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(i) Professional Preparation:

Post-Doctoral Fellow (Physics) University of California, Berkeley, 1999-2001

Ph.D., Harvard University (Applied Physics) 1999

M.A., Harvard University (Applied Physics) 1996

S.M., Seoul National University (Physics) 1992

B.S., Seoul National University (Physics) 1990

(ii) Experience & Employment

Professor, Department of Physics, Harvard University, 2014- Present

Professor, Department of Physics, Columbia University, 2009- 2014

Associate Professor, Department of Physics, Columbia University, 2006-2009

Assistant Professor, Department of Physics, Columbia University, 2002-2006

Miller Postdoctoral Fellow in Physics, University of California, Berkeley 1999-2001

Research Assistant and Teaching Fellow, Harvard University, 1995-1999

Research Assistant, Seoul National University, 1993-1994

Military Service, Korea, 1992-1993

(iii) Honors and Awards

Award, Prize, and Honored Membership: Elected member of the National Science of Academy (2023); Benjamin Franklin Medal in Physics (2023); Elected member of the American Academy of Arts and Science (2020); Tomassoni-Chisesi Prizes (2018); Vannevar Bush Faculty Fellowship (2018); Experimental Investigator in Quantum Materials Award, Moore Foundation (2014); Oliver E. Buckley Prize, American Physical Society (2014); Dresden Barkhausen Award (2012); Member of Korean Academy of Science and Technology (2011); Scientist of the Year, Korean-American scientists and Engineers Association (2011); Proud Korean Award, Korean American Leadership Foundation (2011); IBM Faculty Award (2009); Ho-Am Science Prize (2008); American Physical Society Fellow (2007); Columbia University Distinguished Faculty Award (2007); National Science Foundation Faculty Career Award (2004); Outstanding Young Researcher Award, Association of Korean Physicists in America (2002); Miller Research Fellowship, University of California at Berkeley (1999-2001);

Named Lectures:

Sellmyer Lecture, University of Nebraska (2024); The MCQST Distinguished Lecturer (2024); Robert Sproull Lecture, Cornell University (2024); Kavli Energy NanoScience Institute Distinguished Lectureship, University of California at Berkeley (2023); Abigail and John Van Vleck Lecture, University of Minnesota (2017); Robert Meserve Memorial Lecture, MIT (2016); Rustgi Lecture, State University of New York, Buffalo (2015); Mott Lecturer, Florida State University / NHMFL (2014); Kay Malmstrom Lecture in Physics, Hamline University,

(2014); Loeb Lecture, Harvard University (2012); Dresden Barkhausen Award Lecture (2012); Yunker Lecture, Oregon State University, (2011); Chapman Lecture, Rice University, (2009);

(iv) Publications:

Total Publications (More than 288 publications including Nature (14), Science (21), Nature Phys. (11), Nature Nanotech (15), Nature Materials (6), Nature Comm (8), Phys. Rev. Letts (46), Nano Lett. (36), PNAS (6). Total Citation (More than 97,000, h-index: 115 according to Web of Science).

- Journals

1. A. Y. Joe, A. M. Mier Valdivia, L. A. Jauregui K. Pistunova, D. Ding, Y. Zhou, G. Scuri, K. De Greeve, A. Sushko, B. Kim, T. Taniguchi, K. Watanabe, J. Hone, M. D. Lukin, H. Park, P. Kim, “Controlled Interlayer Exciton Ionization in an Electrostatic Trap in Atomically Thin Heterostructures,” *Nature Comm.*, 15, 6743 (2024)
2. T. Werkmeister, J. R. Ehrets, Y. Ronen, M. E. Wesson, D. Najafabadi, Z. Wei, K. Watanabe, T. Taniguchi, D. E. Feldman, B. I. Halperin, A. Yacoby, P. Kim, “Strongly coupled edge states in a graphene quantum Hall interferometer,” *Nature Comm.*, 15, 6533 (2024)
3. H. Y. Lee, Z. Wang, G. Chen, L. N. Holtzman, X. Yan, J. Amontree, A. Zangiabadi, K. Watanabe, T. Taniguchi, K. Barmak, P. Kim, and J. C. Hone, “263. In situ via Contact to hBN-Encapsulated Air-Sensitive Atomically Thin Semiconductors,” *ACS Nano*, 18, 17111 (2024)
4. L. E. Anderson, A. Laitinen, A. Zimmerman, T. Werkmeister, H. Shackleton, A. Kruchkov, T. Taniguchi, K. Watanabe, S. Sachdev, P. Kim, “Magneto-Thermoelectric Transport in Graphene Quantum Dot with Strong Correlations,” *Phys. Rev. Lett.*, 132, 246502 (2024)
5. H. Shackleton, L. E. Anderson, P. Kim, S. Sachdev, “Conductance and thermopower fluctuations in interacting quantum dots,” *Phys. Rev. B*, 109, 235109 (2024)
6. Y. Lee, J. Yun, G. Kim, S. L. Bud'ko, P. C. Canfield, H. Idzuchi, P. Kim, J.-H. Choi, N. Haberkorn, J. Kim, “The magnetic states of a van der Waals ferromagnet CrGeTe₃ probed by vector-field magnetic force microscopy,” *Appl. Phys. Lett.* 124, 130601 (2024)
7. A. Y. Joe, K. Pistunova, K. Kaasbjerg, K. Wang, B. Kim, D. A. Rhodes, T. Taniguchi, K. Watanabe, J. Hone, T. Low, L. A. Jauregui, P. Kim, “Transport Study of Charge Carrier Scattering in Monolayer WSe₂,” *Phys. Rev. Lett.*, 132, 056303 (2024)
8. V. A. Posey, S. Turkel, M. Rezaee, A. Devarakonda, A. K. Kundu, C. S. Ong, M. Thinel, D. G. Chica, R. A. Vitalone, R. Jing, S. Xu, D. R. Needell, E. Meirzadeh, M. L. Feuer, A. Jindal, X. Cui, T. Valla, P. Thunström, T. Yilmaz, E. Vescovo, D. Graf, X. Zhu, A. Scheie, A. F. May, O. Eriksson, D. N. Basov, C. R. Dean, A. Rubio, P. Kim, M. E. Ziebel, A. J. Millis, A. N. Pasupathy and X. Roy, “Two-dimensional heavy fermions in the van der Waals metal CeSiI,” *Nature* **625**, 483-488 (2024)
9. S. Y. F. Zhao, X. Cui, P. A. Volkov, H. Yoo, S. Lee, J. A. Gardener, A. J. Akey, R. Engelke, Y. Ronen, R. Zhong, G. Gu, S. Plugge, T. Tummuru, M. Franz, J. H. Pixley, N. Poccia, P. Kim, “Time-reversal symmetry breaking superconductivity between twisted cuprate superconductors,” *Science* **382**, 1422–1427 (2023)

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11. K. Ko, A. Yuk, R. Engelke, S. Carr, J. Kim, D. Park, H. Heo, H.-M. Kim, S.-G. Kim, H. Kim, T. Taniguchi, K. Watanabe, H. Park, E. Kaxiras, S. M. Yang, P. Kim and H. Yoo, “Operando electron microscopy investigation of polar domain dynamics in twisted van der Waals homobilayers,” *Nature Materials* **22**, 992-998(2023)
12. P. Cazeaux, D. Clark, R. Engelke, P. Kim, M. Luskin,” *Journal of Elasticity* **154**, 443-466 (2023)
13. K.-F. Huang, Ö. Gül, T. Taniguchi, K. Watanabe, and P. Kim, “Andreev reflection between Aluminum and graphene across van der Waals barriers,” *Low Temp. Phys.* **49**, 728–736 (2023)
14. E. H. Kim, D. H. Lee, T. J. Gu, H. Yoo, Y. Jang, J. Jeong, H.-W. Kim, S.-G. Kang, H. Kim, H. Lee, K.-J. Jo, B. J. Kim, J. W. Kim, S. H. Im, C. S. Oh, C. Lee, K. K. Kim, C.-W. Yang, H. Kim, Y. Kim, P. Kim, D. Whang, and J. R. Ahn, “Wafer-Scale Epitaxial Growth of an Atomically Thin Single-Crystal Insulator as a Substrate of Two-Dimensional Material Field-Effect Transistors,” *Nano Letters* **23**, 3054-3061 (2023)
15. Y. Luo, N. Mao, D. Ding, M.-H. Chiu, X. Ji, K. Watanabe, T. Taniguchi, V. Tung, H. Park, P. Kim, J. Kong and W. L. Wilson, “Electrically switchable anisotropic polariton propagation in a ferroelectric van der Waals semiconductor,” *Nature Nanotechnology* **18**, 350-356 (2023)
16. E. Meirzadeh, A. M. Evans, M. Rezaee, M. Milich, C. J. Dionne, T. P. Darlington, S. T. Bao, A. K. Bartholomew, T. Handa, D. J. Rizzo, R. A. Wiscons, M. Reza, A. Zangiabadi, N. Fardian-Melamed, A. C. Crowther, P. J. Schuck, D. N. Basov, X. Zhu, A. Giri, P. E. Hopkins, P. Kim, M. L. Steigerwald, J. Yang, C. Nuckolls and X. Roy, “A few-layer covalent network of fullerenes,” *Nature* **613**, 71-76 (2023)
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18. Y. Cho, G. R. Schleder, D. T. Larson, E. Brutschea, K.-E. Byun, H. Park, P. Kim, and E. Kaxiras, “Modulation Doping of Single-Layer Semiconductors for Improved Contact at Metal Interfaces,” *Nano Letters* **22**, 9700–9706 (2022)
19. O. Gül, Y. Ronen, S. Y. Lee, H. Shapourian, J. Zauberman, Y. H. Lee, K. Watanabe, T. Taniguchi, A. Vishwanath, A. Yacoby, P. Kim, “Andreev reflection in fractional quantum Hall state,” *Phys. Rev. X* **12**, 021057 (2022).
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23. J. Waissman, L. E. Anderson, A. V. Talanov, Z. Yan, Y. J. Shin, D. H. Najafabadi, T. Taniguchi, K. Watanabe, B. Skinner, K. A. Matveev, P. Kim, “Measurement of Electronic Thermal Conductance in Low-Dimensional Materials with Graphene Nonlocal Noise Thermometry,” *Nature Nano.* **17**, 166-173 (2022).
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29. A. Y. Joe, L. A. Jauregui, K. Pistunova, A. Mier Valdivia, Z. Lu, D. S. Wild, G. Scuri, K. De Greve, R. J. Gelly, Y. Zhou, J. Sung, A. Sushko, T. Taniguchi, K. Watanabe, D. Smirnov, M. D. Lukin, H. Park, P. Kim, ” Electrically controlled emission from singlet and triplet exciton species in atomically thin light emitting diodes,” *Phys. Rev. B, Letters* **103**, L161411 (2021).
30. E. D. Walsh, W. Jung, G.-H. Lee, D. K. Efetov, B.-I. Wu, K.-F. Huang, T. A. Ohki, T. Taniguchi, K. Watanabe, P. Kim, D. Englund, K. C. Fong, ”Josephson-junction infrared single-photon detector,” *Science* **372**, 409-412 (2021).
31. Y. J. Shin, W. Shin, T. Taniguchi, K. Watanabe, P. Kim and S.-H. Bae, ”Fast and accurate robotic optical detection of exfoliated graphene and hexagonal boron nitride by deep neural networks,” *2D Materials* **8**, 035017 (2021).
32. T. I. Andersen , G. Scuri, A. Sushko , K. De Greve, J. Sung, Y. Zhou, D. S. Wild, R. J. Gelly, H. Heo, K. Watanabe, T. Taniguchi, P. Kim, H. Park, M. D. Lukin, ” Moiré Excitons Correlated with Superlattice Structure in Twisted WSe₂/WSe₂ Homobilayers,” *Nature Materials* **20**, 480–487 (2021).

