensional shear flow”
Tim C. S. Wong, John Goree, and Bin Liu
Workshop on the Physics of Dusty Plasmas, Auburn, AL May 2015
- “Dusty Plasma Physics Facility for the International Space Station”
John Goree and Inseob Hahn
Workshop on the Physics of Dusty Plasmas, Auburn, AL May 2015
- “Dusty Plasma Physics Facility for the International Space Station”
John Goree and Inseob Hahn
Gaseous Electronics Conference, Honolulu, HI Oct 2015
- “Perpendicular diffusion of a dilute beam of charged particles in the PK-4 dusty plasma”
Bin Liu and John Goree
Gaseous Electronics Conference, Honolulu, HI Oct 2015
- “Novel multi-species root canal infection model in extracted human teeth”
K.A. Morio, D. Drake, F.B Teixeira, A. Villhauer, D. Lynch, J. Goree
American Association of Endodontists AADR Meeting, San Francisco, CA Apr 6-9 2016
- “Development of a new multi-species biofilm model for root canal disinfection laboratory testing”
K.A. Morio, D. Drake, F.B. Teixeira, A. Villhauer, D. Lynch, J. Goree
American Association of Endodontists AAE Meeting, San Francisco, CA Mar 16-19 2016
- “Statistical Physics Experiments at the Particle Level, Using Dusty Plasmas”
John Goree
NASA Fundamental Physics Workshop, Dana Point, CA Apr 2016
- “Experimental Demonstration of the Fluctuation Theorem for Entropy Production in a Shear Flow”
Chung-Shang Wong, John Goree, Zach Haralson
26th IUPAP International conference on Statistical Physics, Lyon, France 18-22 July 2016
- “Experimental discovery that the Green-Kubo theory fails for viscosity in a 2D dusty plasma”
Zach Haralson and John Goree
26th IUPAP International conference on Statistical Physics, Lyon, France 18-22 July 2016
- "Experimental discovery that the Green-Kubo relation fails for viscosity fails in a 2D dusty plasma"
Zach Haralson and John Goree
Quo vadis - Complex plasmas; Hamburg, Germany 1-4 Aug 2016
- "The fluctuation theorem applied to a dusty plasma shear flow"
Chun-Shang Wong, John Goree, Zach Haralson, and Bin Liu
Quo vadis - Complex plasmas; Hamburg, Germany 1-4 Aug 2016

- “Wave Synchronization in Dusty Plasmas under Microgravity Conditions”
Bin Liu and John Goree
32nd Annual Meeting of the American Society for Gravitational and Space Research
Cleveland, Ohio October 2016
- Fluctuation Theorem Experiment Under Microgravity Conditions
John Goree
32nd Annual Meeting of the American Society for Gravitational and Space Research
Cleveland, Ohio October 2016
- “An equation for pressure of a two-dimensional Yukawa liquid”
Yan Feng, Wei Li, Lin Ziaoling, Wei Lin, John Goree, and Bin Liu
58th Annual Meeting of the APS Division of Plasma Physics Nov 2016
- “Coupling of an Acoustic Wave to Shear Motion due to Viscous Heating”
Bin Liu and J. Goree
8th International Conference on the Physics of Dusty Plasmas
Prague, Czech Republic May 2017
- “Particle Velocity Distribution in a Three-Dimensional Dusty Plasmas”
B. Liu, J. Goree, M. Pustyl'nik, H. Thomas, M. Fink, G. Morfill, V. Fortov,
A. Usachev, V. Molotkov, A. Lipaev, O. Petrov, M. Thoma
8th International Conference on the Physics of Dusty Plasmas
Prague, Czech Republic May 2017
- “Particle Velocity Distribution in a Three-Dimensional Dusty Plasmas”
B. Liu, J. Goree, M. Pustyl'nik, H. Thomas, M. Fink, G. Morfill, V. Fortov,
A. Usachev, V. Molotkov, A. Lipaev, O. Petrov, M. Thoma
33rd Annual Meeting of the American Society for Gravitational and Space Research
Seattle, WA October 2017
- “Excitation of an acoustic pulse by an impulsive shear flow in a dusty plasma”
Bin Liu, John Goree
59th Annual Meeting of the American Physical Society Division of Plasma Physics
Milwaukee, WI October 2017
- “Shock-like pulse experiment in a strongly coupled dusty plasma”
Anton Kananovich, J. Goree
59th Annual Meeting of the American Physical Society Division of Plasma Physics
Milwaukee, WI October 2017
- “Particle Velocity Distribution in a Three-Dimensional Dusty Plasma under Microgravity
Conditions”
Bin Liu and J. Goree
33rd Annual Meeting of the American Society for Gravitational and Space Research
Seattle, WA October 2017
- “Nonlinear Wave Synchronization in Dusty Plasmas”
J. Goree and Bin Liu,
33rd Annual Meeting of the American Society for Gravitational and Space Research
Seattle, WA October 2017
- "Microscopic fluctuations in a sheared liquid studied using a complex plasma,"
Chun-Shang Wong, John Goree, and Zach Haralson,
APS March Meeting 2018, Los Angeles, California, Mar 2018

