

## Cheng Chin - Curriculum Vitae

Address 929 E. 57<sup>th</sup> Street, Chicago, IL 60637, USA  
Phone (1) 773-702-7192 Email [cchin@uchicago.edu](mailto:cchin@uchicago.edu)  
Fax (1) 773-834-5250 Website <http://ultracold.uchicago.edu>

### Education

1995-2001 Ph.D., Physics, Stanford University (Advisor: Steven Chu)  
1990-1993 B.S., Physics, National Taiwan University

### Academic Position

2019-2022 Honorary Chair Professor, National Sun Yat-sen University, Taiwan  
2018-2020 Visiting Professor, Tsinghua University, China  
2015 JILA Visiting Fellow, JILA  
2014, 2015 Visiting Professor, Universität München, Munich, Germany  
2014, 2015 Guest Scientist, Max-Planck-Institut für Quantenoptik, Garching, Germany  
2014, 2015 Visiting Professor, Universität Ulm, Ulm, Germany  
2014 Visiting Professor, ETH Zurich, Zurich, Switzerland  
2013 Visiting Scientist, Institute of Atomic and Molecular Sciences, Taiwan  
2013 Visiting Scientist, Center for Ultracold Atoms, MIT  
2013 Visiting Professor, Physics and Astronomy Department, Rice University  
2013- Professor, Enrico Fermi institute, University of Chicago  
2013- Professor, James Franck institute, University of Chicago  
2013- Professor, Department of Physics, University of Chicago  
2009-2012 Associate Professor, James Franck institute, University of Chicago  
2009-2012 Associate Professor, Department of Physics, University of Chicago  
2005-2008 Assistant Professor, James Franck institute, University of Chicago  
2005-2008 Assistant Professor, Department of Physics, University of Chicago  
2005 Visiting Professor, ETH, Zurich, Switzerland  
2003 Visiting Professor, Institut für Experimentalphysik, Universität Innsbruck, Austria  
2003-2005 Visiting Scientist, Institut für Experimentalphysik, Universität Innsbruck, Austria  
2001-2003 Postdoctoral Fellow, Physics Department, Stanford University

### Honors and Awards *(since 2003)*

2021 Marian and Stuart Rice Research Award  
2017 Bose-Einstein Condensation Award  
2014 American Physical Society Fellow  
2014 Thomson Reuters Highly Cited Researcher  
2014 Distinguished Alumni Award, Physics Department, National Taiwan University  
2013-2015 Alexander von Humboldt Research Fellow  
2011 I. I. Rabi Prize, American Physics Society  
2009 Materials Computation Center Travel Award  
2008 IUPAP Young Scientist Prize in Atomic, Molecular and Optical Physics  
2008-2012 National Science Foundation CAREER award

2006-2012 The David and Lucile Packard Fellow  
 2006 Outstanding Young Researcher Award, Overseas Chinese Physics Association  
 2006-2008 Alfred P. Sloan Research Fellow  
 2003-2005 Lise-Meitner Postdoctoral Research Fellow, Austrian Science Fund

### Academic Activities (since 2001)

2021-2022 President, International Organization of Chinese Physicists and Astronomers  
 2016-2019 Executive Committee, APS DAMOP  
 2015-2020 Bose-Einstein Condensation Conference Scientific Committee  
 2015 Co-organizer, INT Program: “Frontiers on Quantum Simulation with Cold Atoms”  
 2014-2020 JILA National Science Foundation Physics Frontier Center Advisory Committee  
 2012 Chair, American Physical Society (APS) Midwest Prairie Section  
 2011~2014 Program Committee, American Physical Society Division of Atomic, Molecular and Optical Physics (APS DAMOP) conference  
 2011 Co-organizer, Aspen Workshop “Few- & Many-Body Physics in Cold Quantum Gases Near Resonances”  
 2011 National Science Foundation AMO Physics Proposal Review Panelist  
 2010 Co-organizer, Conference on *Novel Quantum States in Condensed Matter*, Beijing, China  
 2010~2017 Editor, *New Journal of Physics*  
 2008~2020 Organizer, S.M.A.R.T. (Science, Mathematics, and Research Training) Woodlawn High School Science Outreach Program  
 2008 Organizer, “Frontier in Laser Cooling, Single-Molecule Biophysics and Energy Science – *Dr. Steven Chu’s 60<sup>th</sup> Birthday Celebration Symposium*”  
 2007~2012 Director, Chicago MRSEC Research Experiences for Undergraduates (REU) Program  
 2007, 11, 18 Organizer, France-Chicago research exchange program in Physics  
 2005, 2009 Organizer, MidWest Regional Meeting on Quantum Gases  
 2001 Local committee member and Editor, the 15<sup>th</sup> ICOLS (International Conference of Laser Spectroscopy Conference)

### Current Group Members

8 Graduate students Geyue Cai, Mingjiamei Zhang, Shu Nagata, Lauren Weiss, Henry Endo, Evan Yamaguchi, Josphen Jachinowski, Lambert Kong  
 6 Undergrad students Nathan Brucotao, Marie Buclez, Nick Li, Stella Kraus, Leon Gold, Annie Zhi

### Former Graduate Students and Postdoctoral Fellows

<i>Name</i>	<i>UChicago Position</i>	<i>Next position</i>
Chen-Lung Hung	Ph.D. in Physics, 2005~2011	Associate Professor, Purdue University
Xibo Zhang	Ph.D. in Physics, 2006~2012	Assistant Professor, Peking University, China

Nathan Gemelke	Postdoc fellow, 2007~2010	Assistant Professor, Penn State University
Kathy-Anne Soderberg	Postdoc fellow, 2007~2010	Funding Agent, Booz Allen Hamilton
Eric Hazlett	Postdoc fellow, 2011~2013	Assistant Professor, Carleton College
Zhaoyuan Ma	Postdoc fellow, 2010	Professor, Future Laboratory, Tsinghua Univ.
Shih-Kuang Tung	Postdoc fellow, 2010~2014	Assistant Professor, Tsinghua Univ., Taiwan
Karina Jimenez Garcia	Postdoc fellow, 2012~2014	Assistant Professor, Center for Research and Advanced Studies of the National Polytechnic Institute, Mexico City, Mexico
Colin Parker	Postdoc fellow, 2011~2015	Associate Professor, Georgia institute of Technology
Li-Chung Ha	Ph.D. in Physics, 2010~2016	Postdoc Fellow, University of Texas in Austin
Jacob Johansen	Ph.D. in Physics, 2011~2017	Postdoc Fellow, Northwestern University
Logan Clark	Ph.D. in Physics, 2012~2017	Postdoc Fellow, University of Chicago
Jiazhong Hu	Postdoc fellow, 2017~2018	Assistant Professor, Tsinghua Univ., China
Brian DeSalvo	Postdoc fellow, 2016~2019	Assistant Professor, Indiana University
Lei Feng	Ph.D. in Physics, 2013~2019	Assistant Professor, Fudan University
Zhendong Zhang	Ph.D. in Physics, 2022	Postdoc Fellow, Stanford University

## Recent Public Coverages

- 2023 **Scientific American:** ‘Quantum Superchemistry’ Observed for the First Time Ever
- 2023 **Physics.org:** *Study demonstrates many-body chemical reactions in a quantum degenerate gas*
- 2023 **Univ. of Chicago News:** Chicago scientists observe first evidence of ‘quantum superchemistry’ in the laboratory
- 2023 **Univ. of Chicago News:** Scientists use lasers to recreate 'twisted' superconducting material
- 2022 **Univ. of Chicago News:** UChicago scientists create strange quantum ‘domain walls’ in laboratory
- 2021 **National Science Foundation:** Bose fireworks and Shooting quantum particles resembles pattern like a turtle
- 2021 **New Scientist:** *Frozen cloud of molecules acts as a single quantum object*

