

## Curriculum Vitae

### Jianwei (John) Miao

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### Education:

- Ph. D., Physics, the State University of New York, Stony Brook, 12/1999.
- M. S., Computer Science, the State University of New York, Stony Brook, 5/1999
- Advanced Graduate Certificate, Biomedical Engineering, the State University of New York, Stony Brook, 5/1999
- M. S., Physics, Chinese Academy of Sciences, 7/1994
- B. S., Physics, Hangzhou University, P. R. China, 7/1991

### Professional Experience:

- 7/2009-Present Professor, Department of Physics and Astronomy & California NanoSystems Institute, University of California, Los Angeles
- 7/2007-7-2009 Associate Professor, Department of Physics and Astronomy & California NanoSystems Institute, University of California, Los Angeles
- 8/2004-7/2007 Assistant Professor, Department of Physics and Astronomy & California NanoSystems Institute, University of California, Los Angeles
- 1/2000-7/2004 Staff Scientist, Stanford Synchrotron Radiation Laboratory, SLAC, Stanford University

### Honors and Awards:

- Fellow, American Physical Society, 2016
- The University of Strasbourg Institute for Advanced Study (USIAS) Fellowship, France, 2015-2017.
- Microscopy Today Innovation Award, 2013.
- Theodore von Kármán Fellowship, RWTH Aachen University, Germany, 2013.
- Outstanding Teaching Award, Dept. of Physics & Astronomy, UCLA, 2012-2013 and 2015-2016.
- Kavli Frontiers Fellow, 2010.
- Guest Professor, Zhejiang University, China, 2009 – Present.
- Outstanding Teacher of the Year Award, Dept. of Physics & Astronomy, UCLA, 2006-2007.
- Alfred P. Sloan Research Fellow, 2006-2008.
- Guest Scientist, RIKEN, Japan, 2004 – Present.
- Werner Meyer-Ilse Memorial Award, 1999.
- Whitaker Foundation Scholarship, 1997-1999.
- Outstanding Student of the Year Award, Physics Department, Hangzhou University, 1990-1991.

### Professional Activities:

- Associate Editor, *Science Advances*, Jan. 2017 – Present.
- Deputy Director, NSF Science and Technology Center on Real Time Functional Imaging (STROBE), Sept. 1, 2016 – present.
- Organizer, Brainstorming Meeting on Live Cell Imaging with XFELs, Los Angeles, CA, Feb. 25-26, 2016.
- Cross-Cutting Characterization and Instrumentation Panel for the DOE BES Workshop on Basic Research Needs for Quantum Materials for Energy Relevant Technology, Gaithersburg Marriott Washingtonian Center, MD, Feb. 8 – 10, 2016.
- NSF STC Site Visit Panel, University of Buffalo, New York, June 3 - 5, 2015.
- CATERETE Beamline Advisory Team, Brazilian Synchrotron Light Laboratory, Campinas, Brazil, Dec. 2014 – present.

- Advances in Imaging: Resolution and Tomography Panel for the DOE BES-Sponsored Workshop on Future of Electron Scattering and Diffraction, Washington DC, Feb. 25-26, 2014.
- NSF panel on the renewal site visit of the Cornell High Energy Synchrotron Source (CHESS), Ithaca, NY, April 28 – 30, 2013.
- Main Editor, *Acta Crystallographica Section A: Foundations of Crystallography*, Nov. 2012-Jan. 2017.
- NSF STC Competition Site Visit Panel, University of Buffalo, New York, Oct. 11-12, 2012.
- Associate Editor, *Crystallography Reviews*, Dec. 2012 – present.
- NIH Review Panel - Small Business: Basic and Integrative Bioengineering, March 2012.
- COSMIC Advisory Panel, Advanced Light Source, Lawrence Berkeley National Laboratory, Feb. 2012 – 2013.
- Co-Editor, *Acta Crystallographica Section A: Foundations of Crystallography*, Jan. 2011 – Nov. 2012.
- Chair, Kavli Frontiers of Science Symposium on “Imaging the Nanoworld with X-rays”, Irvine, CA, Nov. 4-6, 2010.
- Co-organizer, Conference on X-ray Science in the 21st Century, the Kavli Institute for Theoretical Physics, University of California, Santa Barbara, Aug. 2 - Sep. 10, 2010.
- Organizer, Workshop on Coherent Diffractive Imaging for Biological Applications at NSLS-II, Brookhaven National Laboratory, May 17-18, 2010.
- NIH Advisory Panel for National Synchrotron Light Source II (NSLS-II) beamline development, 2010-2011.
- Chair, Scientific Program Committee, Workshop on X-ray Science at the Femtosecond to Attosecond Frontier, Los Angeles, May 18-20, 2009.
- International Advisory Committee for Phase Retrieval and Coherent Scattering Workshop, Asilomar, California, June 25-28, 2007.
- Co-chair, Workshop on Coherent X-ray Microscopy, Argonne National Laboratory, Chicago, May 8-9, 2007.
- Co-chair, Workshop on Nanometrology for Beyond CMOS, San Francisco, California, Dec. 14-15, 2006.
- Co-team leader, Single Particle Imaging Experiment, the Linac Coherent Light Source (LCLS), SLAC, 2005 – 2010.
- International Advisory Committee for Phase Retrieval / Coherent Scattering Workshop, Porquerolles, France, June 15-17, 2005.
- Proposal Review Panel, Advanced Photon Source, Argonne National Laboratory, 2002 – 2004.
- International Advisory Board for the 2<sup>nd</sup> International Workshop on Non-Crystallographic Phase Retrieval, Australia, July, 2003.
- Chair, X-ray Imaging and Spectro-Microscopy Workshop, SLAC, Stanford, Oct. 8-9, 2002.
- Chair, Microsymposium on Holography and X-ray Microscopy, XIX Congress and General Assembly of the International Union of Crystallography, Geneva, Switzerland, Aug. 8-15, 2002.
- Co-chair, International Phasing Workshop: New Approaches to the Phase Problem, Berkeley, May 17-19, 2001.

### **Publications:**

1. A. Pryor, Jr, A. Rana, R. Xu, J. A. Rodriguez, Y. Yang, M. Gallagher-Jones, H. Jiang, J. Park, S. Kim, S. Kim, D. Nam, Y. Yue, J. Fan, Z. Sun, B. Zhang, D. F. Gardner, C. S. Baraldi Dias, Y. Joti, T. Hatsui, T. Kameshima, Y. Inubushi, K. Tono, J. Y. Lee, M. Yabashi, C. Song, T. Ishikawa, H. C. Kapteyn, M. M. Murnane and J. Miao, “Single-Shot 3D Diffractive Imaging of Core-Shell Nanoparticles with Elemental Specificity”, arXiv:1702.06600 (2017).
2. A. Pryor, Jr., Y. Yang, A. Rana, M. Gallagher-Jones, J. Zhou, Y. H. Lo, G. Melinte, W. Chiu, J. A. Rodriguez and J. Miao “GENFIRE: A generalized Fourier iterative reconstruction algorithm for high-resolution 3D imaging”, arXiv:1706.04309 (2017).
3. Y. H. Lo, L. Zhao, M. Gallagher-Jones, A. Rana, J. Lodico, W. Xiao, B. C. Regan and J. Miao “In situ coherent diffractive imaging”, arXiv:1703.07219 (2017).