- “Dusty plasma experiments under microgravity conditions”
John Goree and Bin Liu
NASA Fundamental Physics Workshop, La Jolla, CA Apr 2018
- “Experimental observation of cnoidal wave structures of dust acoustic waves”
A. Sen, G. Ganguli, C. Crabtree, J. Goree, B. Liu, and S. Tiwari
15th Dusty Plasma Workshop, Baltimore, MD Jun 2018
- “Fluctuation Theorem Confirmed in a Dusty Plasma”
Chun-Shang Wong, J. Goree and Bin Liu,
15th Dusty Plasma Workshop, Baltimore, MD Jun 2018
- “Diffusive motion in a three-dimensional cluster in PK-4”
Zian Wei, Bin Liu, John Goree, M. Y. Pustyl'nik, H. M. Thomas, V. E. Fortov,
A. M. Lipaev, A. D. Usachev, V. I. Molotkov, O. F. Petrov, and M. H. Thoma
15th Dusty Plasma Workshop, Baltimore, MD Jun 2018
- “Shear deformations in dusty plasma”
Bin Liu and J. Goree
15th Dusty Plasma Workshop, Baltimore, MD Jun 2018
- “Blast waves experiments in a 2D dusty plasma”
Anton Kananovich and J. Goree
15th Dusty Plasma Workshop, Baltimore, MD Jun 2018
- “Dust particle motion in an RF plasma, analyzed for strongly coupled behavior”
Chun-Shang Wong, J. Goree and Zach Haralson
IEEE Conference on Plasma Science, Denver, CO Jun 2018
- “Diffusive motion in a three-dimensional cluster in PK-4”
Zian Wei, Bin Liu, John Goree, M. Y. Pustyl'nik, H. M. Thomas, V. E. Fortov,
A. M. Lipaev, A. D. Usachev, V. I. Molotkov, O. F. Petrov, and M. H. Thoma
ASGSR 2018, Bethesda, MD Oct 2018
- “Particulate imaging diagnostics in a gas-discharge plasma”
A. Kananovich and J. Goree.
71st Annual Gaseous Electronics Conference, Portland, OR Nov 2018
- “Transport properties of two-dimensional Magnetized Yukawa Monolayers”
Yan Feng, J. Goree, M. Murillo
71st Annual Meeting of the APS Division of Plasma Physics, Portland, OR Nov 2018
- “Experimental measurement of shock thickness in a strongly coupled dusty plasma”
Anton Kananovich and J. Goree
71st Annual Meeting of the APS Division of Plasma Physics, Portland, OR Nov 2018

