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Title: Senior Scientist & Professor
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Publications: 295 peer reviewed, 53 reviews, books and non-peer reviewed
H-index: Publons - 76 (75,000+ citations), Google Scholar - 94 (100,000+ citations)
Outreach: 200+ invited lectures and workshops

Professional Experience

2021-Now Associate Laboratory Director for Biosciences, Lawrence Berkeley Laboratory
2015-2021 Division Director, Molecular Biophysics & Integrated Bioimaging, Lawrence Berkeley Laboratory
2011-Now Division Deputy for Biosciences, Advanced Light Source, Lawrence Berkeley Laboratory
2009-Now Laboratory Research Manager, Foundational Sciences Focus Area (ENIGMA)
2007-Now Adjunct Professor, Department of Bioengineering, UC Berkeley, Berkeley CA
2007-Now Vice President for Technology, the Joint BioEnergy Institute, Berkeley CA
2005-Now Senior Scientist, Lawrence Berkeley Laboratory, Berkeley CA
2010-2015 Deputy Division Director, Physical Biosciences, Lawrence Berkeley Laboratory
2004-2011 Head, Berkeley Center for Structural Biology, Berkeley CA
2009-2010 Acting Division Director, Physical Biosciences, Lawrence Berkeley Laboratory
2007-2009 Deputy Division Director, Physical Biosciences, Lawrence Berkeley Laboratory
2003-2007 Deputy Principal Investigator, Berkeley Structural Genomics Center, Berkeley CA
1999-2005 Staff Scientist, Lawrence Berkeley Laboratory, Berkeley CA
1998-1999 Senior Associate, Howard Hughes Medical Institute, New Haven CT
1998-1999 Research Scientist, Yale University, New Haven CT
1997-1998 Associate Research Scientist, Yale University, New Haven CT
1992-1997 Postdoctoral Associate, Yale University, New Haven CT
1992 Project Scientist, Edinburgh Parallel Computing Center, Edinburgh, Scotland

Education

1988-1992 Ph.D. (Structural analysis and molecular modelling of α_{2u} -globulin)
Edinburgh University, Edinburgh, Scotland & Imperial Chemical Industries, UK
1985-1988 B.Sc. Biological Sciences (Biochemistry), Edinburgh University, Edinburgh, Scotland
Summa Cum Laude

Awards

- Director's Technology Transfer Award, Phenix Software Team (2021)
- DOE Secretary's Achievement Award, National Virtual Biotechnology Laboratory COVID-19 Team (2021)
- Department of Energy, Office of Science, Outstanding Mentor Award, Lawrence Berkeley Laboratory, Berkeley CA (2009)
- Outstanding Performance Award, Lawrence Berkeley Laboratory, Berkeley CA (2004)
- Technology Transfer Award, Lawrence Berkeley Laboratory, Berkeley CA (2002)
- Upjohn prize in Biochemistry, Edinburgh University, Edinburgh, Scotland (1988)
- Science Faculty Bursary, Edinburgh University, Edinburgh, Scotland (1986-1987)

Other Professional Activities

Journal reviewer:

- Acta Crystallographica Sections D and F, Biochemistry, Biophysical Journal, Biopolymers, eLife, IUCrJ, J. Chem. Inf. and Modeling, J. Mol. Biol., JACS, J. Applied Crystallography, J. Synchrotron Radiation, Molecular

Microbiology, Nature, Nature Communications, Nature Machine Intelligence, Nature Methods, Nature Protocols, Nature Structural and Molecular Biology, Protein Science, Proteins, PNAS, Royal Society Philosophical Transactions B, Science, Scientific Data, Structure

Peer review:

- Diamond Light Source Beamline Software Architecture Review (2022)
- LCLS Science & Instrumentation Review in Structural Biology (2020)
- EMBL PETRA III beamline review, DESY (2019)
- NIH P30 review panel (2019)
- NIH Early Stage MIRA award review panel (2018)
- Member, LCLS Proposal review panel (2014-2019)
- NCI Intramural Structural Biology Program (2004, 2017)
- LS-CAT beamline review, Advanced Photon Source (2014, 2019)
- Macromolecular Crystallography beamline review, Diamond Synchrotron (2014)
- BioCARS beamline review, Advanced Photon Source (2013)
- EMBL Grenoble Outstation review panel (2013)
- KAUST Office of Competitive Research Funds (2013, 2014)
- Charter Member, NIH Molecular Structure and Function D study section (2011-2015)
- Ad hoc reviewer, NIH R13 grants (2011)
- Singapore National Research Foundation proposals (2011)
- DOE Knowledgebase program (2010)
- NIH Challenge Grants (2009)
- Los Alamos Biofuels LDRD program (2009)
- NCRR P41 special emphasis panel (2008)
- Netherlands Organization for Scientific Research (2008, 2010, 2014)
- Ad hoc member, NIH Molecular Structure and Function D study section (2008-2010, 2020)
- DOE Small Business Innovation Research proposals (2008)
- Biotechnology & Biological Sciences Research Council, UK (2008, 2009)
- Wellcome Trust awards, UK (2008)
- DOE INCITE program (2007)
- IMCA-CAT 17-ID Experiment End Station Upgrade, APS (2007)