4. A. Pryor Jr., C. Ophus and J. Miao, “A Streaming Multi-GPU Implementation of Image Simulation Algorithms for Scanning Transmission Electron Microscopy”, arXiv:1706.08563 (2017).
5. M Gallagher-Jones, C. S. Baraldi-Dias, A Pryor, Jr., K. Bouchmella, L. Zhao, Y. H. Lo, M. B. Cardoso, D. Shapiro, J. Rodriguez and J. Miao, “Correlative cellular ptychography with functionalized nanoparticles at the Fe L-edge”, *Sci. Rep.* **7**, 4757 (2017).
6. C. C. Dharmawardhana, K. Kanhaiya, T. Z. Lin, M. R. Knecht, J. Zhou, J. Miao and H. Heinz, “Reliable Computational Design of Biological and Inorganic Materials to the Large Nanometer Scale Using the Interface Force Field”, *Mol. Simul.* DOI: 10.1080/08927022.2017.1332414 (2017).
7. Y. Yang, C.-C. Chen, M. C. Scott, C. Ophus, R. Xu, A. Pryor Jr, L. Wu, F. Sun, W. Theis, J. Zhou, M. Eisenbach, P. R. C. Kent, R. F. Sabirianov, H. Zeng, P. Ercius and J. Miao, “Deciphering chemical order/disorder and material properties at the single-atom level”, *Nature* **542**, 75-79 (2017).
8. M. Gallagher-Jones, J. A. Rodriguez and J. Miao, “Frontier Methods in Coherent X-ray Diffraction for High-Resolution Structure Determination”, *Q. Rev. Biophys.* **49**, e20 (2016).
9. Z. Zhao, M. Feng, J. Zhou, Z. Liu, M. Li, Z. Fan, O. Tsen, J. Miao, X. Duand and Y Huang, “Composition Tunable Ternary Pt-Ni-Co Octahedra for Optimized Oxygen Reduction Activity”, *Chem. Commun.* **52**, 11215 (2016).
10. J. Miao, P. Ercius and S. J. L. Billinge, “Atomic electron tomography: 3D structures without crystals”, *Science* **353**, aaf2157 (2016). (Invited Review)
11. B. D.A. Levin, E. Padgett, C.-C. Chen, M. C. Scott, R. Xu, W. Theis, Y. Jiang, Y. Yang, C. Ophus, H. Zhang, D.-H. Ha, D. Wang, Y. Yu, H. D. Abruña, R. D. Robinson, P. Ercius, L. F. Kourkoutis, J. Miao, D. A. Muller and R. Hovden, “Nanomaterial datasets to advance tomography in scanning transmission electron microscopy”, *Sci. Data* **3**, 160041 (2016).
12. B. Leshem, R. Xu, Y. Dallal, J. Miao, B. Nadler, D. Oron, N. Dudovich and O. Raz, "Direct single-shot phase retrieval from the diffraction pattern of separated objects", *Nature Commun.* **7**, 10820 (2016).
13. M. Odstrcil, J. Bussmann, D. Rudolf, R. Bressenitz, J. Miao, W. S. Brocklesby and L. Juschkin, “Ptychographic imaging with a compact gas– discharge plasma extreme ultraviolet light source”, *Opt. Lett.* **40**, 5574-5577 (2015).
14. R. Xu, C.-C. Chen, L. Wu, M. C. Scott, W. Theis, C. Ophus, M. Bartels, Y. Yang, H. Ramezani-Dakhel, M. R. Sawaya, H. Heinz, L. D. Marks, P. Ercius and J. Miao, “Three-Dimensional Coordinates of Individual Atoms in Materials Revealed by Electron Tomography”, *Nature Mater.* **14**, 1099-1103 (2015).
15. J. A. Rodriguez, R. Xu, C.-C. Chen, Z. Huang, H. Jiang, A. L. Chen, K. S. Raines, A. Pryor, Jr., D. Nam, L. Wiegart, C. Song, A. Madsen, Y. Chushkin, F. Zontone, P. J. Bradley and J. Miao, “Three-dimensional Coherent X-ray Diffractive Imaging of Whole, Frozen-Hydrated Cells”, *IUCrJ* **2**, 575–583 (2015).
16. Z. Huang, M. Bartels, R. Xu, M. Osterhoff, S. Kalbfleisch, M. Sprung, A. Suzuki, Y. Takahashi, T. N. Blanton, T. Salditt and J. Miao, “Grain rotation and lattice deformation during photoinduced chemical reactions revealed by in-situ X-ray nanodiffraction”, *Nature Mater.* **14**, 691–695 (2015).
17. J. Miao, T. Ishikawa, I. K. Robinson and M. M. Murnane, “Beyond crystallography: Diffractive imaging using coherent x-ray light sources”, *Science* **348**, 530-535 (2015). (Invited Review)
18. Y. Shechtman, Y. C. Eldar, O. Cohen, H. N. Chapman, J. Miao and M. Segev, “Phase Retrieval with Application to Optical Imaging: A contemporary overview”, *IEEE Signal Processing Mag.* **32**, 87-109 (2015).
19. S. J. L. Billinge and J. Miao, “Celebrating the past, looking to the futures”, *Acta Cryst. A* **71**, 1–2 (2015).
20. O. Raz, B. Leshem, J. Miao, B. Nadler, D. Oron and N. Dudovich, “Direct phase retrieval in double blind Fourier holography”, *Opt. Express* **22**, 24935-24950 (2014) .
21. R. Xu, H. Jiang, C. Song, J. A. Rodriguez, Z. Huang, C.-C. Chen, D. Nam, J. Park, M. Gallagher-Jones, S. Kim, S. Kim, A. Suzuki, Y. Takayama, T. Oroguchi, Y. Takahashi, J. Fan, Y. Zou, T. Hatsui, Y. Inubushi, T. Kameshima, K. Yonekura, K. Tono, T. Togashi, T. Sato, M. Yamamoto, M. Nakasako, M. Yabashi, T. Ishikawa and J. Miao, “Single-shot three-dimensional structure determination of nanocrystals with femtosecond X-ray free-electron laser pulses”, *Nature Commun.* **5**, 4061 (2014).
22. J. Miao and J. A. Rodriguez, “Phasing tiny crystals”, *IUCrJ* **1**, 3-4 (2014).