External Colloquia and Seminars

<i>IBM Watson Research Center, Yorktown Heights, NY</i> "Radio-Frequency Waves Used as Plasma Diagnostics"	15 Jan 1985
<i>AT&T Bell Laboratories, Murray Hill, NJ</i> "The Backward Electrostatic Ion-Cyclotron Wave, Fast-Wave Current Drive and FIR Laser Scattering"	13 Mar 1985
<i>Univ. of Illinois, Nuclear Eng. Seminar</i> "Fast-Wave Current Drive"	25 Oct 1985
<i>Centre de Recherches en Physique des Plasmas, Ecole Polytechnique Federale de Lausanne, Switzerland, Seminar</i> "Parasitic Excitation of the Lower Hybrid Wave"	13 Jan 1987
<i>Chemistry Dept., Univ. of Iowa, Colloquium</i> "Microfabrication Science"	22 Jan 1987
<i>UCLA Dept. of Physics, Plasma Seminar</i> "Basic Physics of Processing Plasmas"	11 Jan 1988
<i>Mech. Eng. Dept., Univ. of Iowa, Thermal Fluids Seminar</i> "Comparison of Turbulent Transport in Fluids and Plasmas"	17 Nov 1988
<i>Univ. of Wisconsin, NSF Eng. Research Center Seminar</i> "Electron Transport in Planar Magnetron Plasmas"	24 Feb 1989
<i>Univ. of Illinois, Nuclear Eng. Seminar</i> "Sputtering Magnetron Modeling and Experiments"	24 Apr 1990
<i>Max-Planck-Institut für extraterrestrische Physik, Institute Seminar</i> "Dusty Plasma Experiments"	7 Dec 1991
<i>Univ. of Tromsø, Norway, Auroral Observatory Seminar</i> "Dispersion Relation of the Electrostatic Ion Cyclotron Wave"	18 Jun 1992
<i>Wright Patterson Air Force Base, Plasma Physics Seminar</i> "Plasma Crystals"	9 Jul 1993
<i>Univ. Calif. San Diego, Physics Dept., Plasma Physics Seminar</i> "Dusty Plasma Experiments and Modelling"	13 Jun 1994
<i>Univ. of Wisconsin, NSF Eng. Research Center Seminar</i> "Plasma Crystals"	18 Nov 1994
<i>DLR, Cologne Germany, Institut für Raumsimulation Seminar</i> "Experiments with Strongly-Coupled Dusty Plasmas"	8 Sep 1995
<i>University of Kiel, Germany, Experimental Physics Seminar</i> "Experiments with Strongly-Coupled Dusty Plasmas"	18 Sep 1995
<i>University of Orleans, France, GREMI Seminar</i> "Experiments with Strongly-Coupled Dusty Plasmas"	21 Sep 1995
<i>Applied Materials, Inc., Santa Clara, CA, Seminar</i> "Computer simulation to predict magnetron erosion profile"	29 Nov 1995
<i>Max Planck Insitut für extraterrestrische Physik, Germany</i> "Particle heating in plasma crystals"	13 Feb 1998
<i>Applied Films, Corp., Boulder, CO, Seminar</i>	

"Computer simulation to predict magnetron erosion profile"	9 Apr 1998
<i>University of Kiel, Germany, Experimental Physics Seminar</i>	
"A new kind of plasma instability driven by ion drag on a dust particle"	5 May 1998
<i>Max Planck Institut für Plasma Physik, Tokamak Physics Seminar</i>	
"Numerical simulations of sputtering magnetron plasmas"	18 Jun 1998
<i>Max Planck Institut für Plasma Physik, Bereichsseminar Oberflaechenphysik</i>	
"Growth of submicron dust particles due to sputtering in a discharge"	12 Nov 1998
<i>Mech. Eng. Dept., Univ. of Iowa, Thermal/Fluids Seminar</i>	
"International Space Station Experiments with Dusty Plasmas"	7 Sep 2000
<i>Applied Physics Dept., Columbia Univ., Plasma Physics Colloquium</i>	
"International Space Station Experiments with Dusty Plasmas"	13 Oct 2000
<i>Physics Dept. Colloquium, Lawrence University, Appleton WI</i>	
Making a plasma act like a crystal	15 Oct 2002
<i>Physics Dept. Colloquium, Iowa State University</i>	
"Making a plasma act like a crystal"	13 Jan 2003
<i>Physics Dept. Colloquium, Grinnell College</i>	
"Making a plasma act like a crystal"	21 Jan 2003
<i>Physics Dept. Colloquium, Case Western Reserve University</i>	
"Making a plasma act like a crystal"	13 Feb 2003
<i>Physics Dept. Colloquium, Augustana College</i>	
"Making a plasma act like a crystal"	17 Apr 2003
<i>Physics Dept. Colloquium, Carleton College</i>	
"Making a plasma act like a crystal"	25 Apr 2003
<i>Physics Dept. Colloquium, Sonoma State College</i>	
"Making a plasma act like a crystal"	12 May 2003
<i>Physics Dept. Colloquium, Swarthmore College</i>	
"Making a plasma act like a crystal"	26 Sep 2003
<i>Physics Dept. Colloquium, California State University, Sacramento</i>	
"Making a plasma act like a crystal"	23 Oct 2003
<i>Physics Dept. Colloquium, Brigham Young University</i>	
"Making a plasma act like a crystal"	7 Dec 2004
<i>Plasma Physics Colloquium, Princeton Plasma Physics Laboratory</i>	
"Dusty plasmas in basic science, astronomy, industry and fusion"	20 Apr 2005
<i>Plasma Physics Seminar, University of Wisconsin at Madison</i>	
"Dusty plasmas: fusion, space, semiconductor manufacturing & basic science"	12 Sep 2005
<i>Physics Colloquium, University of Greifswald, Germany</i>	
"Two-dimensional liquids at an atomistic scale: dusty plasma experiments and numerical simulations."	20 Oct 2006
<i>Physics Colloquium, University of Colorado</i>	