33. Z. Hao, A. M. Zimmerman, P. Ledwith, E. Khalaf, D. H. Najafabadi, K. Watanabe, T. Taniguchi, A. Vishwanath, P. Kim, “Electric field tunable unconventional superconductivity in alternating twist magic-angle trilayer graphene,” *Science* **371**, 1133-1138 (2021)
34. S. S. Sunku, D. Halbertal, R. Engelke, H. Yoo, N. R. Finney, N. Curreli, G. Ni, C. Tan, A. S. McLeod, C. F. B. Lo, C. R. Dean, J. C. Hone, P. Kim, D. N. Basov, “Dual-gated graphene devices for near-field nano-imaging,” *Nano Letters* **21**, 1688–1693 (2021)
35. A. V. Talanov, J. Waissman, T. Taniguchi, K. Watanabe, P. Kim, “High-Bandwidth, Variable-Resistance Differential Noise Thermometry,” *Review of Scientific Instruments* **92**, 014904 (2021).
36. J. Jiang, L.-A. T. Nguyen, T. D. Nguyen, D. H. Luong, D. Y. Kim, Y. Jin, P. Kim, D. L. Duong, and Y. H. Lee, “Probing giant Zeeman shift in vanadium-doped WSe₂ via resonant magnetotunneling transport” *Phys. Rev. B* **103**, 014441 (2021).
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38. N. Poccia, S. Y. F. Zhao, H. Yoo, X. Huang, H. Yan, Y. S. Chu, R. Zhong, G. Gu, C. Mazzoli, K. Watanabe, T. Taniguchi, G. Campi, V. M. Vinokur, P. Kim, “Spatially correlated incommensurate lattice modulations in an atomically thin high-temperature Bi_{2.1}Sr_{1.9}CaCu_{2.008+ δ} superconductors,” *Phys. Rev. Mat.* **4**, 114007 (2020).
39. J. Y. Park, J. Jo, J. A. Sears, Y.-J. Kim, M. Kim, P. Kim, G.-C. Yi, “Bi₂Se₃ thin films heteroepitaxially grown on α -RuCl₃,” *Phys. Rev. Mat.* **4**, 113404 (2020).
40. G.-H. Lee, D. K. Efetov, L. o Ranzani, E. D. Walsh, T. A. Ohki, T. Taniguchi, K. Watanabe, P. Kim, D. Englund, K. C. Fong, “Graphene-based Josephson junction microwave bolometer,” *Nature* **586**, 42-46 (2020).
41. S. Son , Y. J. Shin, K. Zhang, J. Shin, S. Lee, H. Idzuchi, M. J. Coak, H. Kim, J. Kim, J. H. Kim, M. Kim, D. Kim, P. Kim, J.-G. Park, “Strongly adhesive dry transfer technique for van der Waals heterostructure,” *2D Materials* **7**, 041005 (2020).
42. Y. Luo, R. Engelke, M. Mattheakis, M. Tamagnone, S. Carr, K. Watanabe, T. Taniguchi, E. Kaxiras, P. Kim, W. L. Wilson, “In situ nanoscale imaging of moiré superlattices in twisted van der Waals heterostructures,” *Nature Comm.* **11**, 4209(2020)
43. S. Bhandari, M. Kreidel, A. Kelser, G.-H. Lee, K. Watanabe, T. Taniguchi, P. Kim, R. M. Westervelt, “Imaging the Flow of Holes from a Collimating Contact in Graphene,” *Semiconductor Science and Technology* **35**, 09LT02(2020)
44. J. Sung, Y. Zhou, G. Scuri, V. Zolyomi, T. I. Andersen, H. Yoo, D. S. Wild, A. Y. Joe, R. J. Gelly, H. Heo, D. Berube, A. M. Valdivia, T. Taniguchi, K. Watanabe, M. D. Lukin, P. Kim, V. I. Falko, H. Park, “Broken mirror symmetry in excitonic response of reconstructed domains in twisted MoSe₂/MoSe₂ bilayers,” *Nature Nano* **15**, 750–754(2020)
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50. G. Scuri, T. I. Andersen, Y. Zhou, D. S. Wild, J. Sung, R. J. Gelly, D. Berube, H. Heo, L. Shao, A. Y. Joe, A. M. Valdivia, T. Taniguchi, K. Watanabe, M. Loncar, P. Kim, M. D. Lukin, H. Park, “Electrically tunable valley dynamics in twisted WSe₂/WSe₂ bilayers,” *Phys. Rev. Lett.* **124**, 217403 (2020).
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55. Y. Zhou, G. Scuri, J. Sung, R. J. Gelly, D. S. Wild, K. De Greve, A. Y. Joe, T. Taniguchi, K. Watanabe, P. Kim, M. D. Lukin, H. Park, “Controlling excitons in an atomically thin membrane with a mirror,” *Phys. Rev. Lett.* **124**, 027401 (2020).
56. R. W. Day, D. K. Bediako, M. Rezaee, L. R. Parent, G. Skorupskii, M. Q. Arguilla, C. H. Hendon, I. Stassen, N. C. Gianneschi, P. Kim, and M. Dincă, “Single crystals of electrically conductive 2D MOFs: structural and electrical transport properties,” *ACS Cent. Sci.*, **12**, 1959-1964 (2019).
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59. L. A. Jauregui, A. Y. Joe, K. Pistunova, D. S. Wild, A. A. High, Y. Zhou, G. Scuri, K. De Greve, A. Sushko, C.-H. Yu, T. Taniguchi, K. Watanabe, D. J. Needleman, M. D. Lukin, H. Park, P. Kim, "Electrical control of interlayer exciton dynamics in atomically thin heterostructures," *Science* **366**, 870-875 (2019).
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13. P. Kim, Z. Yao and C.M. Lieber, "Structure of Vortex Arrays by Magnetic Decoration", *8th IWCC Conf. Proc.* 3-10 (World Scientific Publishing Co.: Singapore, 1996).

(v) Invited Presentations:

Nov 14, 2024	Sellmyer Lecture at Physics Department, University of Nebraska	Lincoln, NE
Oct 24, 2024	Physics Department Colloquium, University of Connecticut	Storrs, CT
Oct 18, 2024	Physics Colloquium, Cambridge University	Cambridge, UK
Oct 14-15, 2024	MCQST Distinguished Lectures	Munich, Germany
Oct 11, 2024	Invited Speaker, Microsystems Engineering Seminar Series, Rochester Institute of Technology	Online
Oct 8, 2024	Invited speaker, QME Workshop, Rice University	Houston, TX
Oct 2, 2024	Physics Department Colloquium, Washington University	Saint Luis, MO
Sept 26, 2024	Special seminar, Physics department, Seoul National University	Seoul, Korea
Sept 19, 2024	Physics Department Colloquium, Purdue University	West Lafayette, IN
Sep 4, 2024	Invited Speaker, Mini colloquium at CMD31	Braga, Portugal
Aug 28, 2024	Invited Speaker, SELEQ24 (Synthetic Electronic Quantum Matter)	San Sebastian, Spain
Aug 21, 2024	Invited Speaker, KITP Workshop, "Moiré materials: A New Paradigm in Tunable Quantum Matter"	Santa Barbara, CA
Aug 16, 2024	Keynote Lecture, CCMR Symposium	Ithaca, NY
Aug 1, 2024	Invited Speaker, GRC; Quantum Science	Easton, MA
July 30, 2024	Plenary speaker, International Conference on the Physics of Semiconductors (ICPS 2024)	Ottawa, Canada
July 27, 2024	Invited Speaker, Thouless Institute for Quantum Matter (TIQM) 2024 Summer Workshop	Seattle, WA
June 17, 2024	Invited Speaker, GRC 2D Electrons Beyond Graphene	Manchester, NH
May 30, 2024	Invited Speaker, Annual Forum, Chae Institute of Advanced Studies	Seoul, Korea
May 3, 2024	Invited Speaker, UMN Workshop on Long-range Interactions and Strong Disorder: In Physics and in Life	Minneapolis, MN