23. J. Miao, C. C. Chen, C. Zhu, M. C. Scott, E. R. White, C. Y. Chiu, B. C. Regan, Y. Huang, and L. D. Marks, "Reply to 'Three-dimensional imaging of dislocations'", *Nature* **503**, E2 (2013).
24. S. J. L. Billinge and J. Miao, "A new vision for Acta Crystallographica Section A" (Editorial), *Acta Cryst. A* **69**, 533–534 (2013).
25. C. Zhu, C.-C. Chen, J. Du, M. R. Sawaya, M. C. Scott, P. Ercius, J. Ciston, and J. Miao, "Towards three-dimensional structural determination of amorphous materials at atomic resolution", *Phys. Rev. B (Rapid Commun.)* **88**, 100201 (2013).
26. R. L. Sandberg, Z. Huang, R. Xu, J. A. Rodriguez and J. Miao, "Studies of Materials at the Nanometer Scale using Coherent X-Ray Diffraction Imaging". *JOM* **65**, 1208-1220 (2013).
27. H. Jiang, R. Xu, C.-C. Chen, W. Yang, J. Fan, X. Tao, C. Song, Y. Kohmura, T. Xiao, Y. Wang, Y. Fei, T. Ishikawa, W. L. Mao and J. Miao, "Three-Dimensional Coherent X-Ray Diffraction Imaging of Molten Iron in Mantle Olivine at Nanoscale Resolution", *Phys. Rev. Lett.* **110**, 205501 (2013).
28. C. C. Chen, C. Zhu, E. R. White, C.-Y. Chiu, M. C. Scott, B. C. Regan, L. D. Marks, Y. Huang and J. Miao, "Three-dimensional imaging of dislocations in a nanoparticle at atomic resolution", *Nature* **496**, 74–77 (2013).
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30. J. A. Rodriguez, R. Xu, C. C. Chen, Y. Zou and J. Miao, "Oversampling smoothness: an effective algorithm for phase retrieval of noisy diffraction intensities", *J. Appl. Cryst.* **46**, 312-318 (2013).
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33. J. Kirz, C. Jacobsen and J. Miao, "David Sayre", *Physics Today*, June 22, 65 - 66 (2012).
34. Y. Zhao, E. Brun, P. Coan, Z. Huang, A. Sztórkay, P. C. Diemoz, S. Lieberhardt, A. Mittone, S. Gasilov, J. Miao and A. Bravin, "High resolution, low dose phase contrast x-ray tomography for 3D diagnosis of human breast cancers", *Proc. Natl. Acad. Sci. USA* **109**, 18290–18294 (2012).
35. I. Schlichting and J. Miao, "Emerging opportunities in structural biology with X-ray free-electron lasers", *Curr. Opin. Struct. Biol.* **22**, 613–626 (2012).
36. J. Kirz and J. Miao, "David Sayre (1924–2012): Crystallographer who pioneered methods of X-ray imaging and modern computing", *Nature* **484**, 38 (2012).
37. M. C. Scott, C. C. Chen, M. Mecklenburg, C. Zhu, R. Xu, P. Ercius, U. Dahmen, B. C. Regan and J. Miao, "Electron tomography at 2.4-ångström resolution", *Nature* **483**, 444–447 (2012).
38. J. Miao, R. L. Sandberg and C. Song "Coherent X-ray Diffraction Imaging", *IEEE J. Sel. Top. Quant. Electron.* **18**, 399-410 (2012).
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43. B. P. Fahimian, Y. Mao, P. Cloetens, J. Miao, "Low dose x-ray phase-contrast and absorption CT using Equally-Sloped Tomography", *Phys. Med. Biol.* **55**, 5383-5400 (2010).

44. H. Jiang, C. Song, C.-C. Chen, R. Xu, R., K. S. Raines, B. P. Fahimian, C. Lu., T.-H. Lee, A. Nakashima, J. Urano, T. Ishikawa, F. Tamanoi, J. Miao, “Quantitative 3D Imaging of Whole, Unstained Cells by Using X-ray Diffraction Microscopy”, *Proc. Natl. Acad. Sci. USA* **107**, 11234–11239 (2010).
45. Y. Mao, B. P. Fahimian, S. J. Osher and J. Miao, “Development and Optimization of Regularized Tomographic Reconstruction Algorithms Utilizing Equally-Sloped Tomography”, *IEEE Trans. Image Processing* **19** (5), 1259-1268 (2010).
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47. R. L. Sandberg, D. A. Raymondson, W. F. Schlotter, K. S. Raines, C. La-O-Vorakiat, A. Paul, M. M. Murnane, H. C. Kapteyn and J. Miao, “Near diffraction limited coherent diffractive imaging with tabletop soft x-ray sources”, *J. Phys.: Conf. Series* **186**, 012058 (3 pp.) (2009).
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49. L. Baghaei, A. Rad, B. Dai, P. Pianetta, R. F. W. Pease and J. Miao, “Iterative phase recovery using wavelet domain constraints”, *J. Vac. Sci. Technol. B* **27**, 3192-3195 (2009)
50. J. A. Rodríguez, M. Lopez, M. Thayer, Y. Zhao, M. Oberholzer, D. Chang, N. K. Kisalu, M. L. Penichet, G. Helguera, R. Bruinsma, K. L. Hill and J. Miao, “Propulsion of African Trypanosomes is Driven by Bihelical Waves with Alternating Chirality Separated by Kinks”, *Proc. Natl. Acad. Sci. USA* **106**, 19322-19327 (2009).
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**Patents:**

1. J. Miao, Y. Mao and B. P. Fahimian and, “System and Method for Fast Implementation of Equally-Sloped Tomography”, US Patent No. 8,611,626 (2013).
2. B. P. Fahimian and J. Miao, “Dose Reduction and Image Enhancement in Tomography through the Utilization of the Object’s Surroundings as Dynamic Constraints”, US Patent No. 8,532,350 (2013).
3. J. Miao and B. P. Fahimian, “Incorporation of Mathematical Constraints in Methods for Dose Reduction and Image Enhancement in Tomography”, US Patent No. 8442353 B2 (2013).
4. J. Miao and B. P. Fahimian, “Iterative Methods for Dose Reduction and Image Enhancement in Tomography”, US Patent No. 8270760 (2012).