## Publications – Cheng Chin

108. Stability and Dynamics of Atom-Molecule Superfluids Near a Narrow Feshbach Resonance  
Zhiqiang Wang, Ke Wang, Zhendong Zhang, Shu Nagata, Cheng Chin, K. Levin  
ArXiv:2310.01639
107. Observation of sound propagation in a strongly interacting Bose-Fermi mixture  
Krutik Patel, Geyue Cai, Henry Ando, Cheng Chin  
Phys. Rev. Lett. 131, 083003 (2023)
106. Many-body Chemical Reactions in a Quantum Degenerate Gas  
Zhendong Zhang, Shu Nagata, Kaixuan Yao, Cheng Chin  
Nature Physics 19, 1466 (2023)
105. Observation of interaction-induced mobility edge in a disordered atomic wire  
Yunfei Wang, Jia-Hui Zhang, Yuqing Li, Jizhou Wu, Wenliang Liu, Feng Mei, Ying Hu, Liantuan Xiao, Jie Ma, Cheng Chin, Suotang Jia

- Phys. Rev. Lett. 129, 103401 (2022)
104. Design and construction of a quantum matter synthesizer  
Jonathan Trisnadi, Mingjiamei Zhang, Lauren Weiss, Cheng Chin  
Rev. Sci. Instrum. 93, 083203 (2022)
103. Atomic Bose-Einstein condensate in a twisted-bilayer optical lattice  
Zengming Meng, Liangwei Wang, Wei Han, Fangde Liu, Kai Wen, Chao Gao, Pengjun Wang, Cheng Chin, Jing Zhang  
Nature 615, 231 (2023)
102. Dynamical preparation of an atomic condensate in a Hofstadter band  
Han Fu, Andreas Glatz, F. Setiawan, Kai-Xuan Yao, Zhendong Zhang, Cheng Chin, K. Levin  
Phys. Rev. A 105, 043301 (2022)
101. Dynamics of domain walls in a Bose-Einstein condensate driven by density-dependent gauge field  
Kai-Xuan Yao, Zhendong Zhang, Cheng Chin  
Nature 602, 68 (2022)
100. Transition from an atomic to a molecular Bose-Einstein condensate  
Zhendong Zhang, Liangchao Chen, Kai-Xuan Yao, Cheng Chin  
Nature 592, 708 (2021)
99. Jet Sub-structure in Fireworks Emission from Non-uniform and Rotating Bose-Einstein Condensates  
Han Fu, Zhendong Zhang, Kai-Xuan Yao, Lei Feng, Jooheon Yoo, Logan W. Clark, K. Levin, Cheng Chin  
Phys. Rev. Lett. 125, 183003 (2020)
98. Quantum Simulators: Architectures and Opportunities  
Ehud Altman, Kenneth R. Brown, Giuseppe Carleo, Lincoln D. Carr, Eugene Demler, Cheng Chin, Brian DeMarco, Sophia E. Economou, Mark A. Eriksson, Kai-Mei C. Fu, Markus Greiner, Kaden R. A. Hazzard, Randall G. Hulet, Alicia J. Kollar, Benjamin L. Lev, Mikhail D. Lukin, Ruichao Ma, Xiao Mi, Shashank Misra, Christopher Monroe, Kater Murch, Zaira Nazario, Kang-Kuen Ni, Andrew C. Potter, Pedram Roushan, Mark Saffman, Monika Schleier-Smith, Irfan Siddiqi, Raymond Simmonds, Meenakshi Singh, I. B. Spielman, Kristan Temme, David S. Weiss, Jelena Vuckovic, Vladan Vuletic, Jun Ye, Martin Zwierlein  
PRX Quantum 2, 017003 (2021)
97. Pattern formation in a driven Bose-Einstein Condensate  
Zhendong Zhang, Kai-Xuan Yao, Lei Feng, Jiazhong Hu, Cheng Chin  
Nature Physics 16, 652 (2020)
96. Exploring Novel Quantum Phenomena of Atoms and Molecules at Ultralow Temperatures  
Cheng Chin  
Chicago Physics 3, 8 (2019)
95. Real Time Control of Hamiltonian of a 2D Quantum Gas  
Cheng Chin  
in "2D Quantum Metamaterials", proceedings of the 2018 NIST Workshop, World Scientific, ed by W.P. Kirk, J.N. Randall and J.H.G. Owen (2019)
94. Engaged in gauge theory  
Cheng Chin  
Nature Physics 15, 1106 (2019)
93. Strongly Correlated Quantum Gas Prepared by Direct Laser Cooling  
Pablo Solano, Yiheng Duan, Yu-Ting Chen, Alyssa Rudelis, Cheng Chin, Vladan Vuletic  
Phys. Rev. Lett. 123, 173401 (2019)
92. Quantum Simulation of Coherent Hawking-Unruh Radiation  
Jiazhong Hu, Lei Feng, Zhendong Zhang, Cheng Chin  
Nature Physics 15, 785–789 (2019)
91. Temperature dependence of the pairing fraction in the BEC-BCS crossover  
Thomas Paintner, Daniel K. Hoffmann, Wolfgang Limmer, Wladimir Schoch, Benjamin Deissler, Cheng Chin, Johannes Hecker Denschlag  
Physical Review A 99, 053617 (2019)
90. Fermion-Mediated Interactions Between Bosonic Atoms

- B.J. DeSalvo, Krutik Patel, Geyue Cai, and Cheng Chin  
Nature 568, 61 (2019)
89. Super-resolution microscopy of cold atoms in an optical lattice  
Mickey McDonald, Jonathan Trisnadi, Kai-Xuan Yao, Cheng Chin  
Physical Review X 9, 021001 (2019)
  88. Correlations in high harmonic generation of matter-wave jets revealed by pattern recognition  
Lei Feng, Jiazhong Hu, Logan W. Clark, Cheng Chin  
Science 363, 521(2019)
  87. Observation of Density-Dependent Gauge Fields in a Bose-Einstein Condensate Based on Micromotion Control in a Shaken Two-Dimensional Lattice  
Logan W. Clark, Brandon M. Anderson, Lei Feng, Kathy Levin, Cheng Chin  
Phys. Rev. Lett. 121,030402 (2018)
  86. Collective emission of matter-wave jets from driven Bose-Einstein condensates  
Logan W. Clark, Anita Gaj, Lei Feng, Cheng Chin  
Nature 551 356 (2017)
  85. Ultracold gases with intrinsic scale invariance  
Cheng Chin  
In “Universal Themes of Bose-Einstein Condensation”, Cambridge University Press, editors: D. Snoke, N. Proukakis, P. Littlewood, (2017).
  84. Dynamics and interactions of particles in a thermophoretic trap  
Benjamin Foster, Frankie Fung, Connor Fieweger, Mykhaylo Usatyuk, Anita Gaj, B. J. DeSalvo, Cheng Chin  
Proc. SPIE 10347, Optical Trapping and Optical Micromanipulation XIV, 103471Z (2017/08/25).  
<http://dx.doi.org/10.1117/12.2277140>
  83. Observation of three-photon bound states in a quantum nonlinear medium  
Qi-Yu Liang, Aditya V. Venkatramani, Sergio H. Cantu, Travis L. Nicholson, Michael J. Gullans, Alexey V. Gorshkov, Jeff D. Thompson, Cheng Chin, Mikhail D. Lukin, Vladan Vuletic  
Science 359, 783 (2018)
  82. Coherent inflationary dynamics for Bose-Einstein condensates crossing a quantum critical point  
Lei Feng, Logan W. Clark, Anita Gaj, Cheng Chin  
Nature Physics 14, 269 (2018)
  81. Observation of a Degenerate Fermi Gas Trapped by a Bose-Einstein Condensate  
B.J. DeSalvo, Krutik Patel, Jacob Johansen, Cheng Chin  
Phys. Rev. Lett. 119, 233401 (2017)
  80. Direct Lattice Shaking of Bose Condensates: Finite Momentum Superfluids  
Brandon M. Anderson, Logan W. Clark, Jennifer Crawford, Andreas Glatz, Igor S. Aranson, Peter Scherpelz, Lei Feng, Cheng Chin, and K. Levin  
Phys. Rev. Lett. 118, 220401 (2017)
  79. Testing universality of Efimov physics across broad and narrow Feshbach resonances  
Jacob Johansen, B. J. DeSalvo, Krutik Patel, Cheng Chin  
Nature Physics 13, 731 (2017)
  78. Stable thermophoretic trapping of generic particles at low pressures  
Frankie Fung, Mykhaylo Usatyuk, B. J. DeSalvo, and Cheng Chin  
Appl. Phys. Lett. 110, 034102 (2017)
  77. Calibrating High Intensity Absorption Imaging of Ultracold Atoms  
Klaus Hueck, Niclas Luick, Lennart Sobirey, Jonas Siegl, Thomas Lompe, Henning Moritz, Logan W. Clark, Cheng Chin  
Optics Express 25, 8670 (2017)
  76. Exotic domain walls in Bose-Einstein condensates with double-well dispersion  
Tongtong Liu, Logan W. Clark, Cheng Chin  
Phys. Rev. A 94, 063646 (2016)
  75. Universal space-time scaling symmetry in the dynamics of bosons across a quantum phase transition  
Logan W. Clark, Lei Feng, Cheng Chin  
Science, 354, 606 (2016)