Apr 24, 2024	Invited speaker, MRS Spring meeting	Seattle, WA
Apr 18, 2024	Panel member for Quantum physics workshops	New York, NY
Apr 8, 2024	MIT Chez Pierr Seminar	Cambridge, MA
Mar 7, 2024	Invited speaker, APS March meeting	Minneapolis, MN
Feb 29, 2024	Invited speaker, Princeton PCTS workshop, Hunting for Anyons	Princeton, NJ
Feb 21, 2024	Physics Department Colloquium, Boston College	Boston, MA
Feb 18, 2024	Invited Speaker, Quantum Materials and Phenomena Related to Superconductivity	Yongpyuonng, Korea
Jan 26, 2024	Colloquium, Department of Electrical and Computer Engineering at University of Maryland	College Park, MD
Dec 7, 2023	Condensed Matter Physics Seminar, Stanford University	Stanford, CA
Nov 27, 2023	Kavli Energy NanoScience Institute Distinguished Lectureship, University of California at Berkeley	Berkeley, CA
Nov 16, 2023	Department Colloquium, University of California at Irvine	Irvine, CA
Nov 10, 2023	Invited Speaker, Conference on Magnetism and Superconductivity	Online
Nov 6, 2023	Department Colloquium, University of Washington	Seattle, WA
Nov 2, 2023	Invited Speaker, POSTECH Signature Conference 2023	Pohang, Korea
Oct 30, 2023	Invited Scholar Lectureship, Korea University	Seoul, Korea
Oct 26, 2023	Condensed Matter Physics Seminar, Weizmann Institute	Online
Oct 22, 2023	FRIB Public Lecture, Michigan State University	Online
Oct 9, 2023	Invited speaker, Condensed Matter Physics Seminar, University of California at Berkeley	Berkeley, CA
Sept 13, 2023	Invited speaker, Advanced Light Source Workshop	Berkeley, CA
Sept 11, 2023	2D-TECH seminar, Chalmers University	Gothenburg, Sweden
Sept 7, 2023	Plenary speaker, CMD 30 FisMat 2023	Milan, Italy
Sept 4, 2023	Invited speaker, EUCAS 2023	Bologna, Italy
Aug 31, 2023	Invited speaker, IJJ13 Conference	Glasgow, UK
July 4, 2023	Plenary speaker, SCES 2023	Incheon, Korea
June 28, 2023	Plenary speaker Graphene Week 2023	Manchester, UK
June 26, 2023	Plenary speaker, 2D Transition Metal Dichalcogenides 2023	Cambridge UK
June 8, 2023	Plenary speaker, GCIM 2023	Jeju, Korea
June 1, 2023	Discussion leader, GRC on Topological and Correlated Matter	Ventura, CA
May 17, 2023	Colloquium Speaker, Center for Quantum Nanoscience (QNS) at Ewha Womans University	Seoul, Korea
May 16, 2023	Department seminar speaker, Dept of Physics, Yonsei University	Seoul, Korea
May 1, 2023	Invited Speaker, GRC on Superconductivity	Les Diablerets, Switzerland

April 12, 2023	Invited Speaker, MRS Spring meeting	San Francisco, CA
Mar 14, 2023	Invited Speaker, Aspen Workshop on Novel Quantum States of Matter in Moire Material	Aspen, Co
Mar 1, 2023	Department Colloquium, University of Colorado	Boulder, Co
Jan 10, 2023	Invited Speaker, Twistronics 2023 International Workshop on twisted bilayer graphene and beyond	Seoul, Korea
Jan 6, 2023	Departmental Seminar, Dept of Mechatronics, Pusan National University, Korea	Pusan, Korea
Jan 5, 2023	Special Seminar Speaker, Korean Energy Research Institute	Daejeon, Korea
Jan 3, 2023	Invited Lecturer, Center for Integrated Nanostructure Physics, Sungkyunkwan University, Korea	Suwon, Korea
Dec 8, 2022	Invited Speaker, KAST InterAcademy Workshop on Quantum Materials	Online
Dec 5, 2022	Colloquium speaker, Institute of Science and Technology, Austria	Vienna, Austria
Dec 2, 2022	Invited Speaker, US-Korea, Workshop for quantum materials at extreme conditions	Cambridge, MA
Nov 30, 2022	Invited Speaker, MRS Fall meeting	Boston, MA
Nov 4, 2022	Invited Speaker, Kavli Institute Workshop on Magnetism, Superconductivity, Topology	Online
Oct. 24, 2022	Plenary Talk, Beijing Graphene Forum 2022	Online
Oct 10, 2022	Colloquium Speaker, Princeton Quantum Colloquium	Princeton, NJ
Sept 26, 2022	Invited Speaker, IOP Conference on “Advances in Quantum Transport in Low Dimensional Systems”.	Online
Sept 21, 2022	Keynote Speaker, Nakatani RIES symposium	Atlanta, GA
Sept 19, 2022	Invited Speaker, IBS-APCTP Conference –Advances in the Physics of Topological & Correlated Matter	Online
Sept 16, 2022	Department Colloquium, George Mason University	Washington, DC
Aug 8, 2022	Invited Speaker, Samsung Global Research Symposium (GRS) on ‘New Physics for Post-Silicon Era’	Napa, CA
Aug 1, 2022	Lecturer, Princeton Summer School on Condensed Matter Physics	Princeton, NJ
July 25, 2022	Plenary Speaker, 7th International Symposium on Graphene Devices, ISGD-7	Washington DC
July 19, 2022	Invited Speaker, Materials and Mechanisms of Superconductivity (M2S) conference	Vancouver, Canada
July 4, 2022	Invited Speaker, International Conference of High Magnetic Fields in Semiconductor Physics	Online
June 27, 2022	Invited Speaker, Correlated Electron Systems Gordon Research Conference	South Hadley, MA
June 22, 2022	Invited Speaker, Frontiers of Quantum Materials and Devices Conference	Valencia Spain

June 13, 2022	Discussion Leader, Gordon Research Conference	
June 8, 2022	Invited Speaker, Honda-MIT Quantum Workshop	Cambridge, MA
May 30, 2022	APCTP Seminar, POSTECH	Pohang, Korea
May 23, 2022	Condensed Matter Physics Seminar, Seoul National University	Seoul, Korea
May 9, 2022	Invited Speaker, MRS Spring meeting	Honolulu, HI
April 29, 2022	Invited Speaker, South Carolina Quantum Technology Forum	Online
April 20, 2022	Invited Speaker, Korean Physical Society Meeting	Online
March 24, 2022	Honda Research Science Seminar	Online
March 14, 2022	Invited Speaker, APS March Meeting	Online
Feb 28, 2022	Invited Speaker, QMF Seminar, Canada	Online
Feb 23, 2022	Colloquium Speaker, Zurich Colloquium	Online
Feb 8, 2022	Invited Speaker, The 1st SCQC Workshop on 2D Materials for Quantum Computation	Online
Jan 26, 2022	Plenary Speaker, NWO Physics at Veldhoven 2022	Online
Jan 10, 2022	Yonsei Material Colloquium	Online
Dec 7, 2021	Invited Speaker, ISBeCaP2021	Online
Dec 1, 2021	Invited Speaker, MRS Fall Meeting	Boston, MA
Nov 3, 2021	Department Colloquium, Physics Department, Rutgers University	Online
Oct 26, 2021	Graphene 2021 at Grenoble	Online
Oct 21, 2021	Invited Speaker, Basic Research Forum at DoD	Online
Oct 19, 2021	Chez Pierr Seminar, Department of Physics, MIT	Cambridge, MA
Oct 15, 2021	Department Seminar, University of Glasgow	Online
Oct 6, 2021	Condensed Matter Physics Seminar, University of Pennsylvania	Online
Sept 23, 2021	Invited talk, ICIJEHSS- Spintech-Nano 21	Online
Aug 25, 2021	Department Colloquium on Semiconductors, Optoelectronics and Nanostructures from DGIST in Korea	Online
Aug 24, 2021	Invited Speaker, International Symposium on Recent Progress in Superconductivity 2021	Online
Aug 9, 2021	Invited Speaker, Moire-Twistronics Workshop 2021	Online
July 8, 2021	Nano Convergence Distinguished Lectureship	Online
Jun 30, 2021	Invited Speaker, 2021 International Conference on Quantum Computing	Online
Jun 29, 2021	Invited Speaker, NSF Workshop on Emerging Opportunities at the Intersection of Quantum and Thermal Sciences	Online
Jun 21, 2021	Invited Speaker, Brazilian Physical Society Meeting	Online

Jun 21, 2021	Plenary Speaker, 79th Device Research Conference (DRC 2021)	Online
Jun 15, 2021	Invited Speaker, SuperFluctuations 2021	Online
Jun 1, 2021	Invited Speaker, Vortex 2021 Online Conference	Online
May 26, 2021	Invited Speaker, KITP workshop on Majorana fermions	Online
May 25, 2021	Invited Speaker, Quantum Materials Canada Meeting	Online
April 27, 2021	Departmental Colloquium, Brandeis University	Online
April 22, 2021	Invited Speaker, Harvard CNS User meeting	Online
April 19, 2021	Invited Speaker, MRS Spring Meeting, NM07	Online
Mar 30, 2021	VCS Forum Colloquium Speaker	Online
Mar 22, 2021	Departmental Colloquium, Brown University	Online
Mar 22, 2021	Invited Lecturer, Nanoscience Global Lecture	Online
Feb 25, 2021	Invited Speaker, Graphene for US	Online
Feb 18, 2021	Department Colloquium, California Institute of Technology	Online
Feb 1, 2021	Distinguished Science Lecture, Hong Kong University	Online
Jan 28, 2021	Invited speaker, Anniversary meeting for Valerii Vinokur	Online
Dec 17, 2020	Colloquium, SFB951 Berlin	Online
Dec 19, 2020	Condensed Matter Physics Seminar, University of British Columbia	Online
Dec 9, 2020	Condensed Matter Physics Seminar, University of California San Diego	Online
Dec 8, 2020	Invited Speaker, Microsoft Station Q, Annual meeting	Online
Dec 3, 2020	Physics Department Colloquium Speaker, University of British Columbia	Online
Dec 1, 2020	Keynote Speaker, MRS Fall Meeting, MT06/EL04	Online
Nov 30, 2020	Keynote Speaker, MRS Spring Meeting, NM07	Online
Nov 28, 2020	Tutorial Lecturer, MRS Fall/Spring Meeting	Online
Nov 16, 2020	Keynote Speaker, Graphene Canada	Online
Nov 13, 2020	Invited Speaker, The KAST Frontier Scientists workshop	Online
Nov 6, 2020	ECE University of Virginia Distinguished Colloquium Series	Online
Nov 5, 2020	Invited Speaker, Correlated Insulating States in Two Dimensions	Online
Oct 6, 2020	Keynote Speaker, TNANO 2020	Online
Sept 28, 2020	Invited Speaker, MIT NanoBio Seminar Series	Online
Sept 22, 2020	Plenary Speaker, Graphene 2020	Online
Sept 14, 2020	Physics Department Colloquium Speaker, Georgia Institute of Technology	Online
Aug 14, 2020	Invited Speaker, iCANT	Online