**Invited Talks:**

1. “Beyond Crystallography: Coherent Diffractive Imaging and Atomic Electron Tomography”, Electron Microscopy Workshop at ShanghaiTech, Shanghai, China, May 30, 2017.
2. “Atomic Electron Tomography: Probing 3D Structures and Material Properties at the Single-Atom Level”, Nature conference: Electron Microscopy for Materials — The Next Ten Years”, organized by Nature, Nature Materials and Zhejiang University, Hangzhou, China, May 27-29, 2017.
3. “Beyond Crystallography: Coherent X-ray Diffractive Imaging and Atomic Electron Tomography”, Physics Colloquium, Zhejiang University, Hangzhou, China, May 26, 2017.
4. “Beyond Crystallography: Diffractive Imaging with Coherent X-ray Sources”, the Xiangshan Science Conference, Beijing, China, April 27 and 28, 2017.
5. “Beyond Crystallography: Coherent X-ray Diffractive Imaging and Atomic Electron Tomography”, The APS/CNM Users Meeting, Argonne National Lab., May 8, 2017. (Plenary talk)
6. “Beyond Crystallography: Coherent X-ray Diffractive Imaging and Atomic Electron Tomography”, Physics and Astronomy Colloquium, USC, April 17, 2017.
7. “Beyond Crystallography: Coherent Diffractive Imaging and Atomic Electron Tomography”, CNSI/STROBE Lunch Seminar, UCLA, Jan 24, 2017.
8. “Atomic Electron Tomography: 3D Structures without Crystals”, STROBE Seminar, a virtual seminar among Univ. Colorado, Boulder, UCLA and UC Berkeley, Dec. 6, 2016.
9. “Atomic Electron Tomography: 3D Structures without Crystals”, Southern California Society for Microscopy and Microanalysis Fall Meeting, City of Hope, CA, Nov. 7, 2016.
10. “Atomic Electron Tomography: 3D Structures without Crystals”, Environmental Molecular Sciences Laboratory, Pacific Northwest National Laboratory, WA, Sept. 19, 2016.
11. “Atomic Electron Tomography: 3D Structures without Crystals”, the USIAS seminar, Université de Strasbourg, France, Sept. 9, 2016.
12. “Beyond Crystallography: Coherent Diffractive Imaging and Atomic Electron Tomography”, ePSIC Launch Event, Diamond Light Source, Oxfordshire, UK, Sep. 5 - 6, 2016.
13. “Three-Dimensional Determination of the Coordinates of Individual Atoms in Materials”, Microscopy & Microanalysis 2016 Meeting, Columbus, Ohio, July 24 – 26, 2016.
14. “Multi-Dimensional Characterization of Oxidized Mo-Si-B, Ni-Cr and Ni-Cr-Mo Systems”, MURI Annual Meeting on Understanding Atomic Scale Structure in Four Dimensions to Design and Control Corrosion Resistant Alloys, University of Virginia, Charlottesville, VA, June 30 - July 1, 2016.
15. “Three-dimensional Structure Determination of Nanometals at Atomic Resolution”, American Chemical Society 2016 Spring Meeting, San Diego, March 13-17, 2016.
16. “Imaging at the X-ray Frontier: Diffractive Imaging Using Coherent X-ray Sources”, International Workshop on Shanghai X-ray Free Electron Laser, Shanghai, China, Jan. 25, 2016. (Keynote talk)
17. “Beyond Crystallography: Diffractive Imaging Using Coherent X-ray Sources”, Senri Life Science International Symposium J6, Osaka, Japan, Jan. 22, 2016.
18. “Beyond Crystallography: Coherent Diffractive Imaging and Atomic Resolution Electron Tomography”, International Conference on Extreme Light (ICEL 2015) Bucharest, Romania, Nov. 23 - 27, 2015. (Plenary talk)
19. “Beyond Crystallography: Atomic Resolution Electron Tomography”, 23<sup>rd</sup> International Congress on X-ray Optics and Microanalysis Brookhaven National Laboratory, New York, Sept. 14 – 18, 2015.



20. “Beyond Crystallography: Coherent Diffractive Imaging and Atomic Resolution Electron Tomography”, Physical/Theoretical Chemistry Seminar, Department of Chemistry, University of Southern California, Aug. 31, 2015.
21. “Beyond Crystallography: Diffractive Imaging With Coherent X-ray Sources”, ShanghaiTech University, Shanghai, China, Aug. 12, 2015.
22. “Beyond Crystallography: Coherent Diffractive Imaging and Atomic Resolution Electron Tomography”, Institute of High Energy of Physics, Chinese Academy of Sciences, Beijing, China, Aug. 10, 2015.
23. “Beyond Crystallography: Coherent Diffractive Imaging and Atomic Resolution Electron Tomography”, International Workshop on Advanced X-ray Imaging with XFELs and Synchrotron Sources, Weihai, China, Aug. 7, 2015.
24. “Beyond Crystallography: Coherent Diffractive Imaging and Atomic Resolution Electron Tomography”, Brazilian Nanotechnology National Laboratory, Campinas-SP, Brazil, July 17, 2015.
25. “Tomography: Principle, Implementation and Applications”, São Paulo School of Advanced Sciences on Recent Developments in Synchrotron Radiation, Brazil, July 13 – 24, 2015.
26. “Imaging at the X-ray Frontier: Coherent Diffractive Imaging for Physical and Biological Sciences”, São Paulo School of Advanced Sciences on Recent Developments in Synchrotron Radiation, Brazil, July 13 – 24, 2015.
27. “Beyond Crystallography: Coherent Diffractive Imaging and Atomic Resolution Electron Tomography”, Department of Materials and Environmental Chemistry Seminar, Stockholm University, Sweden, July 3, 2015.
28. “Atomic Resolution Electron Tomography”, French Microscopy Congress SFMu, Nice, France, June 30 – July 3, 2015. (Plenary talk)
29. “3D Characterization of Oxidation of the A15 Phase in the Mo-Si-B System with Elemental Specificity”, MURI Review Meeting: Understanding Atomic Scale Structure in Four Dimensions to Design and Control Corrosion Resistant Alloys, Northwestern University, IL, June 17, 2015.
30. “Atomic Resolution Electron Tomography”, the 59<sup>th</sup> International Conference on Electron, Ion, and Photon Beam Technology and Nanofabrication, San Diego, CA, May 26-29, 2015.
31. “Beyond Crystallography: Coherent Diffractive Imaging and Atomic Resolution Electron Tomography”, Physics Colloquium, University of Colorado, Boulder, CO, Feb. 25, 2015.
32. “Coherent Diffractive Imaging with X-ray Free Electron Lasers”, Workshop on XFEL Experiments and Applications, Shanghai Institute of Applied Physics, Chinese Academy of Sciences, Shanghai, China, Dec. 29, 2014. (Keynote talk)
33. “Lensless Imaging with Synchrotron Radiation”, International Symposium on Synchrotron Radiation” (The Opening Ceremony of the T. D. Lee Library), Shanghai Jiao Tong University, Shanghai, China, Dec 27, 2014.
34. “Atomic Resolution Electron Tomography”, KAUST Research Conference: Electron Microscopy Frontiers, Jeddah, Saudi Arabia, Dec. 9 – 11, 2014.
35. “Atomic Resolution Electron Tomography”, 2014 Electron and Scanning Probe Microscopies Principal Investigators’ Meeting, Sponsored by the U.S. Department of Energy Office of Basic Energy Sciences, Gaithersburg, MD, Oct. 20-22, 2014.
36. “4D Characterization of Materials with Atomic Resolution Electron Tomography and In Situ X-ray Nanodiffraction”, 2014 MURI Kickoff Meeting, Northwestern University, Evanston, IL, Oct. 2, 2014.
37. “Coherent Diffraction Imaging and Atomic Resolution Electron Tomography”, Institute of Physics Academia Sinica, Taiwan, Aug 21, 2014.
38. “Coherent Diffraction Imaging (CDI): From Plane-Wave CDI to Ptychography”, The 5th Summer School on X-ray Science: Coherent X-ray Scattering National Sun Yat-Sen University, Taiwan, Aug. 19 - 22, 2014.
39. “Beyond Crystallography: Coherent Diffraction Imaging and Atomic Resolution Electron Tomography”, Twenty-Third Congress and General Assembly of the International Union of Crystallography, Montreal, Canada, Aug. 5 – 12, 2014. (Plenary talk)
40. “Three-Dimensional Imaging of Dislocations and Defects in Materials at Atomic Resolution Using Electron Tomography”, Microscopy & Microanalysis 2014 Meeting, Hartford, CT, August 3-7 2014.