“Two-dimensional liquids at an atomistic scale: dusty plasma experiments and numerical simulations.” 26 Nov 2006

Colloquium, P/T divisions, *Los Alamos National Laboratory*

“Dusty plasmas: an overview including topics from condensed matter, fluids, and astronomy.” 2 Aug 2007

Physics Colloquium, *Boston College*

“Low-dimensionality condensed matter experiments performed at an atomistic scale using strongly-coupled dusty plasmas” 9 Apr 2008

Physics Seminar, *Boston College*

“Non-Gaussian statistics & anomalous transport, with tests using dusty plasmas” 10 Apr 2008

Physics Seminar, *Grinnell College*

“Experiments with dusty plasmas performed on the International Space Station and in the laboratory” 28 Apr 2009

Physics Seminar, *St. Olaf College*

“The electrical charge and motion of objects inserted into a plasma” 21 Oct 2009

Mechanical Engineering Seminar, *University of Minnesota*

“Superheated solids and shear-induced melting experiments using dusty plasma as an analog system” 18 Nov 2009

Experimental Physics Seminar, *University of Kiel, Germany,*

“Superheated solids and shear-induced melting experiments using dusty plasma as an analog system” 9 Dec 2009

Seminar in Honor of Professor Alexander Piel’s 60th Birthday
University of Kiel, Germany

“Pioneering the field of dusty plasmas” 7 Dec 2010

Physics Colloquium, *Illinois State University*

“The electrical charge and motion of objects inserted into a plasma” 19 Apr 2011

Physics Seminar, *Temple University*

“Laser-manipulated dusty plasmas as an analog system for studying melting and viscoelasticity” 21 Mar 2013