74. Ultracold atomic gases going strong  
Cheng Chin  
National Science Review 03: 168-173 (2016) doi: 10.1093/nsr/nwv073
73. Universal Loss Dynamics in a Unitary Bose Gas  
Ulrich Eismann, Lev Khaykovich, Sébastien Laurent, Igor Ferrier-Barbut, Benno S. Rem, Andrew T. Grier, Marion Delahaie, Frédéric Chevy, Christophe Salomon, Li-Chung Ha, and Cheng Chin  
hal-01149089 (2015)
72. Stable levitation and dynamics of ice particles at low pressures  
Nicholas Kowalski, Bernard Xie, Colin V. Parker, Cheng Chin  
arXiv:1504.01035 (2015)
71. Quantum dynamics with spatiotemporal control of interactions in a stable Bose-Einstein condensate  
Logan W. Clark, Li-Chung Ha, Chen-Yu Xu, Cheng Chin  
Phys. Rev. Lett. 115, 155301 (2015)
70. Ten years of Nature Physics: Bound to be universal?  
Cheng Chin and Yujun Wang  
Nature Physics, 11, 449 (2015)
69. Roton-maxon excitation spectrum of Bose condensates in a shaken optical lattice  
Li-Chung Ha, Logan W. Clark, Colin V. Parker, Brandon M. Anderson, Cheng Chin  
Phys. Rev. Lett. 114, 055301 (2015)
68. Observation of geometric scaling of Efimov states in a Fermi-Bose Li-Cs mixture  
Shih-Kuang Tung, Karina Jimenez-Garcia, Jacob Johansen, Colin V. Parker, Cheng Chin  
Phys. Rev. Lett. 113, 240402 (2014)
67. Bosonic thermoelectric transport and breakdown of universality  
A. Rancon, Cheng Chin, K. Levin  
New J. Phys. 16, 113072 (2014)
66. Strong Interaction Effects in Superfluid Ising Quantum Phase Transition  
Wei Zheng, Boyang Liu, Jiao Miao, Cheng Chin, Hui Zhai  
Phys. Rev. Lett. 113, 155303 (2014)
65. In Situ Imaging of Atomic Quantum Gases  
Chen-Lung Hung and Cheng Chin  
Book Chapter of "*Quantum Gas Experiments*" (2014)
64. Physics Viewpoint: Looking for Hofstadter's Butterfly in Cold Atoms  
Cheng Chin, Erich J. Mueller  
Physics 6, 118 (2013)
63. Efficient Continuous-Duty Bitter-Type Electromagnets for Cold Atom Experiments  
Dylan Sabulsky, Colin V. Parker, Nathan D. Gemelke, Cheng Chin  
Rev. Sci. Instrum. 84, 104706 (2013)
62. Anomalous thermoelectric transport in two-dimensional Bose gas  
Eric L. Hazlett, Li-Chung Ha, Cheng Chin  
arXiv:1306.4018 (2013)
61. Direct observation of effective ferromagnetic domains of cold atoms in a shaken optical lattice  
Colin V. Parker, Li-Chung Ha, Cheng Chin  
Nature Physics 9, 769 (2013)
60. Quench Dynamics in Bose condensates in the Presence of a Bath: Theory and Experiment  
A. Rancon, Chen-Lung Hung, Cheng Chin, K. Levin  
Phys. Rev. A 88, 031601 (2013)
59. Strongly interacting two-dimensional Bose gases  
Li-Chung Ha, Chen-Lung Hung, Xibo Zhang, Ulrich Eismann, Shih-Kuang Tung, Cheng Chin  
Phys. Rev. Lett. 110, 145302 (2013)
58. Ultracold mixtures of atomic Li-6 and Cs-133 with tunable interactions  
Shih-Kuang Tung, Colin Parker, Jacob Johansen, Cheng Chin, Yujun Wang, Paul S. Julienne  
Phys. Rev. A 87, 010702 (2013)
57. From Cosmology to Cold Atoms: Observation of Sakharov Oscillations in Quenched Atomic Superfluids  
Chen-Lung Hung, Victor Gurarie, Cheng Chin

- Science 341, 1213 (2013)
56. Quantum critical behavior of ultracold atoms in two-dimensional optical lattices  
Xibo Zhang, Chen-Lung Hung, Shih-Kuang Tung, Cheng Chin  
Science 335, 1070 (2012)
  55. Universal scaling of Efimov resonance positions in cold atom systems  
Cheng Chin, arXiv:1111.1484 (2011)
  54. Extracting density-density correlations from in situ images of atomic quantum gases  
Chen-Lung Hung, Xibo Zhang, Li-Chung Ha, Shih-Kuang Tung, Nathan Gemelke, Cheng Chin  
New Journal of Physics 13 075019 (2011)
  53. Exploring quantum criticality based on ultracold atoms in optical lattices  
Xibo Zhang, Chen-Lung Hung, Shih-Kuang Tung, Nathan Gemelke, Cheng Chin  
New Journal of Physics 13 045011 (2011)
  52. Observation of scale invariance and universality in two-dimensional Bose gases  
Chen-Lung Hung, Xibo Zhang, Nathan Gemelke, Cheng Chin  
Nature 470, 236 (2011)
  51. Feshbach Resonances in Ultracold Gases  
Cheng Chin, Rudolf Grimm, Paul Julienne, Eite Tiesinga  
Review of Modern Physics 82, 1225 (2010)
  50. Atoms in checkerboard order  
Cheng Chin, Nathan Gemelke  
Nature News and Views 464 1289 (2010)
  49. Slow Mass Transport and Statistical Evolution of An Atomic Gas Across the Superfluid-Mott Insulator Transition  
Chen-Lung Hung, Xibo Zhang, Nathan Gemelke, Cheng Chin  
Phys. Rev. Lett. 104.160403 (2010)
  48. Optical lattices for coherent quantum collision microscopy  
Andreas Klinger, Skyler Degenkolb, Nathan Gemelke, Kathy-Anne Brickman Soderberg, and Cheng Chin  
Rev. Sci. Instrum., 80, 013109 (2010)
  47. *In-situ* Observation of incompressible Mott-insulating domains of ultracold atomic gases  
Nathan Gemelke, Xibo Zhang, Chen-Lung Hung, Cheng Chin  
Nature 460, 995 (2009)
  46. Ultracold molecules: new probes on the variation of fundamental constants  
Cheng Chin, V.V. Flambaum, M.G. Kozlov  
New Journal of Physics 11, 055048 (2009)
  45. Ultracold molecules: vehicles to scalable quantum information processing  
Kathy-Anne Brickman Soderberg, Nathan Gemelke, Cheng Chin  
New Journal of Physics 11, 055022 (2009)
  44. Precision determination of scattering lengths from molecular binding energies  
A. Lange, K. Pilch, A. Prantner, F. Ferlaino, B. Engeser, H.-C. Nägerl, R. Grimm and C. Chin  
Phys. Rev. A 79, 013622 (2009)
  43. Exploring Universality of Few-Body Physics Based on Ultracold Atoms Near Feshbach Resonances  
Nathan Gemelke, Chen-Lung Hung, Xibo Zhang, Cheng Chin  
Proceedings of the 21st International Conference on Atomic Physics (ICAP 2008, Storrs)
  42. Simple, accelerating evaporation to Bose-Einstein condensation in a tilted optical trap  
Chen-Lung Hung, Xibo Zhang, Nathan Gemelke and Cheng Chin  
Phys. Rev. A 78, 01604 (2008)
  41. Spectroscopy of ultracold, trapped cesium Feshbach molecules  
M. Mark, F. Ferlaino, S. Knoop, J.G. Danzl, T. Kraemer, C. Chin, H.-C. Nägerl, R. Grimm  
Phys. Rev. A 76, 042514 (2007)
  40. 'Stückelberg interferometry' with ultracold molecules  
M. Mark, T. Kraemer, P. Waldburger, J. Herbig, C. Chin, H.-C. Nägerl, R. Grimm  
Phys. Rev. Lett. 99, 113201 (2007)