41. “Coherent Diffraction Imaging “, Microscopy & Microanalysis 2014 Meeting, Hartford, CT, August 3-7 2014.
42. “Coherent Diffraction Imaging and Atomic Resolution Electron Tomography”, Physics Colloquium, Weizmann Institute of Science, Rehovot, Israel, April 10, 2014.
43. “Coherent Diffraction Imaging and Atomic Resolution Electron Tomography”, Russell Berrie Nanotechnology Institute Monthly Seminar, Technion – Israel Institute of Technology, Israel, April 9, 2014.
44. “Coherent Diffraction Imaging and Atomic Resolution Electron Tomography”, Joint Seminar at the National Research Council and University of Ottawa, Canada, March 19, 2014.
45. “Advances in Imaging: Resolution and Tomography”, Future of Electron Scattering & Diffraction Workshop, organized by the U.S. Department of Energy - Office of Basic Science , Feb. 25-26, 2014. (Plenary talk)
46. “Coherent Diffraction Imaging and Atomic Resolution Electron Tomography”, RIKEN SPring-8 Center, Japan, Dec. 17, 2013.
47. “Coherent Diffraction Imaging and Atomic Resolution Electron Tomography”, Department of Materials Science and Metallurgy, University of Cambridge, UK, Nov. 22, 2013.
48. “Coherent Diffraction Imaging, X-ray Phase-Contrast and Electron Tomography”, Fraunhofer-Institut für Lasertechnik ILT, RWTH Aachen University, Germany, Nov. 20, 2013.
49. “Coherent Diffraction Imaging and Atomic Resolution Electron Tomography”, Ernst Ruska-Centre Juelich, Germany, Nov. 19, 2013.
50. “Single-Shot 3D Structure Determination and Atomic Resolution Electron Tomography”, the 6th International Workshop on FEL Science: New Horizon of XFEL Science, Tainan, Taiwan, Nov. 3-7, 2013.
51. “Coherent Diffraction Imaging and Atomic Resolution Electron Tomography”, Condensed Matter Physics Seminar, University of California, San Diego, Oct. 30, 2013.
52. “Three-Dimensional imaging of nanoparticles at atomic resolution”, American Chemical Society 246<sup>th</sup> National Meeting, Indianapolis, Indiana, Sep. 8-12, 2013.
53. “Coherent X-ray Diffraction Imaging and Atomic Resolution Electron Tomography”, ICMR Summer School on Materials in 3D: Modeling and Imaging at Multiple Length Scales, University of California, Santa Barbara, Aug. 19 - 30, 2013.
54. “Coherent Diffraction Imaging and Atomic Resolution Electron Tomography”, Beijing National Center for Electron Microscopy, Tsinghua University, China, July 16, 2013.
55. “Coherent Diffraction Imaging with X-ray Free Electron Lasers”, the 38th International conference on Vacuum Ultraviolet and X-ray Physics, Hefei, China, July 12-19, 2013.
56. “Lensless X-ray Imaging and Atomic Resolution Electron Tomography”, ASM International San Fernando Valley Chapter, May 23, 2013.
57. “Lensless X-ray Imaging and Atomic Resolution Electron Tomography”, Materials Department Colloquium, University of California, Santa Barbara, April 26, 2013.
58. “Imaging at the X-ray Frontier: Coherent Diffraction Imaging for Bio- and Nano-Science”, International Symposium Nanoscale Photonic Imaging, Max-Planck-Campus, Göttingen, Germany, April 4-5, 2013.
59. “Imaging at the X-ray Frontier: Coherent Diffraction Imaging (CDI) for Biological and Nanoscience”, the American Physical Society March Meeting 2013, Baltimore, Maryland, March 18-22, 2013.
60. “Single-Shot 3D Imaging of Metallic Nanocrystals with Femtosecond X-ray Free Electron Laser Pulses”, TMS 2013 142nd Annual Meeting, San Antonio, Texas, March 3-7, 2013. (Keynote talk)
61. “Coherent Diffraction Imaging of Biological Materials: Present Status and Future Perspectives”, Workshop on ‘From Functional Soft Matter to Biology - Future Challenges’, European Synchrotron Radiation Facility, Grenoble, France, Feb 4, 2013.
62. “Electron Tomography at Atomic Resolution”, the NCEM / MF Electron Tomography Workshop, LBNL, Berkeley, CA, Jan. 16-18, 2013.
63. “Three-Dimensional Imaging of Local Structure in Materials at Atomic Resolution”, UCLA Physical Chemistry Seminar, Nov. 26, 2012.
64. “Coherent Diffraction Imaging with Synchrotron Radiation and an X-ray Free Electron Laser”, the 5th Workshop on FEL Science - Creation of New Science, Gyeongju, Korea, Oct. 28 - Nov. 1, 2012.