July 31, 2020	Invited Speaker, NeXUS User meeting	Online
July 15, 2020	Invited Speaker, Cool Electrons in Flatlands (CEF) 2020	Online
May 20, 2020	UT Austin MRSEC seminar	Online
April 29, 2020	Invited Lecturer, KSEA Science Concert	Online
Mar 9, 2020	Invited Speaker, Quantum Matter: Computation Meets Experiments, Aspen Winter Conference	Online
Jan 13, 2020	Tutorial lecturer, Muju International Winter school	Muju, Korea
Jan 6, 2020	Lecturer at Theory Winter School at NHMFL	Tallahassee, FL
Dec 6, 2019	Invited Speaker, Frontier Scientists Workshop between US and Korea Academy of Science	Cambridge, MA
Dec 4, 2019	Invited Speaker, MRS Fall meeting	Boston, MA
Nov 6, 2019	Nature Conference on 2D Materials	Xian, China
Oct 25, 2019	Invited Speaker, EPiQS-TMS alliance workshop on Topological Phenomena in Quantum Materials (TPQM2019)	Santa Barbara, CA
Oct 7, 2019	Plenary speaker, Recent Progress of Graphene Research	Mastue, Japan
Sept 23, 2019	Physics Department Colloquium Columbia University	New York, NY
Sept 6, 2019	Electrical Engineering Department Colloquium at University of Illinois at Urbana-Champaign	Urbana-Champaign, IL
Aug 19, 2019	Invited Speaker, International Conference of Magnetic and Superconducting Materials (MSM 19)	Seoul, Korea
July 31, 2019	Invited Speaker, Chey Institute for Advanced Studies, Conference for Scientific Innovation	Seoul, Korea
June 27, 2019	Seminar KU-KIST Institute, Korea University	Seoul, Korea
June 4, 2019	Invited Speaker, Moire in Paris	Paris, France
May 29, 2019	Invited Speaker UK-Korea Research Conference at Kavli Royal Society International Centre	Chicheley Hall, UK
May 21, 2019	Public Lecture on Searching For Quantum Fractals: Hofstadter's Butterfly and Beyond at Zimmerli Art Museum	New Brunswick, NJ
May 20, 2019	Invited Speaker, Workshop on Quasiperiodicity and Fractality in Quantum Statistical Physics	New Brunswick, NJ
May 17, 2019	2019 Kavli Distinguished Lecture, Cornell University	Ithaca, NY
May 10, 2019	MSE Department Colloquium, Stanford	Palo Alto, CA
April 27, 2019	Invited Speaker, Workshop on Strongly Correlated Systems & Interactions in Quantum Matter	Princeton, NJ
Mar 19, 2019	Department Colloquium, UC David Chemistry	Davis, CA
Mar 9, 2019	Invited Speaker, APS March Meeting	Boston, MA
Mar 6, 2019	Invited Speaker, Kavli Foundation Special Symposium, APS March Meeting	Boston, MA
Mar 2, 2019	Invited Speaker, Frontiers in Condensed Matter and Materials Physics: A Scientific Symposium in Honor of the 70th Birthday of Steven G. Louie	Berkeley, CA

Feb 21, 2019	Physics Colloquium, New York University	New York, NY
Feb 18, 2019	Plenary Speaker, Annual User Meeting, Oak Ridge National Laboratory	Nashville, TN
Feb 15, 2019	Invited Speaker, GrapheneForUS	New York, NY
Jan 23, 2019	Distinguished Lecture, Department of Physics, KAIST	Daejeon, Korea
Jan 21, 2019	Tutorial Speaker, Mooju Winter School	Mooju, Korea
Jan 15, 2019	Invited Speaker, KITP Rapid Response Workshop: Correlations in Moire Flat Bands	Santa Barbara, CA
Nov 30, 2018	Invited Speaker, MRS Fall meeting	Boston, MA
Oct 26, 2018	Spitzer Lecture, University of Southern California	Los Angeles, CA
Sept 24, 2018	Plenary speaker, CINT Annual User Meeting	Santa Fe, NM
Sept 13, 2018	Department Colloquium, University of Rome	Rome, Italy
Aug 21, 2018	Invited Speaker, FET International Workshop 2018	Groningen, Netherlands
July 27, 2018	Plenary Speaker, ICSNN 2018	Madrid, Spain
July 23, 2018	Invited Speaker, HMF23	Toulouse, France
July 18, 2018	Invited Speaker, International Workshop on Quantum Designer Physics	San Sebastian
July 16, 2018	Plenary Speaker, NT 18	Beijing, China
July 3, 2018	Plenary Speaker, ICSM 2018	Busan, Korea
June 28, 2018	Invited Speaker, Quantum Hall Effect 2018	Stuttgart, Germany
June 26, 2018	Plenary Speaker, Graphene 2018	Dresden, Germany
June 13, 2018	Invited Speaker, International School for Quantum Complex Matter - Superstripes	Rome, Italy
June 6, 2018	Invited Speaker, Gordon Research Conference	Stone Hill, College, MA
May 29, 2018	Invited Speaker, Workshop on Analysis, Modeling, and Computation for Nanoscale Systems, Fields Institute	Toronto, Canada
May 2, 2018	Frontiers in Nanotechnology Seminar, Northwestern University	Evanston, IL
March 16, 2018	Berkeley Nanosciences and Nanoengineering Institute	Berkeley, CA
Feb 5, 2018	JQI Seminar at Joint Quantum Institute	College Park, MD
Jan 8, 2018	Public Lecture in Tata Institute of Fundamental Research	Mumbai, India
Dec 14, 2017	Invited Speaker, Symposium for New Era of Quantum Science and Engineering	Seoul, Korea
Dec 6, 2017	Plenary Speaker, ICAMD 2017	Jeju, Korea
Nov 29, 2017	Van Vleck Lectures, University of Minnesota	Minneapolis, MN
Nov 27, 2017	Invited Speaker, MRS Fall meeting	Boston, MA
Oct 30, 2017	Invited Speaker, AVS 60th	Tampa, FL
Oct 25, 2017	Plenary Speaker, US-EU 2D workshop	Washington DC
Oct 20, 2017	Department Colloquium, University of Texas, UG	Brownsville, TX

Oct 10, 2017	Seminar, University of Chicago	Chicago, IL
Oct. 3, 2017	Department Colloquium, Ohio State University	Columbus, OH
Sept 26, 2017	WIN Distinguished Lecture, University of Waterloo	Waterloo, Canada
Sept 19, 2017	Department Seminar, Stevenson Institute	Hovoken, NJ
Aug 30, 2017	Invited Speaker, Flatland Conference	Lausanne, Switzerland
Aug 23, 2017	Invited Speaker, Valleytronic Workshop	Cambridge, MA
Aug 4, 2017	Invited Speaker, KITP Conference on "Order, Fluctuations, and Strong Correlations"	Santa Barbara
July 17, 2017	Keynote Speaker, Edison20	Buffalo, NY
July 7, 2017	Plenary Speaker, MRSEC Workshop at Columbia University	New York, NY
June 19, 2017	Invited Seminar, KIAS special seminar	Seoul, Korea
May 25, 2017	Weizmann Physics Colloquium	Rehoboth, Israel
May 23, 2017	Ben Gurion University	Beer Sheva, Israel
May 17, 2017	Invited speaker, Mathematical Modeling of 2D Materials workshop	Minneapolis, MN
May 1, 2017	Invite Speaker, NSF Workshop on 2D materials	Washington DC
Apr 26, 2017	Invited Speaker, IEEE Boston Chapter Workshop	Lexington, MA
Apr 21, 2017	Invited Speaker, MRS Spring Meeting	Phoenix, AZ
Apr 13, 2017	Department Colloquium, Princeton University	Princeton, NJ
Mar 30, 2017	ICFO Colloquium	Barcelona, Spain
Mar 28, 2017	Plenary Speaker, Graphene 2017	Barcelona, Spain
Mar 13, 2017	Invited Speaker, APS March Meeting	New Orleans, LA
Mar 7, 2017	Tutorial Lecturer, The International Winterschool on Electronic Properties of Novel Materials	Kirchberg, Austria
Feb 8, 2017	Invited Speaker, SNU Winter Workshop on 2D Materials	Seoul, Korea
Feb 5, 2017	Mooju Winterschool, Tutorial lecturer	Mooju, Korea
Feb 2, 2017	Invited Speaker, SRC Winter Workshop on Quantum Coherence and Topological Matter	Pyungchang, Korea
Jan 25, 2017	Department Colloquium, University of Toronto	Toronto, Canada
Jan 19, 2017	Seminar at LSM, Rutgers University	Piscataway, NJ
Jan 15, 2017	Invited Speaker, Winter Conference at Aspen Center for Physics	Aspen, CO
Dec 14, 2016	Plenary Speaker, Conference Materials.it	Sicily, Italy
Dec 7, 2016	Colloquium Ehrenfestii, Leiden University	Leiden, Netherland
Nov 14, 2016	Special Seminar, Department of Physics and Astronomy, Howard University	Washington DC
Oct 21, 2016	Condensed Matter Physics Seminar, University of Illinois, Urbana-Champaign	Urbana-Champaign, IL
Oct 12, 2016	Physics Department Colloquium, Boston College	Boston, MA

Oct 3, 2016	Invited Speaker, The 53rd Annual Technical Meeting of the Society of Engineering Science (SES)	College Park, MD
Sept 26, 2016	Plenary Speaker, Recent Progress of Graphene Research (RPGR) 2016	Seoul, Korea
Sept 21, 2016	MIT Micro/Nano Seminar	Cambridge, MA
Aug 23, 2016	Keynote Speaker, 20 th International Vacuum Society Meeting	Pusan, Korea
Aug 5, 2016	Invited Speaker, International Conference of Physics of Semiconductor (ICPS)	Beijing, China
July 12, 2016	Invited Speaker, ITAMP Workshop on Fractional Quantum Hall Physics	Cambridge, MA
July 6, 2016	Keynote Speaker, IWRPS	Yongpyung, Korea
July 4, 2016	Plenary Speaker, ISPSA	Jeju, Korea
June 30, 2016	Plenary Speaker, The 2nd International Symposium on Device and Applications of Two-dimensional Materials	Shanghai, China
June 13, 2016	Lecturer, School for Nano Energy	Rome, Italy
June 8, 2016	Keynote Speaker, CIMTEC 2016	Perugia, Italy
May 11, 2016	Invited Speaker, Workshop on 2D Materials Beyond Graphene	Argonne, IL
May 3, 2016	Invited Speaker, European Materials Research Society Meeting	Lille, France
April 28, 2016	Department Colloquium, University of Ottawa	Ottawa, Canada
April 8, 2016	The Robert H. Meserve Memorial Lecture, MIT	Cambridge, MA
Mar 14, 2016	Invited Speaker, 215th American Chemical Society National Meeting	San Diego, CA
Jan 18, 2016	Mooju Winterschool, Tutorial lecturer	Mooju, Korea
Jan 6-8, 2016	Invited Lecturer, Topology and Quantum Numbers in Condensed Matter Physics	Seoul, Korea
Dec 15, 2015	Invited Speaker, Big Ideas in Quantum Materials	La Jolla, CA
Dec 2, 2015	Invited Speaker, MRS Fall Meeting	Boston, MA
Oct 14, 2015	MIT Optics and Quantum Electronics Seminar	Cambridge, MA
Sep 25, 2015	Physical Sciences Symposium on Crystals and Graphene Sciences Symposium	Boston, MA
Sep 21, 2015	Physics Colloquium, University of Wisconsin	Madison, WI
Aug 5, 2015	Invited Speaker, EPiQM Moore Foundation PI's meeting	San Francisco, CA
July 31, 2015	Plenary Speaker, EP2DS-21 / MSS-17	Sendai, Japan
Jun 29, 2015	Invited Speaker, MPG-POSTECH forum	Pohang, Korea
Jun 22, 2015	Plenary Speaker, Graphene Week 2015	Manchester, UK
May 20, 2015	CalTech - Materials Research Lecture	Pasadena, CA
May 15, 2015	Invited Speaker, The 4th Super-PIRE REIMEI Workshop on Frontiers of Condensed Matter Physics	Vancouver, Canada