39. Precision measurements of collective oscillations in the BEC-BCS crossover  
A. Altmeyer, S. Riedl, C. Kohstall, M. J. Wright, R. Geursen, M. Bartenstein, C. Chin, J. Hecker Denschlag, and R. Grimm  
Phys. Rev. Lett. 98, 040401 (2007).
38. Experimental Evidence for Efimov Quantum States  
H.-C. Nagerl, T. Kraemer, M. Mark, P. Waldburger, J.G. Danzl, B. Engeser, A.D. Lange, K. Pilch, A. Jaakkola, C. Chin, R. Grimm  
Proceedings of the 20th International Conference on Atomic Physics (ICAP 2006, Innsbruck)
37. Enhanced sensitivity to fundamental constants in ultracold atomic and molecular systems near Feshbach resonances  
Cheng Chin and V.V. Flambaum  
Phys. Rev. Lett. 96, 230801 (2006)
36. Evidence for Efimov quantum states in an ultracold gas of caesium atoms  
T. Kraemer, M. Mark, P. Waldburger, J. G. Danzl, C. Chin, B. Engeser, A. D. Lange, K. Pilch, A. Jaakkola, H.-C. Nägerl and R. Grimm  
Nature 440, 315-318 (16 March 2006).
35. A simple model of Feshbach molecules  
Cheng Chin, cond-mat/0506313
34. Formation and Bose-Einstein condensation of ultracold molecules  
Cheng Chin, Physics Bimonthly, Taiwan, 27, 403 (2005)
33. Observation of Feshbach-like resonances in collisions between ultracold molecules  
C. Chin, T. Kraemer, M. Mark, J. Herbig, P. Waldburger, H.-C. Nägerl and R. Grimm  
Phys. Rev. Lett. 94, 123201 (2005)
32. Simple mean-field model for condensates in the BEC-BCS crossover regime  
Cheng Chin  
Phys. Rev. A, 72, 041601(R) (2005)
31. Efficient creation of molecules from a cesium Bose-Einstein condensate  
M. Mark, T. Kraemer, J. Herbig, C. Chin, H.-C. Nägerl and R. Grimm  
Europhys. Lett. 69, 706 (2005).
30. Radio-frequency transitions on weakly-bound ultracold molecules  
C. Chin and P. Julienne  
Phys. Rev. A, 71, 012713 (2005)
29. Precise determination of Li<sub>6</sub> cold collision parameters by radio-frequency spectroscopy on weakly bound molecules  
M. Bartenstein, A. Altmeyer, S. Riedl, R. Geursen, S. Jochim, C. Chin, J. Hecker Denschlag, and R. Grimm  
Phys. Rev. Lett. 94, 103201 (2005)
28. Exploring the BEC-BCS Crossover with an Ultracold Gas of Li-6 Atoms  
M. Bartenstein, A. Altmeyer, S. Riedl, S. Jochim, R. Geursen, C. Chin, J. Hecker Denschlag, R. Grimm  
in Proceedings of the XVII. International Conference on Atomic Physics (ICAP 2004, Rio de Janeiro)
27. The birth of ultracold molecules in the world of quantum gas  
C. Chin  
Association of Asia Pacific Physical Societies Bulletin 14, 14 (2004)
26. Observation of the Pairing Gap in a Strongly Interacting Fermi Gas  
C. Chin, M. Bartenstein, A. Altmeyer, S. Riedl, S. Jochim, J. Hecker Denschlag, and R. Grimm  
Science 305, 1128 (2004); published online July 22 2004; 10.1126/science.1100818
25. Collective Excitations of an ultracold Gas in the BEC-BCS Crossover Regime  
M. Bartenstein, A. Altmeyer, S. Riedl, S. Jochim, C. Chin, J. Hecker Denschlag, and R. Grimm  
Phys. Rev. Lett. 92, 203201 (2004)
24. Ultracold Cs<sub>2</sub> Feshbach Spectroscopy  
C. Chin, V. Vuletić, A. J. Kerman, S. Chu, E. Tiesinga, P.J. Leo and C.J. Williams  
Phys. Rev. A 70, 032701 (2004)
23. Thermal Equilibrium and Efficient Evaporation in an Ultracold Atom-Molecule Mixture  
C. Chin and R. Grimm