65. "Electron Tomography at Atomic Resolution", National Center for Electron Microscopy DOE Review Meeting, Lawrence Berkeley National Laboratory, Aug. 22-23, 2012.
66. "High-Resolution Coherent Diffraction Imaging with High Harmonic and Soft X-ray Laser Sources", The PULSE Proposer's Day Workshop, DARPA, Arlington, VA, July 17, 2012.
67. "Coherent Diffraction Imaging", Ultrafast Dynamic Imaging of Matter Conference, Banff, Alberta, Canada, July 1-3, 2012.
68. "Coherent Diffraction Imaging", International Workshop on Phase Retrieval and Coherent Scattering, Fukuoka, Japan, June 18-21, 2012. (Opening talk)
69. "Three-Dimensional Imaging of Biological Materials Using Coherent X-rays and Electrons", the Future of Structural Biology, Max Planck Symposium, Hamburg, Germany, May 23-24, 2012.
70. "Coherent Diffraction Imaging of Biological Systems", BioMedicine in 4D Conference, Oregon Health and Science University, Portland, March 21-23, 2012.
71. "Coherent Diffraction Imaging of Biological Materials", European Synchrotron Radiation Facility Users' Meeting, Grenoble, France, Feb. 7-8, 2012.
72. "Lensless X-ray Microscopy and Low-Dose X-ray Phase Contrast Tomography", Stanford Molecular Imaging Seminar Series, Stanford University, Feb. 2, 2012.
73. "Coherent Diffraction Imaging and Its Application in Materials Science and Biology", UCLA Optics & Photonics Seminar, Jan. 12, 2012.
74. "Coherent X-ray Diffraction Imaging and Its Applications in Materials Science, Nanoscience and Biology", Advanced Light Source Seminar, LBNL, Berkeley, Nov. 30, 2011.
75. "Three-Dimensional Imaging of Human Breast Cancer and Atomic Structure of Nanomaterials by Using Equally Sloped Tomography", Physics & Astronomy Colloquium, UCLA, Sep. 29, 2011.
76. "Coherent Diffraction Imaging of Biological Materials", Workshop on Science with Free Electron Lasers, SINAP, Shanghai, Aug. 20-21, 2011.
77. "Advanced Experimental Methods with Synchrotron Radiation and X-FELs: Past, Present and Future", Public Talk at the SSRF/SINAP, Chinese Academy of Sciences, Shanghai, Aug. 20, 2011.
78. "Coherent Diffraction Imaging and Its Application in Materials Science and Biology", DESY, Hamburg, Germany, June 28, 2011.
79. "Coherent Diffraction Imaging and Low-dose X-ray Tomography", European Synchrotron Radiation Facility Seminar, Grenoble, France, June 22, 2011.
80. "Three-Dimensional Coherent Diffraction Imaging of Materials and Cells", Workshop on Diffraction Microscopy, Holography and Ptychography using Coherent Beams, Ithaca, NY, June 6-7, 2011.
81. "Coherent Diffraction Imaging", The 55th International Conference on Electron, Ion, and Photon Beam Technology and Fabrication, Las Vegas, May 31- June 3, 2011.
82. "Three-Dimensional Coherent X-ray Diffraction Imaging of Biological Specimens", Workshop on Biology with X-FELs, LBNL, Berkeley, Jan 18 - 21 2011.
83. "Towards Atomic-Resolution Electron Tomography", NCEM Seminar, Lawrence Berkeley National Laboratory, Nov. 18, 2010.
84. "3D View of the Nano-World with Coherent X-rays", the 22nd Annual Kavli Frontiers of Science Symposium, National Academy of Sciences Arnold and Mabel Beckman Center, Irvine, CA, Nov. 4-6, 2010.
85. "3D Coherent Diffractive Imaging of Biological Specimens", Workshop on Frontiers in Biology with X-FELs, Joint ALS/SSRL, SLAC, Oct. 20-21, 2010.
86. "Coherent X-ray Diffraction Imaging of Biological Materials", Keck Site Visit Meeting, UCLA, Sep. 28, 2010.
87. "Coherent Diffraction Microscopy and Its Application in Materials Science and Structural Biology", Physics Division Colloquium, Los Alamos National Laboratory, Sep. 9, 2010.
88. "Ankylography: Three-Dimensional Structure Determination from a Single View", KITP Conference on X-ray Science in the 21st Century, UC, Santa Barbara, Aug. 2-6, 2010.
89. "Coherent Diffractive Imaging for Biology and Materials/Nano-Science (CDI)", NSLS-II, Brookhaven National Laboratory, July 28, 2010.

90. "Ankylography: Three-Dimensional Structure Determination from a Single View", X-rays, Neutrons, Complex Fluids and Magnetism: A Satellite Symposium Dedicated to Sunil K. Sinha's 70th Birthday, Northwestern University, Evanston, Illinois, July 13, 2010.
91. "Coherent Diffractive Imaging: Past, Present and Future", the 4th Yamada Symposium on APSE2010, Osaka, Japan, June 14-18, 2010.
92. "Coherent Diffractive Imaging of Biological Samples", Workshop on Coherent Diffractive Imaging for Biological Applications at NSLS-II, Brookhaven National Lab, May 17 - 18, 2010.
93. "Medical Multidetector X-ray CT (MDCT): Computational Issues and Opportunities", Computer Science Seminar, UCLA, May 12, 2010.
94. "Coherent Diffraction Microscopy and Its Applications in Structural Biology", the 5th International Conference on Structural Analysis of Supramolecular Assemblies by Hybrid Methods, Lake Tahoe, March 10-14, 2010.
95. "Coherent Diffraction Microscopy and Its Applications in Materials and Nanoscience", the TMS 2010 Annual Meeting, Seattle, Feb. 14-19, 2010.
96. "Ankylography: Three-Dimensional Structure Determination from a Single View", the 2nd Workshop on FEL Science "Emerging X-ray Applications in Biological Systems", Kenting, Taiwan, Dec. 6 - 9, 2009.
97. "Coherent Diffraction Microscopy and Its Applications in Nanoscience and Biology", COSI Seminar, University of Colorado, Boulder, Oct. 26, 2009.
98. "Ankylography: Three-Dimensional Structure Determination from a Single View", Workshop on Next Generation Light Source: Nanoscale Coherent Imaging and Microscopy with a soft X-ray Laser, Lawrence Berkeley National Lab., Oct. 16-17, 2009.
99. "Ankylography: Three-Dimensional Structure Determination from a Single View", Frontiers in Optics (FiO) 2009/Laser Science (LS) XXV, San Jose, Oct. 11-15, 2009.
100. "Ankylography: Three-Dimensional Structure Determination from a Single View", Symposium on "Coherent X-ray Diffraction and Imaging in Biology", 25th European Crystallographic Meeting, Istanbul, Aug. 16-21, 2009.
101. "Three-Dimensional Coherent Diffraction Microscopy and Its Applications Nanoscience and Biology", Zhejiang California International NanoSystems Institute, Zhejiang University, Aug. 10, 2009.
102. "Coherent X-ray Scattering, Oversampling and Application of X-ray Free Electron Lasers", OCPA6 Conference, Lanzhou, China, August 3 - 7, 2009.
103. "Coherent Diffraction Microscopy and Its Applications", High Pressure Synchrotron Science Workshop, Advanced Photon Source, Argonne National Lab., May 6-8, 2009.
104. "Coherent Diffraction Microscopy: Seeing the Invisible with Computational Algorithms", Materials Department Colloquium, UC Santa Barbara, April 3, 2009.
105. "Coherent Diffraction Microscopy and Its Potential Applications with ERLs", Photon Factory, KEK, Japan, March 17, 2009.
106. "Recent Topics of Materials and Biological Research", Technology and Instrumentation in Particle Physics (TIPP09), Tsukuba, Japan, March 12-17, 2009.
107. "Lensless Diffraction Microscopy: Seeing the Invisible with Oversampling Iterative Algorithms", Current Trends in Structural Biology on the Single Molecule Level, Luzern, Switzerland, Jan. 26-29, 2009.
108. "Lensless Diffraction Microscopy: Seeing the Invisible with Computational Algorithms", Dept. of Electrical & Computer Engineering, UC San Diego, Jan. 12, 2009.
109. "Lensless Diffraction Microscopy: Seeing the Invisible with Computational Algorithms", 39<sup>th</sup> Winter Colloquium on the Physics of Quantum Electronics, Snowbird, Utah, Jan. 4-8, 2009.
110. "Quantitative 3D Imaging of Nanoscale Materials Using X-ray Diffraction Microscopy", the Materials Research Society Fall Meeting, Boston, MA, Dec. 1-5, 2008.
111. "Lensless Diffraction Microscopy: Seeing the Invisible with Computational Algorithms", Department of Physics & Astronomy Colloquium, UCLA, Nov. 20, 2008.
112. "Coherent Diffraction Microscopy: Present and Future", the XXI-IUCr Congress in Osaka, Japan, Aug. 23-31, 2008.
113. "X-ray Diffraction Microscopy", DARPA, Arlington, VA, April 24, 2008.