Physics and Astronomy Colloquium, *University of Nebraska at Lincoln*

“The First Measurement of Spatially-localized Viscous Heating” 3 Oct 2013

Physics Colloquium, *Auburn University*

“The First Measurement of Spatially-localized Viscous Heating” 31 Jan 2014

Physics Seminar, *Boston College*

“The First Measurement of Spatially-localized Viscous Heating” 20 Mar 2014

Complex Plasma Summer School, *Seton Hall University*

“Dusty Plasmas” 6 Aug 2014

Physics Seminar, *Emory University*

"Flipping" method of teaching physics, with software demonstration 27 Apr 2015

Physics Colloquium, <i>Emory University</i> “Dusty Plasma”	28 Apr 2015
Physics Seminar, <i>Soochow University, China</i> “Introduction to dusty plasma, with a comparison to soft condensed matter”	7 Oct 2015
Physics Seminar, <i>University of Science and Technology of China</i> “Localized Viscous Heating Observed in a Two-Dimensional Dusty Plasma”	8 Oct 2015
Physics Seminar, <i>University of Science and Technology of China</i> “Flipped Classroom” and “Peer Instruction” Methods of Teaching Physics	9 Oct 2015
Plasma Physics Seminar, <i>University of Wisconsin, Madison</i> “Dusty plasmas for fundamental physics, fusion, semiconductor manufacturing and astronomy”	7 Dec 2015
Physics Colloquium, <i>Truman State University</i> “Brief Violations of the Second Law of Thermodynamics Observed in Dusty Plasma Experiments”	5 April 2017
Physics Colloquium, <i>Truman State University</i> “Brief Violations of the Second Law of Thermodynamics Observed in Dusty Plasma Experiments”	5 April 2017
Physics Seminar, <i>Lawrence University, Appleton, WI</i> “Violating the Second Law of Thermodynamics, Briefly”	7 Nov 2017

Departmental Colloquia and Seminars Presented at The University of Iowa, since 2004

Mechanical Engineering Seminar, <i>The University of Iowa</i> “Shear Flow Imaged at a Microscopic Level in a Dusty Plasma”	29 Jan 2004
Physics and Astronomy Colloquium, <i>The University of Iowa</i> “Two-Dimensional Liquids Studied at an Atomistic Level”	19 Sep 2005
Plasma Physics Seminar, <i>The University of Iowa</i> “Dusty plasmas in fusion and basic science”	26 Sep 2005
Physics and Astronomy Colloquium, <i>The University of Iowa</i> “Plasma Treatment for Biomedical Applications”	23 Jan 2006
Physics and Astronomy Colloquium, <i>The University of Iowa</i> “Experiments performed on the International Space Station to observe charged objects in plasma”	12 Oct 2009
Mechanical Engineering Graduate Seminar, <i>The University of Iowa</i> “Plasma Jet for Disinfection of Bacteria”	14 Apr 2011
Plasma Physics Seminar, <i>The University of Iowa</i> “Dusty Plasma Physics Facility for the International Space Station”	31 Jan 2012
Plasma Physics Seminar, <i>The University of Iowa</i> “Subsonic ion wake demonstrated in a microgravity experiment”	23 Apr 2012
Physical and Environmental Chemistry Seminar, <i>The University of Iowa</i> “Superheating of a melting solid studied experimentally using an analog physical system”	
Mechanical Engineering Graduate Seminar, <i>The University of Iowa</i> “Oscillatory motion of a row of droplets in a microfluidic flow”	8 Nov 2012
Physics and Astronomy Colloquium, <i>The University of Iowa</i> “The First Measurement of Spatially-localized Viscous Heating”	9 Sep 2013
Mechanical Engineering Graduate Seminar, <i>The University of Iowa</i> “Experiments on the thermodynamics and fluctuations in laminar shear flows of a very small size” -- talk given by Chun-Shang Wong	17 Sep 2015
Physics and Astronomy Colloquium, <i>The University of Iowa</i> Brief Violations of the Second Law of Thermodynamics in a Collisional Plasma	2 Oct 2016

In addition to the above, John A. Goree is a co-author of typically four talks per year given by students and research scientists working under his supervision and presented in the Plasma Physics Seminar at The University of Iowa.

Publications in Refereed Journals

1. A. H. Boozer, T. K. Chu, R. L. Dewar, H. P. Furth, J. A. Goree, J. L. Johnson, R. M. Kulsrud, D. A. Monticello, G. Kuo-Petravic, G. Sheffield, S. Yoshikawa and O. Bettancourt
Two High-Beta Toroidal Configurations: A Stellarator and a Tokamak-Torsatron Hybrid
Nuclear Fusion Vol. III S, pp. 129-139, 1983
2. J. Goree, M. Ono, P. Colestock, D. McNeill and H. Park
Fast-Wave Current Drive in a Toroidal Plasma
Physical Review Letters, Vol. 55, pp. 1669-1672, 1985
3. J. Goree, D. K. Mansfield, M. Ono and K. L. Wong
Far-Infrared Laser Scattering in the ACT-I Toroidal Device
Journal of Vacuum Science and Technology, Vol. A3, 1074-1076, 1985
4. J. Goree, M. Ono and K. L. Wong
Observation of the Backward Electrostatic Ion-Cyclotron Wave
Physics of Fluids, Vol. 28, pp. 2845-2847, 1985
5. J. Goree
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