May 8, 2015	Rustgi Lecture, State University of New York, Buffalo	Buffalo, NY
May 7, 2015	Condensed Matter Physics Seminar, University of Maryland	College Town, MD
April 23, 2015	EU-US 2D Materials Workshop, invited speaker	Washington DC
April 6, 2015	Invited Talk, Material Research Society Spring Meeting	San Francisco, CA
March 26, 2015	Physics Colloquium, Northeastern University	Boston, MA
March 20, 2015	Physics Colloquium, University of Central Florida	Orlando, Florida
Feb 20, 2015	Physics Colloquium, McGill University	Montreal, Canada
Jan 7, 2015	Invited Speaker, Winter Workshop on Quantum Materials in Condensed Matter Physics	Seoul, Korea
Dec. 10, 2014	Physics Colloquium, University of Michigan	Ann Arbor, MI
Nov. 24, 2014	Physics Colloquium, Berkeley	Berkeley, CA
Nov. 14, 2014	Malmstrom Lecture, Hamline University	Saint Paul, MN
Oct 17, 2014	Invited Speaker, International Workshop on Field-Effect Transistors and Functional Interfaces	Kashiwa, Japan
Oct 3, 2014	Invited Speaker, The 19th “Science in Japan” Forum Frontiers of Research on Low-Dimensional Systems	Washington DC
Aug 25, 2014	Plenary speaker, 7 th International Conference on Molecular Electronics (ElecMol)	Strasbourg, France
Aug 22, 2014	Invited speaker, Les Houches Summer School: Topological aspects of condensed matter physics	Les Houches, France
Jun 28, 2014	Invited Speaker, Poicare Seminar on Dirac Matter	Paris, France
May 28, 2014	Invited Speaker, Ho-Am Forum on Science 2014: 2-Dimensional quantum materials systems	Seoul, Korea
May 14, 2014	Physics Colloquium, Brookhaven National Laboratory	Brookhaven, NY
May 10, 2014	Invited Speaker, AKPA - IBS Symposium on Special Topics in Physics	Chicago, IL
April 21, 2014	Invited Speaker, MRS meeting	San Francisco, CA
April 18, 2014	EE Seminar, Duke University	Durham, NC
March 31, 2014	Plenary Speaker, German Physical Society Meeting	Dresden, Germany
March 20, 2014	Physics Colloquium, Florida State University	Tallahassee, FL
March 3, 2014	Invited Speaker, APS March Meeting	Denver, CO
Feb. 20, 2014	Physics Colloquium, Purdue University	West Lafayette, IN
Feb. 13, 2014	Keynote speaker, Mooju Winterschool	Mooju, Korea
Feb. 6, 2014	Physics Colloquium, New York University	New York, NY
Jan. 29, 2014	Colloquium, UMass Amherst	Amherst, MA
Jan. 7 th , 2014	KITP Colloquium	Santa Barbara
Dec. 18, 2013	Invited Seminar at LG Display	Seoul, Korea
Nov 21 st , 2013	Department Colloquium Vanderbilt University	Knoxville, TN
Nov 7 th , 2013	Physics Colloquium, Perimeter Institute	Waterloo, Canada

Oct 24 th , 2013	Invited Speaker, The Kavli Prize Scientific Symposium in honor of Dr. Mildred Dresselhaus	Washington DC
Oct 2 nd , 2013	Invited Speaker, Italy-US Research in Nanotechnology: Toward Sustainable Energy	New York, NY
Aug 13, 2013	Invited Speaker, the Korean-US Kavli Symposium	Irvine, CA
July 9, 2013	Special Seminar, UNIST	Ulsan, Korea
July 5, 2013	Plenary speaker, The 14 th International Conference on the Formation of Semiconductor Interface	Gyeongju, Korea
July 2, 2013	Invited Speaker, The 20 th International Conference on Electronic Properties of Two-Dimensional Systems (EP2DS)	Wroclaw, Poland
Jun 27, 2013	Invited Speaker, International Symposium of Quantum hall Effects and Related Topics	Stuttgart, Germany
Jun 24, 2013	Invited Speaker, 2013 Swiss Workshop on Materials with Novel Electronic Properties	Les Diablerets, Switzerland
Jun 7, 2013	Special seminar at SAINT	Soowon, Korea
May 29, 2013	K.A.O.S, public lecture	Seoul, Korea
May 24, 2013	Materials Science Colloquium, GIST	Gwangju, Korea
May 17, 2013	Condensed Matter Physics Seminar at Delft University	Delft, Netherlands
May 14, 2013	Invited Speaker, Nanotech Conference & Expo 2013	Washington DC
May 3, 2013	Invited speaker, Workshop on Electro-electron interaction graphene and other new 2D materials	Minneapolis, MN
April 29, 2013	Pennergy Seminar at University of Pennsylvania	Philadelphia, PA
April 26, 2013	Physics Colloquium at University of Virginia	Charlottesville, VA
April 15, 2013	Physics Colloquium at Temple University	Philadelphia, PA
Mar 1, 2013	Physics Colloquium at Northwestern University	Evanston, IL
Feb 15, 2013	Physics Colloquium at University of Kentucky	Kentucky
Feb 1, 2013	Invited Lecturer, School on Modern Topics in Condensed Matter Physics	Singapore
Jan 31, 2013	Special Seminar at Graphene Center, National University of Singapore	Singapore
Jan 15, 2013	Colloquium Pierre et Marie Curie	Paris, France
Jan. 14, 2013	Seminar at Laboratory of Physics of Solids, University of Paris, South	Orsay, France
Dec. 18, 2012	Condensed Matter Physics Seminar at KIAS	Seoul, Korea
Dec. 17, 2012	Plenary Speaker, Graphene Workshop at Sejong University	Seoul, Korea
Nov 27, 2012	Invited Speaker, MRS	Boston, MA
Nov 5, 2012	Physics Colloquium, University of Washington	Seattle, WA
Oct 23, 2012	Physics/Applied Physics Colloquium; EE distinguished Lecture Series, Stanford University	Palo Alto, CA
Oct 6, 2012	Invited Speaker, Recent Progress in Graphene Research	Beijing China

Sept 21, 2012	Loeb Lecture, Harvard University	Cambridge, MA
August 3, 2012	Invited Speaker, Super-PIRE Workshop	Washington DC
July 31, 2012	Invited Speaker, DOE Science Graduate Fellowship meeting	Brook Haven, NY
July 23, 2012	Invited Speaker, High Magnetic Fields in Semiconductor Physics, HMF-20	Chamonix, France
July 5, 2012	Plenary Speaker, Conference on Precision Electromagnetic Measurements, 2012	Washington DC
Jun 25, 2012	Invited Presentation, Gordon Research Conference on Correlated Electron Systems	South Hadley, MA
Jun 17, 2012	Invited Presentation, Gordon Research Conference on Graphitic Carbon Materials	Davidson, NC
May 30, 2012	NSF/AFOSR Workshop on 2D Materials and Devices beyond Graphene	Washington DC
May 15, 2012	Physics Colloquium, Fudan University	Shanghai, China
May 9, 2012	Physics Department Seminar, Sejong University	Seoul, Korea
May 7, 2012	Chemical Engineering Department Colloquium, Seoul National University	Seoul, Korea
April 23, 2012	Physics Colloquium, Brown University	Providence, RI
April 9, 2012	Invited Speaker, MRS Spring Meeting	San Francisco, CA
April 4, 2012	Physics Colloquium, Argonne National Laboratory	San Francisco, IL
March 30, 2012	Electrical Engineering Seminar, Harvard University	Cambridge, MA
March 26, 2012	Physics Department Colloquium, Queens College	Queens, New York
March 16, 2012	Physics Department Colloquium, Virginia Institute of Technology	Blacksburg, VA
Feb 24, 2012	Department of Material Science and Engineering Carnegie Mellon University	Pittsburgh, PA
Feb 10, 2012	Dresden Barkhausen Award Ceremonial Lecture	Dresden, Germany
Jan 9, 2012	Fundamental Aspects of Graphene and Other Carbon Allotropes	Santa Barbara
Dec 21, 2011	Plenary Speaker, Graphene Workshop	Seoul, Korea
Dec 14, 2011	Chemistry Colloquium, Naval Research Laboratory	Washington, DC
Nov 10, 2011	Yunker Seminar, Oregon State University	Corvallis, OR
Nov 7, 2011	Physics Club Colloquium, Yale University	New Haven, CT
Oct 21, 2011	Plenary Speaker, Korean Physical Society Fall Meeting	Busan, Korean
Oct 5, 2011	Physics Colloquium, University of Minnesota	Minneapolis, MN
Sept 27, 2011	Physics Colloquium, University of Maryland	College Park, MD
Sept 19, 2011	Physics Colloquium, Columbia University	New York, NY
Sept 12, 2011	Invited Speaker, Opportunities at the Interface of Neuroscience and Nanoscience	London, UK