114. "Oversampling, Lensless Imaging and Application of X-ray Free Electron Lasers", the University of Rome "Tor Vergata", Rome, Italy, Apr. 12, 2008.
115. "3D X-ray Diffraction Microscopy Applied in Nanoscience and Biology", Heraeus-Seminar 'Matter in Coherent Light', the Physikzentrum Bad Honnef, Germany, March 17 - 20, 2008.
116. "Three-Dimensional X-ray Diffraction Microscopy: Present and Future", Workshop on Coherent X-ray Diffraction Imaging at NSLS-II, Brookhaven National Lab, March 14, 2008.
117. "Dose Reduction and Image Enhancement in Biological and Medical Imaging through Equally-Sloped Tomography", CNSI, UCLA - ASMeW, Waseda Joint Symposium, Los Angeles, March 5 - 6, 2008.
118. "Quantitative 3D X-ray Microscopy: A Versatile Tool for Non-Destructive Characterization of Materials at the Nanometer Level", UCLA-Northrop Grumman Meeting, UCLA, Oct. 29, 2007.
119. "3D X-ray Diffraction Microscopy Applied to Nanoscience", X-ray and Neutron Scattering Contractor's Meeting, Arlie Center, Warrenton, VA, Oct. 17 - 19, 2007.
120. "Three-Dimensional X-ray Diffraction Microscopy and Its Applications in Nanoscience and Biology", Shanghai Synchrotron Radiation Facility, Shanghai Institute of Applied Physics, Chinese Academy of Sciences, Aug. 31, 2007.
121. "Three-Dimensional Coherent Diffraction Microscopy and Its Applications in Nanoscience and Biology", Zhejiang University, China, Aug. 27, 2007.
122. "X-ray Diffraction & Imaging Lab", California NanoSystems Institute Lunch Seminar, UCLA, Feb. 15, 2007.
123. "3D X-ray Diffraction Microscopy and Its Applications in Nanoscience and Biology", Department of Physics and Astronomy, Nov. 15, 2006.
124. "3D X-ray Diffraction Microscopy: A Versatile Tool for Nondestructive and Quantitative Characterization of Materials at the Nanometer Resolution", DARPA/DSRC Workshop on Nondestructive Femtosecond Laser Based Evaluation of Materials and Structures, Arlington, VA, Nov. 7-8, 2006.
125. "Lensless Imaging and Equally Sloped Tomography for Nanoscience and Biology", Workshop on Hard and Soft X-ray Tomography, Berkeley, California, Oct. 11, 2006.
126. "3D Coherent Diffraction Microscopy and Its Applications in Nanoscience and Biology", Institut für Röntgenphysik, Georg-August University of Göttingen, Germany, Sep. 13, 2006.
127. "Coherent Imaging of Biological Structures", Workshop on Biological Imaging at PETRA III, Hamburg, Germany, Sep. 11-12, 2006.
128. "Lensless Imaging and Equally Sloped Tomography of Cellular Structure and Large Macromolecules", Baylor College of Medicine, Houston, Sep. 7, 2006.
129. "3D Coherent Diffraction Microscopy and Its Applications in Structural Biology", Large Macromolecular Assemblies Session, American Crystallographic Association Meeting, Honolulu, Hawaii, July 22-27, 2006.
130. "Oversampling, Lensless Imaging and Application of X-ray Free Electron Lasers", Workshop on X-ray Free Electron Lasers: Challenges for Theory, Institute for Theoretical Atomic, Molecular and Optical Physics, Harvard-Smithsonian Center, Cambridge, MA, June 19-21, 2006.
131. "Quantitative 3D Imaging of Nanomaterials by Using Coherent X-rays", Workshop on Almost Impossible Materials Science: Pushing the Frontier with ERL X-ray Beams, Cornell University, June 16-17, 2006.
132. "3D Coherent Diffraction Microscopy and Its Applications in Nanoscience and Biology", School of Physics, Peking University, June 9, 2006.
133. "Lensless Imaging and Equally Sloped Tomography for Nanoscience and Biology", International Symposium on the Methodological Study of Phase Contrast Hard X-Ray Imaging of Nanobiological and Medical Samples with Synchrotron Radiation, Beijing, June 5-9, 2006.
134. "Oversampling, Lensless Imaging and Application of X-ray Free Electron Lasers", JILA, University of Colorado at Boulder, May 16, 2006.
135. "Coherent Scattering, Oversampling and the Application of X-ray Free Electron Lasers", Joint ETH and University of Zurich Colloquium, Switzerland, May 10, 2006.

136. "The Principle and Implementation of the Oversampling Method", Physik Institut Seminar, University of Zurich, Switzerland, May 8, 2006.
137. "Quantitative 3D Imaging of Nanostructured Materials by Using Coherent X-rays", Workshop on Microscopy and Imaging in Materials Science, Argonne National Laboratory, Chicago, May 2, 2006.
138. "Coherent Imaging of Biological Samples", Workshop on Coherent X-ray Imaging in Biology, Melbourne, Australia, April 20-21, 2006.
139. "3D Coherent Diffraction Microscopy and Its Applications in Nanoscience and Structural Biology", Symposium on Synchrotron Radiation for the International Chemical Congress of Pacific Basin Societies, Honolulu, Hawaii, Dec. 15-20, 2005.
140. "3D Coherent X-ray Diffraction Microscopy: the Present and the Future", PSI Workshop on Pixel- and Microstrip-Detectors for Synchrotron Radiation, Paul Scherrer Institut, Switzerland, Oct. 18-19, 2005.
141. "3D Coherent X-ray Diffraction Microscopy: the Present and the Future", The 27th International Free Electron Laser Conference, Stanford, California, Aug. 21-26, 2005.
142. "3D Coherent X-ray Diffraction Microscopy: the Present and the Future", The Ministry of Education, Culture, Sports, Science and Technology Committee Meeting, Tokyo, Japan, July 19, 2005.
143. "3D Coherent Diffraction Microscopy and Its Applications in Nanoscience", National Nanoscience Initiative workshop on X-rays and Neutrons, Washington D.C. June 16-18, 2005.
144. "3D Coherent Diffraction Microscopy: Present and Future", The 3<sup>rd</sup> International Symposium of X-ray and Neutron Scattering on Integrated Molecular Systems, Pohang, Republic of Korea, June 27-29, 2005.
145. "3D Microscopy Provides the First Deep View", The 13<sup>th</sup> International Conference on Solid-State Sensors, Actuators and Microsystems, Seoul, Republic of Korea, June 5-9, 2005.
146. "3D Coherent Diffraction Microscopy and Its Application in Nanoscience", the 2<sup>nd</sup> US-Japan Workshop on Synchrotron Radiation and Nanoscience, San Diego, California, April 4-6, 2005.
147. "3D Diffraction Microscope Provides a First Deep View", 2005 American Physical Society March Meeting, Los Angeles, California, March 21-25, 2005.
148. "3D Coherent X-ray Diffraction Microscopy: The Present and the Future", International Workshop on New Science with New Detectors", Grenoble, France, Feb. 9-10, 2005.
149. "3D Diffraction Microscopy for Nanoscience and Bio-Imaging", California NanoSystems Institute Advisory Board Meeting, Santa Barbara, California, Jan. 27-28, 2005.
150. "Coherent Diffraction Microscopy and Its Applications", 35<sup>th</sup> Winter Colloquium on The Physics of Quantum Electronics, Snowbird, Utah, Jan. 2-6, 2005.
151. "Crystallography without Crystals and the Potential of Imaging Single Biomolecules", Stanford Synchrotron Radiation Laboratory, SLAC, April 14, 2005.
152. "Three-Dimensional Diffraction Microscopy and Its Applications", Physics and Astronomy Colloquium, UCLA, Dec. 9, 2004.
153. "Coherent X-ray Imaging and Its Applications", Frontiers in Soft X-ray and Infrared Research, Madison, Wisconsin, Sept. 16-18, 2004.
154. "3D Diffraction Microscopy and Its Application in Structural Biology", the 8th International Conference on Biology and Synchrotron Radiation, Himeji, Japan, Sep. 7-11, 2004.
155. "Three-Dimensional Diffraction Microscopy and Its Applications in Nanoscience and Structural Biology", the 60<sup>th</sup> Zhongguancun Forum, Institute of Physics, CAS, Beijing, July 8, 2004.
156. "Crystallography without Crystals", the 6<sup>th</sup> Conference of the Asian Crystallographic Association, Hong Kong, June 27-30, 2004. (Plenary talk)
157. "Three-Dimensional Diffraction Microscopy and Its Applications in Structural Biology", Physics Colloquium, Ohio State University, March 18, 2004.
158. "Towards Atomic Resolution 3D Diffraction Microscopy with Coherent X-rays and Electrons", the 4<sup>th</sup> International Symposium on Atomic Level Characterizations for New Materials and Devices, Kauai, Hawaii, Oct. 5-10, 2003.
159. "Diffraction Imaging with Coherent X-rays", Workshop on X-ray Science with Coherent Radiation, Berkeley, California, Aug. 22-23, 2003.