- Phys. Rev. A 69, 033612 (2004)
22. Crossover from a Molecular Bose-Einstein Condensation to a Degenerate Fermi Gas  
M. Bartenstein, A. Altmeyer, S. Riedl, S. Jochim, C. Chin, J. Hecker Denschlag, and R. Grimm  
Phys. Rev. Lett. 92, 120401 (2004)
  21. Optimized Production of a Cesium Bose-Einstein Condensate  
T. Kraemer, J. Herbig, M. Mark, T. Weber, C. Chin, H.-C. Nägerl and R. Grimm  
Appl. Phys. B 79, 1013 (2004)
  20. Impact of Casimir-Polder Potential and Johnson Noise on Bose-Einstein Condensate Stability Near Surfaces  
Y. Lin, I. Teper, C. Chin, and V. Vuletić  
Phys. Rev. Lett. 92, 050404 (2004).
  19. Experiments with a Bose-Einstein Condensate of Cesium Atoms  
T. Weber, J. Herbig, M. Mark, T. Kraemer, C. Chin, H.-C. Nägerl and R. Grimm  
in Proceedings of the XVI International Conference on Laser Spectroscopy (ICOLS 2003, Palm Cove).
  18. Bose-Einstein Condensation of Molecules  
S. Jochim, M. Bartenstein, A. Altmeyer, G. Hendl, S. Riedl, C. Chin, J. Hecker Denschlag and R. Grimm  
Science 302, 2101 (2003); published online Nov. 13, 2003; 10.1126/science.1093280 (Science Express).
  17. Pure Gas of Optically Trapped Molecules Created from Fermionic Atoms  
S. Jochim, M. Bartenstein, A. Altmeyer, G. Hendl, C. Chin, J. Hecker Denschlag, and R. Grimm  
Phys. Rev. Lett. 91, 240402 (2003).
  16. Preparation of a Pure Molecular Quantum Gas  
J. Herbig, T. Kraemer, M. Mark, T. Weber, C. Chin, H.-C. Nägerl and R. Grimm  
Science 301, 1510-1513 (2003)
  15. Sensitive Detection of Cold Cesium Molecules Formed on Feshbach Resonances  
C. Chin, A. J. Kerman, V. Vuletić and S. Chu  
Phys. Rev. Lett. 90, 033201 (2003).
  14. Controlled Atom-Molecule Interactions in Ultracold Gases  
C. Chin, V. Vuletić, A. J. Kerman and S. Chu  
in Proceedings of the II. Asia Pacific Conference on Few-Body Problems in Physics (APFB 2002, Shanghai), Modern Physics Letters A 18, 398 (2003).
  13. Measurement of Collision Shifts on Clock Transition and Quantum Computation in Optical Lattices  
C. Chin, V. Vuletić, A. J. Kerman and S. Chu  
in Proceedings of the XV. International Conference on Laser Spectroscopy (ICOLS 2001, Snowbird).
  12. Cooling, Collisions and Coherence of Cold Cesium Atoms in a Trap (Ph.D. Thesis)  
C. Chin (Stanford 2001).
  11. High Precision Feshbach Spectroscopy of Ultracold Cesium Collisions  
C. Chin, V. Vuletić, A. J. Kerman and S. Chu  
in Proceedings of the XVI. International Conference on Few-Body Problems in Physics (FB16, Taipei), Nuclear Physics A 684, 641 (2001).
  10. Measurement of An Electron's Electric Dipole Moment Using Cesium Atoms Trapped in Optical Lattices  
C. Chin, V. Leiber, V. Vuletić, A. J. Kerman and S. Chu  
Phys. Rev. A. 63, 033401 (2001).
  09. Determination of Cs-Cs Interaction Parameters Using Feshbach Spectroscopy  
A. J. Kerman, C. Chin, V. Vuletić, S. Chu, P. J. Leo, C. J. Williams, and P. S. Julienne  
in Proceedings of the Euroconference on Atomic Optics and Interferometry (Cargese), C. R. Acad. Sci. Paris, t. 2, Serie IV, p. 633 (2001).
  08. High Resolution Feshbach Spectroscopy of Cesium  
C. Chin, V. Vuletić, A. J. Kerman and S. Chu  
Phys. Rev. Lett. 85, 2717 (2000).
  07. Laser Cooling: Beyond Optical Molasses and Beyond Closed Transitions  
V. Vuletić, A. J. Kerman, C. Chin, and S. Chu  
in Proceedings of the XVII. International Conference on Atomic Physics (ICAP 2000, Florence).
  06. Beyond Optical Molasses: 3D Raman Sideband Cooling of Atomic Cesium to High Phase-Space Density  
A. J. Kerman, V. Vuletić, C. Chin, and S. Chu

- Phys. Rev. Lett. 84, 439 (2000).
05. Suppression of Atomic Radiative Collisions by Tuning the Ground-State Scattering Length  
V. Vuletić, C. Chin, A. J. Kerman, and S. Chu  
Phys. Rev. Lett. 83, 943 (1999).
  04. Observation of Low-Field Feshbach Resonances in Collisions of Cesium Atoms  
V. Vuletić, A. J. Kerman, C. Chin, and S. Chu  
Phys. Rev. Lett. 82, 1406 (1999).
  03. Raman Sideband Cooling in An Optical Lattice  
V. Vuletić, A. J. Kerman, C. Chin, and S. Chu  
in Proceedings of the 14th International Conference on Laser Spectroscopy (ICOLS 1999, Innsbruck).
  02. Degenerate Raman Sideband Cooling of Trapped Cesium Atoms at Very High Atomic Densities  
V. Vuletić, C. Chin, A. J. Kerman, and Steven Chu  
Phys. Rev. Lett. 81, 5768 (1998).
  01. Exploring the Properties of the Physical Fields by Computer Simulation  
C. Chin and W. Li  
1989 National Science Exhibition (Ministry of Education, Taipei, Taiwan 1990).

### Invited Talks in Conferences and Workshops (~ Nov. 2017)

- |       |  |
|-------|--|
| 11/17 | <b>Conference on Frontiers in Two-Dimensional Quantum Systems (smr 3167)</b> , Trieste, Italy  |
| 10/17 | <b>International School &amp; Workshop on “Critical Stability of Quantum Few-Body Systems”</b> ,<br>Dresden, Germany   |
| 09/17 | <b>Bose-Einstein condensation 2017: Frontiers in Quantum Gases</b> , Sant Feliu, Spain   |
| 06/17 | <b>Aspen workshop on "Correlations and Entanglement in and out of Equilibrium: from Cold<br/>Atoms to Electrons"</b> , Aspen, Co   |
| 05/17 | <b>SPICE workshop on Non-equilibrium Quantum Matter workshop</b> , Schloss Waldthausen,<br>Mainz, Germany  |
| 12/16 | <b>NCTS Annual Meeting 2016: Quantum Simulation and Numerical Studies in Many-Body<br/>Systems</b> , National Tsinghua University, Taiwan  |
| 08/16 | <b>Quantum Gases 2016: Non-equilibrium dynamics</b> , Beijing, China.  |
| 06/16 | <b>Qin-Huang-Dao Summer Workshop: Beyond Standard Quantum Gases</b> , Qinhuangdao, China   |
| 06/16 | <b>KITPC-PKU conference in Synthetic Topological Quantum Matter</b> , Beijing, China   |
| 04/16 | <b>614. We-Heraeus-Seminar, “Few-body physics: Advances and prospects in Theory and<br/>Experiment”</b> , Physikzentrum Bad Honnef, Germany  |
| 12/15 | <b>IAS Program and Croucher Conference on Topological Phases in Condensed Matter and<br/>Cold Atomic Systems</b> , Hong Kong, China  |
| 11/15 | <b>SFB/Transregio 21 Workshop 2015: 9<sup>th</sup> International Conference on Control of Quantum<br/>Correlations in Tailored Matter: Common Perspectives of Mesoscopic Systems and Quantum<br/>Gases</b> , Gunsberg, Germany |
| 11/15 | <b>The International Symposium on Material Sciences</b> , Osaka, Japan   |
| 10/15 | <b>Joint Conference on Novel Quantum Matter</b> , Beijing, China   |
| 09/15 | <b>12<sup>th</sup> US-Japan Seminar: Many-body Quantum Systems from Quantum Gases to Metrology<br/>and Information Processing</b> , Madison, Wisconsin   |
| 09/15 | <b>FINESS-2015: Finite-Temperature Non-Equilibrium Superfluid Systems</b> , Sopot, Poland  |
| 08/15 | <b>Synthetic Quantum Magnetism</b> , Dresden, Germany  |
| 08/15 | <b>International Conference on Quantum Fluids and Solids</b> , Niagara Falls, NY   |
| 07/15 | <b>CIOP 2015: 7<sup>th</sup> International Conference on Information Optics and Photonics</b> , Nanjing,<br>China  |
| 07/15 | <b>2015 Taiwan International Symposium on Contemporary Atomic and Optical Physics</b> ,<br>Hsinchu, Taiwan   |
| 04/15 | <b>INT-15-1 Program: Frontiers in Quantum Simulation with Cold Atoms</b> , Seattle, WA   |
| 03/15 | <b>Aspen Workshop: Non-equilibrium quantum matter</b> , Aspen, Co  |
| 03/15 | <b>Quantum Many-Body Systems Far from Equilibrium</b> , Stellenbosch, South Africa   |
| 12/14 | <b>Topological Aspects of Quantum Matters</b> , Hsinchu, Taiwan  |