Aug 30, 2011	Invited Speaker, Workshop on Graphene	San Sebastian, Spain
Aug 11, 2011	Keynote Speaker, US-Korea Conference on Science, Technology and Entrepreneurship	Park City, UT
Aug 2, 2011	International School of Solid State Physics, Quantum Phenomena in Graphene, Topological Insulators, other low dimensional materials and optical lattices	Erice, Italy
Jul 19, 2011	Colloquium, Max Plank Institute	Stuttgart, Germany
Jun 16, 2011	The 71st Physical Electronics Conference	Albany, NY
June 9, 2011	Global Research Forum	Seoul, Korea
June 2, 2011	Graphene and Related Two-Dimensional Materials	London, UK
May 24, 2011	Physics Department Colloquium, Seoul National University	Seoul, Korea
May 20, 2011	Distinguished Scholar Seminar	Suwon, Korea
May 16, 2011	Keynote speaker, International Conference on Nano Diamond and Nano Carbon	Matsue, Japan
May 10, 2011	Keynote speaker, Graphene the road to applications	Boston, MA
May 5, 2011	Physics Seminar, at New York City College of Technology of CUNY	Brooklyn, NY
Apr 27, 2011	MRS Invited Speaker	San Francisco, CA
Apr 25, 2011	2011 VLSI-TSA Symposium	Hsinchu, Taiwan
Apr 24, 2011	2011 Frontier of Spintronics / Nanoelectronics workshop	Hsinchu, Taiwan
Apr 11, 2011	Graphene 2011 conference in Bilbao	Bilbao, Spain
April 8, 2011	CNE colloquium, SUNY Albany	Albany, NY
Mar 23, 2011	APS March Meeting, Invited talk	Dallas, TX
Mar 17, 2011	Physics Colloquium, APS Editorial Office	Ridge, NY
Mar 12, 2011	Invited Speaker, Moriond Conference on Graphene 2011	Moriond, Italy
Jan 21, 2011	Physics Colloquium, NIST	Gaithersburg, MD
Jan 12, 2011	Invited Speaker, International Symposium on Nanoscale Transport and Technology	Atsugi, Japan
Dec 18, 2010	The International Chemical Congress of Pacific Basin Societies	Honolulu, Hawaii
Dec 14, 2010	Physical Chemistry Seminar, Caltech	Pasadena, CA
Dec 5, 2010	Physical Phenomena at High Magnetic Fields 2010	Tallahassee, FL
Dec 4, 2010	Symposium for Millie Dresselhaus's 80 th Birthday	Cambridge, MA
Dec 2, 2010	Physics Colloquium, MIT	Cambridge, MA
Nov 18, 2010	Physics Colloquium, University of Florida	Gainesville, FL
Nov 11, 2010	Invited Speaker Dasan International Conference	Jeju, Korea
Oct 22, 2010	Invited Lecturer, Graphene International School	Cargèse, France
Oct 16, 2010	Invited Speaker, Julius Springer Forum on Applied Physics	Stanford, CA
Oct. 9, 2010	Invited Speaker, Electronic Properties of Graphene	Princeton, NJ

Sept 28, 2010	Physics Department Seminar, Brooklyn College	New York, NY
Sept 17, 2010	ITRS Workshop on Emerging Spin and Carbon Based Emerging Logic Devices	Seville, Spain
Sept 14, 2010	Condensed Matter Physics Seminar, Rutgers University	Piscataway, NJ
Sept 1, 2010	Conference on Novel Quantum States in Condensed Matter	Beijing, China
Aug 13, 2010	US-Korea Conference on Science, Technology, and Entrepreneurship (UKC) 2010	Seattle, WA
Aug 11, 2010	US Air Force AFOSR/AOARD Workshops	Seattle, WA
Aug 6, 2010	The 19th International Conference on the Application of High Magnetic Fields in Semiconductor Physics and Nanotechnology (HMF-19)	Fukuoka, Japan
Aug 2, 2010	Keynote speaker, Recent Advances in Graphene and Related Materials	Singapore
July 29, 2010	Institutional Seminar, Ulsan National Institute of Technology	Ulsan, Korea
July 28, 2010	Graphene miniworkshop, Seoul National University	Seoul, Korea
Jun 28, 2010	Graphene Satellite Symposium at NT 10	Montreal, Canada
Jun 17, 2010	Gordon Research Conference on Correlated Electron Systems	Mountain Holyoke, MA
Jun 7, 2010	Workshop on Interactions, Disorder, and Topology in Quantum Hall Systems	Dresden, Germany
May 29, 2010	Nobel Symposium on Physics of Graphene	Stockholm, Sweden
May 25, 2010	Spring College on Computational Nanoscience	Trieste, Italy
May 12, 2010	The 125th Anniversary YONSEI International Symposium	Seoul, Korea
May 7, 2010	Physics, Colloquium, Argon National Laboratory	Argon, IL
May 6, 2010	Physics Colloquium, University of Chicago	Chicago, IL
April 20, 2010	QHE30 Conference	Minnesota, MN
April 16, 2010	Physics Colloquium, University of Cincinnati	Cincinnati, OH
April 7, 2010	Physics Colloquium, Hunter College	New York, NY
Mar. 9, 2010	International Winter School of Electronic Properties of Novel Materials	Kirchberg, Austria
Feb 24, 2010	Physics Colloquium, Rensselaer Polytech Institute	Troy, NY
Feb 5, 2010	2010 International Winter School: Beyond Moore's Law	Jeju, Korea
Jan 25, 2010	Physics Colloquium, Univ. of Pittsburgh	Pittsburgh, PA
Dec 10, 2009	Invited Speaker, IEDM	Baltimore, MD
Nov 19, 2009	Physics and Electrical Engineering Department Colloquium, University of California at Riverside	Riverside, CA
Nov 6, 2009	Physics Colloquium, Rice University	Houston, TX
Oct 16, 2009	Invited Speaker, User Meeting in Molecular Foundry	Berkeley, CA
Sept 3, 2009	Physics Department Colloquium Speaker, Purdue University	West Lafayette, IN

Aug. 16, 2009	Invited Speaker, American Chemical Society Annual Meeting	Washington DC
July 30, 2009	Invited Speaker, Graphene Conference	Benasque, Spain
July 1, 2009	Invited Speaker, Recent Progress in Graphene Research	Seoul, Korea
Jun 25, 2009	Department Colloquium, Ecole Normal Supreme	Paris, France
Jun 24, 2009	Invited Speaker, Nanoschool II del France	Paris, France
May 26, 2009	Invited Speaker, ECS 215 th meeting	San Francisco, CA
May 1, 2009	Jack Fischer Festival, University of Pennsylvania	Philadelphia, PA
April 15, 2009	Physics Department Colloquium Speaker, Georgia Tech	Atlanta, GA
April 3, 2009	Physics Department Colloquium Speaker, University of Alberta	Alberta, CA
April. 1, 2009	Physics Department Colloquium Speaker, University of Texas at Austin	Austin, TX
Mar. 25, 2009	Physics Department Colloquium Speaker, Indiana University	Bloomington, IN
Mar. 16, 2009	American Physical Society, March Meeting, Invited Speaker	Pittsburg, PA
Feb. 26, 2009	Invited Speaker, KITP Low Dimensional Electron Systems	Santa Barbara, CA
Jan. 15, 2009	Department Colloquium, MSE Department, University of Pennsylvania	Philadelphia, PA
Dec. 10, 2008	Department Colloquium, MSE Department, KAIST	Daejeon, Korea
Dec. 5, 2008	Invited speaker, The 18 th Workshop on Nanosclae and Mesoscopic Systems	Pohang, Korea
Nov. 27, 2008	Department Colloquium, Physics Department, Kyung Hee University	Seoul, Korea
Nov. 21, 2008	Seminar at APCTP	Seoul, Korea
Nov. 5, 2008	Department Colloquium, Physics Department, Yeonsei University	Seoul, Korea
Nov. 4, 2008	Department Colloquium, Physics Department, Sejong University	Seoul, Korea
Oct 29, 2008	Invited speaker, MPI-Korea Symposium	Pohang, Korea
Oct. 24, 2008	Tutorial speaker, KPS Fall meeting 2008	Kwangju, Korea
Oct. 23, 2008	Invited speaker, SAIT Forum	Suwon, Korea
Oct 19, 2008	Invited speaker, KCIST 08	Phoenix Par, Korea
Oct 17, 2008	Department Colloquium, Physics Department, Sungkeunkwan University	Suwon, Korea
Sept 27, 2008	Invited speaker, ICNME 2008	Dalin, China
Sept 22, 2008	Invited speaker, ERD Graphene Workshop	Tsukuba, Japan
Sept 19, 2008	Department Colloquium, MSE department, GIST	Kwangju, Korea
Sept 17, 2008	Department Colloquium, Physics Department, Ewah Women's University	Seoul, Korea
Sept 12, 2008	Invited speaker, Neo Eureka Forum	Seoul, Korea

August 25, 2008	Invited speaker, Graphene Week 2008	Trieste, Italy
July 31, 2008	Plenary Speaker, ICPS 2008	Rio de Janeiro, Brazil
July 7, 2008	Keynote Speaker, YESS08	Washington, DC
Jun 23, 2008	Plenary Speaker, Device Research Conference 2008	Santa Barbara, CA
Jun 17, 2008	Invited Talk, Graphene Week, Aspen Physics Center	Aspen, CO
Jun 5, 2008	Ho-Am Prize Ceremonial Seminar, Seoul National University	Seoul, Korea
May 28, 2008	Plenary Speaker, EIPBN 2008 meeting	Portland, OR
May 13, 2008	Department Seminar, Michigan Technology University	Hancock, MI
May 8, 2008	Invited Presentation, NRI/FCRP Graphene Workshop	Cambridge, MA
April 30, 2008	Department Colloquium, University of Massachusetts, Lowell	Lowell, MA
April 23, 2008	Frontiers in Nanotechnology Seminar, Northwestern University	Evanston, Illinois
April 9, 2008	American Chemical Society Meeting, Invited Talk	New Orleans, LA
March 26, 2008	Materials Research Society Invited Talk	San Francisco, CA
March 20, 2008	Department Colloquium, Michigan State University	East Lansing, MI
March 11, 2008	American Physical Society March Invited Talk	New Orleans, LA
March 9, 2008	American Physical Society March Meeting Tutorial	New Orleans, LA
Feb 18, 2008	Invited Talk, Mauterndorf Winterschool	Salzburg, Austria
Feb 13, 2008	Department Colloquium, University of Rochester	Rochester, NY
Jan 17, 2008	Department Colloquium, University of California at San Diego	San Diego, CA
Jan 11, 2008	2008 International Winter School: Beyond Moore's Law	Kenting, Taiwan
Jan 8, 2008	FENST Workshop on Nanoelectronics and Nanophotonics	Basel, Swiss
Dec 10, 2007	Condensed Matter Physics Seminar, Princeton University	Princeton, NJ
Dec 6, 2007	Physics Department Colloquium, Lehigh University	Bethlehem, PA
Nov 28, 2007	Physics Department Colloquium, CUNY	New York, NY
Nov 26, 2007	Condensed Matter Physics Seminar at Berkeley	Berkeley, CA
Nov 23, 2007	Yukawa International Symposium 2007	Kyoto, Japan
Nov 19, 2007	FENA/ONAMI Workshop	Los Angeles, CA
Nov 15, 2007	Division of Engineering Seminar at Brown University	Providence, RI
Oct 31, 2007	Solid State Physics Seminar at Yale University	New Haven, Connecticut
Oct 29, 2007	Departmental Seminar, University of Toronto	Toronto, Canada
Oct 19, 2007	Invited Speaker, New England Division of APS Meeting	Storrs, Connecticut
Oct 15, 2007	Vienna Physics Colloquium	Vienna, Austria
Oct 11, 2007	Physics Department Colloquium, New York University	New York, NY