160. "Coherent X-ray Imaging", the 2<sup>nd</sup> PSI Summer School on Structure and Dynamics of Soft Condensed Matter, Zuz, Switzerland, Aug. 9-16, 2003.
161. "Coherent X-ray imaging with the Oversampling Method", Gordon Research Conference on X-ray Physics, Rhode Island, July 13-18, 2003.
162. "Crystallography without Crystals and the Potential of Imaging Single Biomolecules", International Workshop on Non-Crystallographic Phase Retrieval, Queensland, Australia, June 30 – July 2, 2003.
163. "Crystallography without Crystals and Its Applications in Structural Biology", International Symposium on Diffraction Structural Biology, Tsukuba, Japan, May 28-31, 2003.
164. "X-ray Crystallography without Crystals and Its Applications in Nanoscience and Structural Biology", NSLS Users' Meeting, Brookhaven National Lab., New York, May 19-21, 2003. (Plenary talk)
165. "Crystallography without Crystals and Its Applications in Nanoscience and Structural Biology", Physics Colloquium, University of Texas at Austin, Jan. 18, 2003.
166. "X-ray Crystallography without Crystals and the Potential of Imaging Single Biomolecules", SLAC Scientific Policy Committee Meeting, Stanford, California, Dec. 6-7, 2002.
167. "Crystallography without Crystals and the Potential of Imaging Single Biomolecules", Materials Science and Engineering Colloquium, Stanford University, Nov. 20, 2002.
168. "Single Particle X-ray Diffraction: the Present and Future", Workshop on X-ray Imaging and Spectro-Microscopy, Stanford, California, Oct. 8-9, 2002.
169. "Single Particle Diffraction with Coherent X-rays", Workshop on Exploiting the Coherence of X-rays, Motzen, Germany, Sept. 23-24, 2002.
170. "High Resolution Diffraction Microscopy with Coherent X-rays and Electrons", 15<sup>th</sup> International Congress on Electron Microscopy, Durban, South Africa, Sep. 1-6, 2002.
171. "High Resolution 3D X-ray Diffraction Microscopy and Its Potential of Imaging Single Biomolecules", XIX Congress and General Assembly of the International Union of Crystallography, Geneva, Switzerland, Aug. 8-15, 2002.
172. "High Resolution 3D X-ray Diffraction Microscopy and Its Potential of Imaging Single Biomolecules", The 5<sup>th</sup> SPring-8 International Workshop on 30-m Long Straight Section – on the use of Coherent Soft X-rays from Super-Brilliant Sources, Mikazuki, Japan, May 10 - 12, 2002.
173. "High Resolution 3D X-ray Diffraction Microscopy and Its Potential of Imaging Single Biomolecules", Photon Factory Symposium, KEK, Japan, March 19-20, 2002
174. "A New Approach to 3D Structures of Biomolecules Utilizing X-FELs", Workshop on Frontiers in Structural Biology at High-Brightness X-ray Source, Brookhaven National Lab., New York, May 21, 2001.
175. "Extending X-ray Crystallography to Non-Crystalline Specimens by the Oversampling Method", International Phasing Workshop: New Approaches to the Phase Problem, Berkeley, California, May 17-19, 2001.
176. "On Possible Extensions of X-ray Crystallography through Oversampling and X-FEL Sources", Workshop on Methods & Instrumentation for X-FEL, DESY, Germany, June 26-27, 2000.
177. "Extending X-ray Crystallography by Using the Linac Coherent Light Source", LCLS Scientific Advisory Committee Meeting, SLAC, Stanford, March 30-31, 2000.
178. "Solving the Phase Problem by Using the Oversampling Technique", CCP4 2000 Study Weekend, York University, England, Jan. 7-8, 2000.
179. "Extending the Methodology of X-Ray Crystallography to Non-Crystalline Specimens", the 11<sup>th</sup> U.S. National Synchrotron Radiation Instrumentation Conference, Stanford, California, Oct. 13-15, 1999.
180. "An Extension of the Methodology of X-Ray Crystallography to Allow X-Ray Microscopy without X-Ray Optics", the 6<sup>th</sup> International Conference on X-Ray Microscopy, Berkeley, California, Aug. 1-6, 1999.

**Other Seminars before 2004:**

MIT; Stanford University; University of Chicago; University of Illinois at Urbana-Champaign; UCLA; UCSD; SUNY at Stony Brook; SUNY at Buffalo; Michigan State University; University of Minnesota; University of California, Davis; University of Cincinnati; University of Florida; University of Wisconsin - Milwaukee; University of Central Florida; McGill University; University of Zurich; University of Melbourne; Waseda University; Tohoku University; SLAC; Cornell High Energy Synchrotron Source; Lawrence Berkeley National Laboratory; Argonne National Laboratory; Brookhaven National Laboratory; Lawrence Livermore National Laboratory; Hauptman-Woodward Institute; SPring-8/RIKEN; European Synchrotron Radiation Facility; HASYLAB, DESY; Beijing Synchrotron Radiation Facility, Chinese Academy of Sciences; Shanghai Institute of Applied Physics, Chinese Academy of Sciences; Institute of Physics, Academia Sinica, Taiwan.