11/14 **Phase Transitions in Low Dimensions**, Buffalo, NY  
 08/14 **Quantum Gases 2014: Synthetic Gauge and Large Spin System**, Beijing, China  
 08/14 **Extreme Sciences: Explore the Unknown Environments**, CiTou, Taiwan  
 08/14 **Quantum Critical Matter – From Atoms to Bulk (QCM 14)**, Obergurgl, Austria  
 08/14 **International Conference on Atomic Physics**, Washington DC  
 06/14 (Plenary) **OCPA8 International Conference on Physics Education and Frontier Physics**,  
 Nanyang Technological University, Singapore  
 06/14 **American Physical Society DAMOP**, Madison, WI  
 03/14 **American Physical Society March meeting**, Denver, CO  
 02/14 **International Conference on Quantum Optics**, Obergurgl, Austria  
 02/14 **CIFAR Cold Atoms**, Banff, Canada  
 09/13 **NSFC-ISF: Joint Workshop on Bose-Einstein Condensation and Ultracold Phenomena**,  
 Beijing, China  
 09/13 **Bose-Einstein Condensation 2013 – Frontier in Quantum Gases**, Sant Feliu de Guixols, Spain  
 04/13 **US-Japan Joint Seminar 2013**, Nara, Japan  
 04/13 **Few-body Physics in Cold Atomic Gases**, Beijing, China  
 03/13 **Finite temperature and low energy effects in cold atomic and molecular few- and many-body  
 systems**, ITAMP, Cambridge, MA  
 03/13 **Universal Themes of Bose-Einstein Condensation**, Lorentz Center, Leiden, Netherlands  
 02/13 **FINESS-2013: Finite-Temperature Non-equilibrium Superfluid Systems**, Queenstown, New  
 Zealand  
 01/13 **43<sup>rd</sup> Winter Colloquium on the Physics of Quantum Electronics (PQE-2013)**, Snowbird, UT  
 09/12 **Packard Fellow Meeting**, Monterey, CA  
 07/12 **ICTP Workshop on Quantum Simulations with Ultracold Atoms**, Trieste, Italy  
 07/12 **Summer School on Quantum Many-Body Physics of Ultra-Cold Atoms and Molecules**,  
 Trieste, Italy  
 06/12 **5<sup>th</sup> International Symposium on Cold Atom Physics**, IChang, China  
 05/12 **2012 International workshop on ultracold atoms and molecules**, Taichung, Taiwan  
 05/12 **International Conference on Frontiers of Cold Atoms and Related Topics**, Hong Kong, China  
 03/12 **Frontiers of quantum condensed matter physics: light, matter and unusual devices out of  
 equilibrium**, New York, NY  
 01/12 **2012 Aspen Ultracold Atomic Systems Conference**, Aspen, CO  
 11/11 **Modeling Materials with Cold Gases Through Simulations**, Zurich, Switzerland  
 09/11 **Bose-Einstein Condensation 2011 – Frontiers in Quantum Gases**, Sant Feliu de Guixols, Spain  
 09/11 **2011 Conference on the UK Network for Research at the Interface between Cold Atoms and  
 Condensed Matter Physics**, Nottingham, UK  
 08/11 (Plenary) **26<sup>th</sup> International Conference on Low Temperature Physics**, Beijing, China  
 07/11 (Plenary) **The 7<sup>th</sup> Chinese Physicists Worldwide International Conference**, Kaohsiung, Taiwan  
 06/11 **Gordon Research Conference**, Vermont, VT  
 06/11 (Prize talk) **DAMOP (Meeting of the Division of Atomic, Molecular and Optical Physics)**,  
 Atlanta, GA  
 06/11 **Aspen Workshop “Few- & Many-Body Physics in Cold Quantum Gases Near Resonance”**,  
 Aspen, CO  
 05/11 **INT Ultracold Atom Symposium**, Seattle, WA  
 12/10 **Control of Quantum Correlations in Tailored Matter SFB/TTR 21 workshop (SFB/TTR21)**,  
 Gunzburg, Germany  
 10/10 **Beyond Standard Optical Lattices**, Santa Barbara, CA  
 07/10 **Quantum Simulation Workshop**, Hefei, China  
 07/10 **4<sup>th</sup> International Symposium on Cold Atom Physics**, Zhoushan, China  
 06/10 **2<sup>nd</sup> International Conference: Nonlinear waves-Theory and Applications**, Beijing, China  
 06/10 **Complexity and Disorder at Ultra-low temperatures**, Santa Fe, NW

06/10 **Ultracold Fermi Gas: Superfluidity and Strong-Correlation**, Tokyo, Japan

06/10 **Critical Behavior of Lattice Models in Condensed Matter and Particle Physics**, Aspen, CO

05/10 **DAMOP (Meeting of the Division of Atomic, Molecular and Optical Physics)**, Houston, TX

05/10 **Joint Urbana Chicago Festival**, Chicago, IL

03/10 **APS March Meeting**, Portland, OR

11/09 **Ab-Initio Modeling of Cold Gases**, Zurich, Switzerland

10/09 **Efimov Physics in Ultracold Gases**, Innsbruck, Austria

10/09 **Efimov States in molecules and nuclei**, Rome, Italy

09/09 **Bose-Einstein condensation 2009 – Frontiers in Quantum Gases**, Sant Feliu de Guixols, Spain

08/09 **6<sup>th</sup> Meeting of Chinese Physicists Worldwide**, Lanzhou, China

07/09 **Low-Temperature Physics Conference in China**, Qingdao, China

07/09 **International Conference on Quantum Foundation and Technology: Frontier and Future**, Shanghai, China

07/09 **Colorado Cold Molecule Workshop**, Denver, CO

05/09 **Quantum Simulation/Computation with Cold Atoms and Molecules**, Aspen, CO

04/09 **Nearly Perfect Fluids – from quark-gluon plasma to ultracold atoms**, Research Triangle, NC

01/09 (Plenary Talk) **Third Winter School of Asian CORE Program**, Taipei, Taiwan

01/09 **39<sup>th</sup> Winter Colloquium on the Physics of Quantum Electronics (PQE-2009)**, Snowbird, UT

10/08 **New Laser Scientists Conference**, Rochester, NY

08/08 **Frontiers in Laser Cooling, Single-Molecule Biophysics and Energy Science**, Berkeley, CA

07/08 **21<sup>st</sup> International Conference on Atomic Physics**, Storrs, CT

07/08 **Third International Symposium on Cold Atom Physics**, Wuhan, China

07/08 **Summer School on Cold Atom Physics and Precision Measurements**, Shanghai, China

12/07 **Workshop on Bose-Einstein Condensation and Quantized Vortices in Superfluidity and Superconductivity**, Singapore

11/07 **2<sup>nd</sup> MidWest Cold Atom Workshop**, Madison, WI

09/07 **Packard Fellow Meeting**, Monterey, CA

08/07 **Summer School on Experimental Cold Atomic and Molecular Physics**, Shanghai

09/06 **4<sup>th</sup> COE Symposium On Physics of Self-Organization Systems**, Tokyo, Japan

06/06 **Gordon Research Conference**, South Hadley, MA

06/06 **Strong Correlations in Fermi Systems**, Copenhagen, Denmark

02/06 **CIAR UltraCold Matter Workshop**, Banff, Alberta, Canada

01/06 **Aspen Physics Workshop on Strong Correlations in Ultracold Fermi System**, CO

12/05 **60<sup>th</sup> Anniversary of Phys. Dept. at National Taiwan University**, Taipei, Taiwan