Sept 28, 2007	Invited Speaker, COE21 Workshop on “Strongly Correlated Systems”	Tokyo, Japan
Sept 10, 2007	Physics Department Colloquium, University of Tennessee	Knoxville, Tennessee
Aug 30, 2007	Invited Speaker, NanoKorea 2007	Seoul, Korea
July 17, 2007	Plenary Speaker, EP2DS 17	Genoa, Italy
July 9, 2007	Invited Speaker, Research Workshop on Advances in Physics and Applications of Low-Dimensional Systems	Brasilia, Brazil
Jun 21, 2007	Invited Speaker, Spin Tech IV	Maui, Hawaii
Jun 14, 2007	Invited Talk, Emergent Phenomena in Quantum Hall Systems	Pennsylvania State University, PA
Jun 4, 2007	Invited Talk, Conference on Quantum Phenomena in Confined Dimensions	Trieste, Italy
May 29, 2007	Invited Talk, European Materials Research Society Meeting	Strasbourg, France
May 18, 2007	Physics Department Colloquium, Northwestern University	Evanston, Illinois
May 3, 2007	Condensed Matter and Surface Science Seminar, University of Ohio, Athens	Athens, OH
April 27, 2007	Science Colloquium, IBM Almaden Research Center	San Jose, CA
March 5, 2007	American Physical Society March Meeting Tutorial	Denver, CO
Feb. 22, 2007	Physical Chemistry Seminar, Harvard University	Cambridge, MA
Feb. 20, 2007	Physics Department Colloquium, University of Maryland	University Park, Maryland
Feb 8, 2007	Invited Talk, Mesilla Conference	Mesilla, New Mexico
Jan 15, 2007	Physics and Chemistry of Semiconductor Interface	Salt Lake City, Utah
Jan. 8, 2007	KITP miniworkshop on graphene, UCSB	Santa Barbara, California
Jan. 4, 2007	Physics Department Colloquium, Caltech	Pasadena, California
Dec. 16, 2006	US-Taiwan Workshop, Invited Speaker	Taipei, Taiwan
Dec. 6, 2006	Physics Department Colloquium, University of Colorado	Boulder, Colorado
Nov 30, 2006	Invited Talk, Material Research Society Meeting	Boston, Massachusetts
Nov 2006	Physics Department Colloquium, Delaware University	Newark, Delaware
Nov 2006	Canadian Institute of Advanced Research, Nanoelectronics Workshop	Banff, Canada
Nov 2006	Physics Department Colloquium, Boston University	Boston, Massachusetts
Nov 2006	Physics Department Colloquium, Johns Hopkins University	Baltimore, Maryland
Oct 2006	Physics Department Colloquium, University of North Carolina at Chapel Hill	Chapel Hill, North Carolina
Oct 2006	Special Seminar, Naval Research Laboratory	Washington DC
Oct. 2006	Physics Department Colloquium, Ohio State University	Columbus, Ohio
Oct. 2006	IBM Physical Seminar	Yorktown Heights, NY
Oct. 2006	Chemistry Department Seminar, Lehigh University	Bethlehem, Pennsylvania

Sept 2006	Workshop on Dynamics and Relaxation in Complex Quantum and Classical Systems and Nanostructures	Dresden, Germany
Sept 2006	Physics Department Colloquium, University of Wisconsin	Madison, Wisconsin
Sept 2006	Physics Department Colloquium, Columbia University	New York, New York
Aug 2006	ICTP-ICTS College on Science at Nanoscale	Beijing, China
Aug 2006	CMT Departmental Seminar, Seoul National University	Seoul, Korea
Aug 2006	Nanowire Workshop, Invited Speaker	Seoul, Korea
Jul. 2006	Special Department Seminar, KAIST	Taejeon, Korea
Jul. 2006	Gordon Research Conference on Nanofabrications	Tilton, New Hampshire
Jul. 2006	4 th Stig Lundqvist Conference on Advancing Frontiers of Condensed Matter Physics	Trieste, Italy
Jun 2006	Key note lecture, Nanotube 2006	Nagano, Japan
May 2006	Department Seminar, POSTECH Physics Department	Pohang, Korea
May 2006	FENA Colloquium, UCLA	Los Angeles, CA
May 2006	Condensed Matter Physics Seminar, University of Maryland	University Park, MD
Apr. 2006	Condensed Matter Physics Seminar, UIUC	Urbana-Champaign, IL
Apr. 2006	Department Seminar, Canadian National Research Council	Ottawa, Canada
Mar. 2006	American Physical Society March Meeting	Baltimore, Maryland
Mar. 2006	International Winter School of Electronic Properties of Novel Materials	Kirchberg, Austria
Feb. 2006	Department Colloquium, Cornell University	Ithaca, New York
Feb. 2006	Condensed Matter Physics Seminar, Pennsylvania State University	College Park, Pennsylvania
Feb. 2006	Condensed Matter Physics Seminar, Rutgers University	New Brunswick, New Jersey
Jan. 2006	New York Nanoscience Discussion Group, New York University	New York, New York
Jan. 2006	Nanoelectronics 2006, Lancaster University	Lancaster, United Kingdom
Jan. 2006	Interaction and Dynamics in Low Dimensional Quantum Systems Conference, Weizmann Institute	Rehovot, Israel
Nov. 2005	Condensed Matter Physics Seminar, SUNY Stony Brook	Stony Brook, New York
Nov. 2005	Department Colloquium, Princeton University	Princeton, New Jersey
Nov. 2005	Condensed Matter Physics Seminar, Case Western Reserve University	Cleveland, Ohio
Oct. 2005	Chez Pierre Seminar, MIT	Cambridge, Massachusetts
Oct. 2005	Physics Department Seminar, Yale University	New Haven, Connecticut
Oct. 2005	Graduate Seminar, University of Pittsburgh	Pittsburgh, Pennsylvania
Sep. 2005	Condensed Matter Physics Seminar, University of Pennsylvania	Philadelphia, Pennsylvania
Jul. 2005	Molecular Conduction and Sensor Workshop, Purdue University	Lafayette, Indiana

Jul. 2005	Summer School on Condensed Matter Physics, Princeton Center for Complex Materials	Princeton, New Jersey
May. 2005	Device Research Conference	Santa Barbara, California
Apr. 2005	Korean Physical Society Meeting	Seoul, Korea
Feb. 2005	Materials Science Department Seminar, Rensselaer Polytechnic Institute	Troy, New York
Feb. 2005	Materials Science Division Seminar, Brookhaven National Laboratory	Brookhaven, New York
Jan. 2005	Workshop on Strongly Correlated Electronic Materials	Princeton, New Jersey
Jan. 2005	Lecture in Nanotechnology, University of Washington	Seattle, Washington
Dec. 2004	2 nd International Symposium on Nanostructured Materials	Seoul, Korea
Oct. 2004	Optics East 2004	Philadelphia, Pennsylvania
Jun. 2004	ICTP Spring College on Science at Nanoscale	Trieste, Italy
May 2004	American Electro Chemical Society Meeting	San Antonio, Texas
Mar. 2004	American Physical Society March Meeting	Montreal, Canada
Dec. 2003	International Conference on Advanced Materials and Devices	Jeju, Korea
Oct. 2003	International Thermal Conductivity Conferences	Knoxville, Tennessee
Sep. 2003	Physics Colloquium, Hunter College	New York, New York
Aug. 2003	Stig Lundqvist Conference on Advancing Frontiers of Condensed Matter Physics	Trieste, Italy
Jul. 2003	Special Departmental Seminar, Dept of Material Science, POSTECH	Pohang, Korea
Jul. 2003	International conference on the science and application of nanotubes	Seoul, Korea
Jul. 2003	Departmental Seminar, Dept of Applied Physics, University of Tokyo	Tokyo, Japan
May. 2003	Workshop on carbon-nanotube FETs	Chicago, Illinois
May. 2003	Condensed matter physics seminar, Brookhaven National Laboratory	Brookhaven, New York
Apr. 2003	Condensed matter physics seminar, University of Massachusetts, Amherst	Amherst, Massachusetts
Apr. 2003	Departmental Condensed Matter Physics Seminar, University of Virginia	Charlottesville, Virginia
Feb. 2003	EMD and condensed matter physics seminar, Princeton University,	Princeton, New Jersey
Oct. 2002	MARTECH seminar, Florida State University,	Tallahassee, Florida
Jul. 2002	Quantum phases at the nanoscale	Erice, Italy
Jun. 2002	US-Japan Nanothermal Seminar: Nanoscale Thermal Science and Engineering	Berkeley, California

Apr. 2002	Special Symposium honoring Sumio Iijima for Franklin Medal of Physics, University of Pennsylvania	Philadelphia, Pennsylvania,
Jul. 2001	Department of Chemistry, Korea Advanced Institute of Science and Technology	Taejeon, Korea
Jul. 2001	Departmental Seminar, Department of Physics, Seoul National University	Seoul, Korea
Mar. 2001	Departmental Seminar, Department of Materials Science and Engineering, Berkeley	Berkeley, California
Mar. 2001	Condensed Matter Seminar, Department of Physics, Boston University	Boston, Massachusetts
Feb. 2001	Condensed Matter Physics Seminar, Department of Astronomy and Physics, University of Pennsylvania	Philadelphia, Pennsylvania
Feb. 2000	Institute Seminar, Lawrence Livermore National Laboratory, February 28, 2000.	Livermore, California
Oct. 1999	Special Seminar, Zyvex	Richardson, Texas
Aug. 1999	International Interdisciplinary Colloquium on the Science and Technology of the Fullerenes, , August 29, 1999.	Toulouse, France
Mar. 1999	International Winter School of Electronic Properties of Novel Materials	Kirchberg, Austria

(vi) University and Community Services:

Departmental Committees: Student-faculty issues (2002-4), Machine Shop (2004-7), Graduate Student Seminar (2002-4), Nevis Retreat (2003-4), Graduate Advising Committee (2005-7), Graduate Curriculum Committee (2005), Building Committee (2006-7), Condensed Matter Physics Junior faculty search committee (2007). Colloquium (2009-10, 13), Biophysics Search Committee (2011), Nevis Retreat (2012); Graduate Admission Committee (2015, 2016); Low Energy Physics Faculty Search Committee (2016, 2018); Committee on Search (2022-2023); co-Director of Graduate Study (2024-);

University Committees: Nanocenter Microfabrication Facility Committee (2003-14). Presidential Teaching Award Selection Committee (2011, 2012), Chemistry Department Academic Review Committee (2011), Provost Faculty Advisory Committee (2011-2013), University representative for Scientific & Technology Steering Committee at Brookhaven National Laboratory (2021-);