11/05 **Cold Atom Workshop**, Taipei, Taiwan

09/05 **Workshop on Bose condensation and degenerate Fermi gases**, Wuhan, China

09/05 **The Chinese Physics Society Annual meeting**, Wuhan, China

08/05 **LT24 (International Conference on Low temperature Physics)**, Orlando, FL

07/05 **Telluride Workshop on “Theory of Ultracold Molecules”**, Telluride, CO

06/05 **Ultracold Trapped Atomic Gases**, Aspen, CO

05/05 **DAMOP (Meeting of the Division of Atomic, Molecular and Optical Physics)**, Lincoln, NE

04/05 **Strongly Interacting Quantum Gases**, Columbus, OH

02/05 **Banff Cold Atom Meeting**, Banff, Alberta, Canada

02/05 (Plenary Talk) **2005 PSROC Annual Meeting**, Kaohsiung, Taiwan

10/04 **New Laser Scientist Conference III**, Rochester, NY

09/04 **Meeting on Interacting Fermions and Optical Lattices**, ETH, Zürich, Switzerland

07/04 **ISCAP-I (International Symposium on Cold Atom Physics)**, Jiangxi, China

06/04 **Gordon Research Conference**, South Hadley, MA

05/04 **CLEO/IQEC 2004**, San Francisco, CA

09/03 **Theoretical Concepts and Recent Experiments on Ultracold Molecules**, Volterra, Italy

- 06/00 **APS DAMOP (Meeting of the Division of Atomic, Molecular and Optical Physics)**, Storrs, CN  
 03/99 **FB16 (International Conference on Few-Body Problems in Physics)**, Taipei, Taiwan

Colloquium and Seminar talks (*Jan. 2005 ~Dec. 2017*)

- 08/17 CM/AMO Seminar talk, UC San Diego, San Diego  
 07/17 Special Seminar talk, MIT, Boston  
 03/17 Seminar talk, Tsinghua University, Beijing, China  
 03/17 Seminar talk, USTC, Hefei, China  
 01/17 Colloquium talk, Physics Department, Purdue University  
 12/16 AMO seminar talk, Academic Sinica, Taiwan  
 12/16 Colloquium talk, Electrophysics Department, National Chiao Tung University, Taiwan  
 11/16 Colloquium talk, University of British Columbia, Canada,  
 10/16 Friday Lunch Seminar, University of Chicago  
 06/16 AMO Seminar talk, Physics Department, Stanford University  
 02/16 Colloquium talk, Physics Department, Columbia University, New York  
 01/16 Physical Science Seminar, IBM Thomas J. Watson Research Center, Yorktown Height, New York.  
 12/15 General Education Colloquium talk, National Cheng Kung University, Tainan, Taiwan  
 12/15 Colloquium talk, University of Vermont, Burlington, Vermont  
 11/15 887<sup>th</sup> Colloquium talk, Institute for Molecular Science, Okazaki, Japan  
 10/15 Seminar talk, Tsinghua University, Beijing, China  
 10/15 Seminar talk, University of Ulm, Ulm, Germany  
 09/15 Seminar talk, Max Planck institute for Quantum Optics, Munich, Germany  
 07/15 Seminar talk, Institute for Atomic and Molecular Science, Academic Sinica, Taiwan  
 04/15 Colloquium talk and Seminar talk, Washington State University, WA  
 03/15 Seminar talk, Harvard University, MA  
 02/15 Colloquium talk, JILA, Co  
 01/15 Colloquium talk, University of Michigan, MI  
 01/15 Colloquium talk, Michigan State University, MI  
 12/14 Seminar talk, Institute for Atomic and Molecular Science, Academic Sinica, Taiwan  
 12/14 Seminar talk, Research Center for Applied Sciences, Academic Sinica, Taiwan  
 12/14 Colloquium talk, National Taiwan University, Taiwan  
 11/14 Condensed matter seminar, Princeton University, NJ  
 11/14 Colloquium talk, Illinois State University, Normal IL  
 09/14 Seminar talk, University of Amsterdam, Amsterdam, Netherlands  
 09/14 Seminar talk, Bonn University, Germany  
 09/14 Seminar talk, Max Planck Institute of Quantum Optic, Garching, Germany  
 05/14 Seminar talk, Tubingen University, Germany  
 05/14 SFB/ZOQ colloquium talk, Tubingen University, Germany  
 05/14 Ecole Normale Superieure, France  
 04/14 CQD Special Colloquium, Heidelberg University, Germany  
 04/14 Seminar talk, Innsbruck University, Austria  
 03/14 Colloquium talk, ETH, Zurich, Switzerland  
 01/14 Seminar talk and 4 lectures, Ulm University, Germany  
 01/14 Colloquium talk, Hamburg University, Germany  
 01/14 SFB/TRR 21-Colloquium, Ulm University, Germany  
 12/13 Seminar talk, National Tsinghua University, Hsinchu, Taiwan  
 12/13 colloquium talk, seminar talk and 3 lectures, Institute of Atomic and Molecular Science, Academic Sinica, Taiwan  
 11/13 Colloquium talk, Kansas State University, KS  
 08/13 Seminar talk, Lincoln National Laboratory, MA

07/13 Seminar talk, Physics Department, MIT, MA  
05/13 Seminar talk, Physics & Astronomy Department, Rice University, TX  
05/13 Seminar talk, Physics & Astronomy Department, Rice University, TX  
04/13 Institute of Advanced Studies, Tsinghua University, Beijing, China  
02/13 Colloquium talk, Enrico Fermi Institute, University of Chicago, IL  
12/12 Joint CQSE and CASTS Seminar talk, National Taiwan University, Taiwan  
12/12 Seminar talk, Institute of Physics, Academic Sinica, Taiwan  
10/12 Colloquium talk, University of Chicago, IL  
09/12 Hard Condensed Matter and Atomic-Molecular-Optical Physics Seminar, Georgia Institute of Technology, GA  
09/12 Seminar talk, Ecole Normale Superieure, Paris, France  
09/12 AMO physics lectures, Ecole Normale Superieure, Paris, France  
07/12 Seminar talk, Innsbruck University, Innsbruck, Austria  
06/12 Special lectures, Shanxi University, China  
05/12 Colloquium talk, Cornell University, NY  
03/12 Seminar talk, Georgia Institute of Technology, GA  
01/12 Seminar talk, Stanford University, CA  
01/12 Colloquium talk, Cornell University, NY  
12/11 Joint CQSE and CASTS Seminar talk, National Taiwan University, Taiwan  
12/11 Seminar talk, National Tsinghua University, Hsinchu, Taiwan  
10/11 Seminar talk, Purdue University (Calumet campus), Hammond, IN  
10/11 Atomic, Molecular, and Optical Physics Seminar talk, Northwestern University, Evanston, IL  
10/11 Colloquium talk, University of Wisconsin – Madison, Madison, WI  
09/11 Colloquium talk, Princeton University, Princeton, NJ  
09/11 Seminar talk, LENS, Florence, Italy  
09/11 Colloquium talk, University of Virginia, VA  
08/11 Seminar talk, Institute for Interdisciplinary Information Sciences, Tsinghua University, China  
06/11 Colloquium talk, Aspen Workshop, Aspen, CO  
02/11 Colloquium talk, Pennsylvania State University, State College, PA  
02/11 Colloquium talk, University of Washington, Seattle, WA  
02/11 Colloquium talk, University of Connecticut, Storrs, CN  
12/10 Seminar talk, National Tsing-Hua University, Hsinchu, Taiwan  
12/10 Seminar talk, Institute of Physics, Academic Sinica, Taipei, Taiwan  
12/10 Colloquium talk, Physics Department, Chinese University of Hong Kong, Hong Kong, China  
12/10 Seminar talk, Institute of Atomic and Molecular Sciences, Academic Sinica, Taipei, Taiwan  
12/10 Colloquium talk, Institut für Angewandte Physik, University of Bonn, Bonn, Germany  
11/10 Seminar talk, 5<sup>th</sup> Physics institute, University of Stuttgart, Stuttgart, Germany  
11/10 Colloquium talk, Oklahoma State University, Stillwater, OK  
10/10 Colloquium talk, University of Calgary, Calgary, Canada  
10/10 CM seminar talk, Purdue University, IN  
09/10 CM seminar talk, University of Massachusetts Amherst, MA  
06/10 ZhongCuanCun Forum talk, Beijing, China  
06/10 Seminar talk, Peking University, Beijing, China  
06/10 Seminar talk, Tsinghua University, Beijing, China  
04/10 AMO seminar talk, Joint Quantum Institute, University of Maryland, MD  
04/10 Colloquium talk, Indiana University-Purdue University, Indianapolis, IN  
04/10 Colloquium talk, Illinois Institute of Technology, Chicago, IL  
03/10 CM/AMO Seminar talk, University of Michigan, Ann Arbor, MI  
12/09 NCKU Physics/NCTS Seminar talk, National Cheng Kung University, Taiwan  
12/09 Seminar talk, Physics Department, National Chung Hsing University, Taiwan

12/09 NTU Physics/CTS Seminar talk, National Taiwan University, Taiwan  
 11/09 Colloquium talk, Physics Department, Colorado School of Mines, Golden, CO  
 11/09 Special Colloquium talk, JILA, Boulder, CO  
 11/09 Colloquium talk, Physics Department, University of Ulm, Germany  
 10/09 Nuclear Physics Seminar Talk, University of Kentucky, Lexington, IL  
 10/09 Colloquium talk, University of Kentucky, Lexington, IL  
 10/09 AMO seminar talk, UC Berkeley, Berkeley, CA  
 10/09 Colloquium talk, Northwestern University, Evanston, IL  
 10/09 Colloquium talk, University of Chicago, Chicago, IL  
 09/09 Colloquium talk, University of Massachusetts, Boston, MA  
 09/09 Center for Ultracold Atoms Seminar talk, MIT, Boston, MA  
 09/09 Colloquium talk, Heidelberg University, Heidelberg, Germany  
 09/09 Seminar talk, Max-Planck-Institute for Quantum Optics, Munich, Germany  
 08/09 Seminar talk, Los Alamos National Laboratory, Los Alamos, NM  
 07/09 Seminar talk, Institute of Quantum Electronics, Peking University, University, Beijing, China  
 07/09 Seminar talk, Institute of Physics, Chinese Academy of Science, Beijing, China  
 07/09 Colloquium talk, Physics Department, Tsinghua University, Beijing, China  
 07/09 Seminar talk, Center for Advanced Study, Tsinghua University, Beijing, China  
 06/09 Colloquium talk, Institute for Quantum Computing, Waterloo, Canada  
 04/09 Seminar talk, Physics Department, Ohio State University, OH  
 04/09 Seminar talk, High Energy Physics division, Argonne National Laboratory, IL  
 03/09 Colloquium talk, Physics Department, University of California, Davis, CA  
 03/09 Seminar talk, Physics Department, University of Texas at Austin, TX  
 03/09 AMO seminar talk, Physics Department, Rice University, Houston, TX  
 12/08 CQSE Seminar talk, Institute of Atomic, Molecular Science, National Taiwan University, Taiwan  
 09/08 Seminar talk, Physics Department, Michigan State University, MI  
 09/08 Seminar talk, Physics Department, University of Toronto, Canada  
 12/07 Seminar talk, Physics Department, National Tsinghua University, Hsinchu, Taiwan  
 08/07 Seminar talk, Physics Department, Beijing University, China  
 04/07 Colloquium talk, Physics Department, Northwestern University  
 12/06 Colloquium talk, Physics Department, National Taiwan University, Taipei, Taiwan  
 10/06 HEP Seminar Talk, Physics Department, University of Chicago  
 10/06 Colloquium talk, Physics Department, Toledo University  
 09/06 Seminar talk, Physics Department, Kyoto University, Kyoto, Japan  
 09/06 Seminar talk, Physics Department, Tokyo University, Tokyo, Japan  
 08/06 Colloquium talk, Physics Department, National Cheng-Kung University, Tainan, Taiwan  
 08/06 Seminar talk, Institute of Atomic and Molecular Science, Academic Sinica, Taipei, Taiwan  
 05/06 Colloquium talk, Argonne National Laboratory, Argonne  
 04/06 Seminar talk, Physics Department, Ohio State University  
 04/06 Colloquium talk, Physics Department, Purdue University  
 03/06 Contributed talk, APS March meeting, Baltimore, Maryland  
 03/06 Colloquium talk, James Franck institute, University of Chicago  
 01/06 Seminar talk, Physics Department, University of Michigan  
 09/05 Seminar talk, Physics Department, Jiao Tong University, Shanghai, China  
 03/05 Colloquium talk, Argonne National Laboratory, Argonne, IL  
 03/05 Colloquium talk, Physics Department, University of Chicago, IL

### Selected Public Coverage *(since 2005)*

- 2019 **American Physical Society Physics Viewpoint:** Zooming in on ultracold atoms
- 2019 **UChicago PSD News:** Cold atoms act as messengers at a distance
- 2019 **Nature News and Views:** New interactions seen in an ultracold gas
- 2019 **UChicago News:** Machine learning reveals hidden turtle pattern in quantum fireworks
- 2018 **UChicago News:** Quantum systems work together for change, UChicago scientists find
- 2017 **Pro-physik.de:** Bosonenfalle für Fermionen
- 2017 **American Physical Society Physics Synopsis:** Fermions trapped in Bose gas
- 2017 **Univ. of Chicago News:** UChicago scientists see fireworks from atoms at ultra-low temperatures
- 2017 **Univ. of Chicago News:** UChicago physicists settle debate over how exotic quantum particles form
- 2017 **Univ. of Chicago:** Undergrads achieve levitation breakthrough
- 2017 **Chicago Maroon:** Physics Undergraduates Help Discover New Levitation Method
- 2017 **Univ. of Chicago News:** New method uses heat flow to levitate variety of objects
- 2016 **Univ. of Chicago News:** Researchers confirm decades-old theory describing principle of phase transitions
- 2015 **Univ. of Chicago News:** *Laser-wielding physicists seize control of atoms' behavior*
- 2015 **Physics Viewpoint:** Casting new light on atomic interactions
- 2015 **Univ. of Chicago News:** *Cesium atoms shaken, not stirred, to create elusive excitation in superfluid*
- 2015 **Univ. of Chicago News:** *Exotic, gigantic molecules fit inside each other like Russian nesting dolls*
- 2014 **Quanta:** *Physicists Find a Surprising Rule of Threes*
- 2013 **Science:** Ultracold Big Bang experiment successfully simulates evolution of early universe
- 2013 **Univ. of Chicago News:** Ultracold Big Bang experiment successfully simulates evolution of early universe
- 2012 **Univ. of Chicago News:** Ultracold experiments heat up quantum research
- 2011 **Univ. of Chicago News:** *Same rules apply to some experimental systems regardless of scale*
- 2009 **NSF:** *"Wedding Cake" Images Display Transitions between Exotic Quantum States*
- 2009 **Univ. of Chicago News:** *Experiment reveals dramatic transition from conductor to insulator*
- 2008 **Physorg.com:** *Physicists propose ultracold scheme for scalable quantum information processing*
- 2008 **Univ. of Chicago Inquiry:** *Faculty Q and A with Cheng Chin*
- 2007 **Univ. of Chicago News:** *Physicists warm up to ultracold experiments*