Synergetic Activities: led a discussion of nanoscience and technology and introduced condensed matter physics experimental laboratories and microfabrication facilities to the participants of “Science Invitational” events at Columbia College(08/09/2002); participated in Nano Engineering and Investing Trends Conference held at New York University Stern School of Business as an invited panelist (06/20/2003);); invited panelist for NSF MRI committee (10/20/2004); invited discussion leaders in Gordon research conference (07/22/2005); Panel Discussion Members in Nanoarch (2013); Selection and Evaluation Committee, Institute of Basic Science, Korea (2015-2018);

Symposium Organizers: the focus session, “fundamental challenges in transport properties in nanostructures” at American Physical Society March Meeting, 2004. the focus session, “Thermal, thermoelectric and mass transport at nanoscale” at American Physical Society March

Meeting, 2006. Guest editor of Solid State Communication (2007); Major advocator of Carbon based electronics in Emerging Research Device-working group meeting (2008); Organizer for Graphene Week (2012), Workshop on Electron Interaction in Graphene (2013); Ho-Am Forum on Science 2014: 2-Dimensional quantum materials systems (2014); 2015 Winter Workshop on Quantum Materials in Condensed Matter Physics (2015); Winter Workshop on Topology and Quantum Numbers (2016); Symposium for New Era of Quantum Science and Engineering (2017); US-Korea, Workshop for quantum materials at extreme conditions (2022); Aspen Summer School organizer (2024)

Advisory Board: ITRS Workshop in 2008, International Advisory Board of ICPS 2010, 2012; Nanotube 2007, 2012, National High Magnet Laboratory External Advisory Committee 2013-2021,

Editorial: Associate Editor, Nano Letter, American Chemical Society (2011-2022), Guest Editor for special edition in Solid State Communication (2007, 2011).

Research Leadership: Columbia Nanoscience and Engineering Center, Thrust leader (2005-10), Functional Electronics and Nanoarchitectonics, Thrust leader (2006-11), Function Accelerated nanomaterial Engineering, Thrust leader (2011-), Columbia Energy Frontier Research Center, Thrust leader (2009-2014), Columbia Nanoelectronics beyond 2020, Team leader (2011-2014), Research Area Leader (2016-2023), Center for Integrated Quantum Materials.

(vii) Collaborations and Other Affiliations

(a) Collaborators and Co-Editors (5 Years): Amir Yacoby (Harvard); S. J. van der Molen (Leiden); G. -C. Yi (SNU); E. B. Tadmor (UMN); M. Lusk (UMN); A. W. Tsien (Waterloo); H. Idzuchi (Tohoku); R. M. Wetervelt (Harvard); T. Taniguchi (NIMS); K. Watanabe (NIMS); K. Wang (UMN); G.-H. Lee (Postech); W. -W. Son (KIAS); J. R. Ahn (SKKU); A. Pasupathy (Columbia); C. R. Dean (Columbia); T. L. Brower-Thomas (Howard); E. Kaxiras (Harvard); F. Capasso (Harvard); W. L. Wilson (Harvard); B. Halperin (Harvard); H. Park (Harvard); M. D. Lukin (Harvard); L. E. Brus (Columbia); X. Roy (Columbia); E. J. Mele (UPenn); D. N. Basov (Columbia); M. M. Fogler (UCSD); C. Nuckolls (Columbia); K. C. Fong (BBN); D. Englund (MIT); T. Heinz (Stanford); J. Hone (Columbia); M. -H. Jo (Postech); S. -J. Sin (Hanyang); S. Sachdev (Harvard); J. Ravichandran (USC); R. Ramesh (Berkeley); L. F. Kourkoutis (Cornell); P. Ajayan (Rice); K. Banerjee (UCSB); C. M. Lieber (Harvard); M. Z. Bazant (MIT); R. S. Ruoff (UNIST); L. Colombo (TI); M. S. Foster (Rice); A. Macdonald (Austin); Y. H. Lee (SKKU); A. K. Geim (Manchester); M. Potemski (Grenoble); D. A. Muller (Cornell); T. Low (UMN); I. P. Herman (Columbia); P. Cadden-Zimansky (Bard); D. Ham (Harvard); W. Lee (Yonsei); K. L. Shepard (Columbia); W. J. Yoo (SKKU)

(b) Graduate Student Advisors: Charles M. Lieber (Harvard)

(c) Postgraduate-Scholar Sponsor: Paul L. McEuen (Berkeley, now at Cornell)

(viii) Student and Postdoctoral Fellow Advising

Graduate Thesis: Joshua P. Small (May 2006); Yuanbo Zhang (June 2006); Meninder Purewal (May 2008), Melinda Han (May 2010); Yuri Zuev (January, 2011); Yue Zhao (December 2011); Andrea Young (December 2011); Dmitri Efetov (May 2014); Fereshte Ghahari (July 2014); Patrick Maher (May 2015); Jess Crossno (May, 2017); Carlos Forsythe (July, 2017); Giselle Elbaz (July, 2017); Xiaomeng Liu (October, 2018); Austin Cheng (May 2019); Jing K. Shi (May 2020); Ko-Fan Huang (May 2020); Andrew Y. Joe (May 2021); S. Y.

Frank Zhao (July 2021); Rebecca Engelke (May 2022); Laurel Anderson (August 2022); Mehdi Rezaee (December 2022); Artem Talanov (November 2023); Zeyu Hao (May 2024);

Graduate Thesis in Progress: Andres Mier Valdivia (Applied Physics); Thomas Werkmeister (Applied Physics); Zhongying Yan (Physics); Alex Cui (Physics); James Ehrets (Physics); Jonathan Zauberman (Physics); Isabelle Phinney (Chemical Physics); Thao Dinh (Physics); Grace Chen (Applied Physics); Kierstin Torres (Applied Physics); Terry Phang (Physics); Christina Henzinger (Applied Physics); Jun Wei Lam (Applied Physics);

Undergraduate: Jeremy Amai-Dolan (Haverford College), Laura Berzak (Dartmouth), Elizabeth Gabor (Columbia), Laura Newburgh (Barnard College), Nada Petrovic (Columbia), Kerstin Perez (Columbia Univ), Josh Wittenberg (Berkeley), William Pontius (Columbia), Ani Rabi (Columbia), Joel Chudow (Columbia); Asher Mullokandov (Columbia); Solomon Endrich (Columbia), Hechen Ren (Columbia); Charles Starr (Columbia); Steven Carr (Columbia); Minyong Han (Columbia); Giovani Scuri (Columbia); Achim Harzheim (Harvard); Kateryna Pistunova (Harvard);

Post-doc: Byung Hee Hong (Associate Professor, Department of Chemistry, Seoul National University); Barbaros Oezylmaz (Assistant Professor, Department of Physics, National University of Singapore); Pablo Jarillo-Herrero (Assistant Professor, Department of Physics, MIT); Kirill Bolotin (Assistant Professor, Department of Physics, Vanderbilt University); Namdong Kim (Senior Research Scientist, POSTECH); Keunsoo Kim (Assistant Professor, Department of Physics, Sejong University); Young-Jun Yu (Research Scientist, ETRI); Paul Cadden-Zimansky (Assistant Professor, Department of Physics, Bard College); Vikram Deshpande (Assistant Professor, Department of Physics, University of Utah); Cory Dean (Assistant Professor, Columbia University); Jayakanth Ravichandran (Assistant Professor at University of Southern California); Amelia Barreiro (European Patent Office); Adam Wei Tsen (Assistant Professor, University of Waterloo); Chulho Lee (Assistant Professor, Korea University); Jean-Damien Pillet (Associate Professor, Ecole Polytechnique); Martin Gustafsson (BBN); Ke Wang (Assistant Professor, University of Minnesota); Gil-Ho Lee (Assistant Professor, POSTECH); Hiroshi Idzuchi (Assistant Professor, Tohoku University); Young Jae Shin (BNL); Luis A. Jauregui (Assistant Professor, University of California Riverside); Si Young Lee (Samsung); Hyobin Yoo (Assistant Professor, Seogang University); Nicola Poccia (Group Leader, Leibniz Institute for Solid State and Materials Research Dresden); Hoseok Heo (Samsung); Tamar Mentzel (Assistant Professor, University of California, Riverside); Onder Gul (TNO Quantum Technology); Yuval Ronen (Assistant Professor, Weizmann Institute); Dapeng Ding (); Antti Laitinen (deceased); Jonah Weissman (Assistant Professor, Hebrew University); Qi Yang (Coherent Corp.); Joon Young park (current); Jue Wang (current); Andrew Zimmerman (Microsoft); Abhishek Banerjee (current); Nadine Leisgang (current); Sejoon Lim (current); Sangmin Lee (current); Gabriele Pasquale (current);

(ix) Teaching

Fall, 2002, 2003, & 2004: Physics 1403, "Introduction to Classical and Quantum Waves"
 Spring 2003, 2004, & 2005: Physics 1402, "Introduction to Electromagnetism and Optics"
 Fall 2005, 2006, 2007: Physics 4021, "Introduction to Quantum Physics I"
 Spring 2006, 2007, 2008: Physics 4022, "Introduction to Quantum Physics II"
 Spring 2009, 2010, 2011, 2012: Physics G6082, "Condensed Matter Physics I"
 Fall 2009, 2010, 2011: Physics C2601, "Classical and Quantum Waves"
 Fall 2012, 2013: Physics W3007, "Electricity-Magnetism"

Spring 2013, 2014: Physics W3072, “Current Research Problems”

Fall 2014, 2015, Spring 2018: Physics 15b, “Introductory Electromagnetism”

Spring 2023, Physics 15c, “Waves,” Laboratory

Spring 2015, 2016: Physics 181, “Statistical Mechanics and Thermodynamics”

Spring 2019, 2020, Fall 2022: Physics 296, “Mesoscale and Low Dimensional Devices,”

Fall 2020, 2021, 2024: Freshman Seminar, “Physics of Measurement,”

Spring 2021, 2022, 2023: Physics 153, “Electrodynamics”

(x) Other Professional Activities

Here is the list of my other professional activities:

*Associate Editor in Nano Letters (American Chemical Society) 1/1/2011-12/31/2022:

* Consulting: Nakatani Foundation for Advancement of Measuring Technologies in Biomedical Engineering (2018-); Intellectual Ventures Management LLC (2022-);

* Advisory Board: Graphene Square (2016-); First Quantum, Inc (2022-2023); Global Network Honda Research Institutes (2023-);

*Visiting Chaired Professor in Seoul National University (2012-2018); Sungkyunkwan University (SKKU) (3/1/2019-2/28/2023) and Ulsan National Institute of Science and Technology (UNIST), Korea 3/1/2012-2/28/2019; Kyung Hee University (9/1/2024-);