Advisory panels:

- Member, Diamond Light Source (UK) Advisory Committee (2021-Present)
- Member, Pacific Northwest Center for Cryo-EM Advisory Committee (2019-Present)
- Chair, RCSB Advisory Committee (2019-Present)
- Member, RBVI Advisory Committee (2016-2017)
- Member, RCSB Advisory Committee (2015-2019)
- Member, wwPDB Advisory Committee (2013-Present)
- Chair, EM Data Bank Advisory Committee (2013-2016)
- Chair, mmCIF/PDBx working group (2012-Present)
- Member, wwPDB X-ray Validation Task Force (2008-Present)
- Member, Oak Ridge National Laboratory Neutron Future Sciences Advisory Panel (2013)
- Member, Argonne National Laboratory Photon Sciences Advisory Committee (2013)
- Member, Diamond Synchrotron Software Advisory Panel (2012)
- Ad hoc member, NAGMS Council (2010)
- Member, Photon Factory International SAC, Life Science Subcommittee (2009)
- Member, UCLA-DOE Institute for Genomics and Proteomics External Advisory Committee (2008)
- Member, NIGMS/NCRR NSLSII advisory panel (2008-2012)
- Member, Protein Information Management System (PIMS) Scientific Advisory Board (2006-2009)
- Chair, NIH Protein Structure Initiative data management committee (2003-2008)
- Member, International structural genomics organization task force on data deposition (2002-2009)

Teaching:

- Instructor, UC Berkeley BioE 225 (Biomolecular Structure Determination) (2017-Present)

- Instructor, UC Berkeley BioE 290D (Biomolecular Structure Analysis) (2009-2016)
- UC Berkeley BioE 24 (2015)
- Guest lecturer, UC Berkeley MCB 206 (2014)
- Guest lecturer Stanford Bio207 (Protein Folding and Disease) (2009, 2010)
- Co-taught UC Berkeley Chem 272A/B (Biomolecular Crystallography) (2006-2008)

Invited Lectures and Workshops

2022

- Macromolecular Crystallography Course, Cold Spring Harbor Laboratory, USA, October 19th-25th.

2021

- Keystone Conference, Frontiers in Cryo-Electron Microscopy, online, February 2nd-6th.

2020

- Cryo-EM Validation in the Age of SARS-CoV-2: Methods, Tools and Applications, online, November 20th.
- Structural Biology Seminar Series, University of Colorado Anschutz Medical Campus, Denver, USA, January 28-30th.
- wwPDB Single-particle EM Data-management Workshop, Hinxton, United Kingdom, January 23rd-26th.
- Stanford-SLAC Cryo-EM Center Cryo-EM Modeling Workshop, Stanford, USA, January 15-17th.

2019

- Macromolecular Crystallography Course, Cold Spring Harbor Laboratory, USA, October 13th-30th.
- Structural Biology symposium, Zurich University, Zurich, August 21st.
- Phenix Workshop, 32nd European Crystallographic Meeting, Vienna, Austria, August 18th.
- Crystallographic Computing School, Melk, Austria, August 14-17th.
- American Crystallographic Association Annual Meeting, Covington, KY, July 20th.
- University of Michigan International Cryo-EM data processing workshop, Ann Arbor, MI, USA, June 19-21st.
- Stanford-SLAC Cryo-EM Center Modeling Workshop, Stanford, USA, July 10-12th.
- School on 3D CryoEM image analysis, Erice, Italy, May 30th-June 6th.
- Macromolecular Crystallography School, Instituto de Quimica-Fisica, Madrid, Spain, April 22nd-26th.
- Single Particle Cryo-EM Course, Cold Spring Harbor Laboratory, USA, March 21st-24th.
- West Coast Structural Biology Workshop, Asilomar, CA, USA, March 17-19th.
- DOE/BER Genomic Sciences Contractors meeting, Tyson's Corner, VA, USA, February 25-27th.
- Frontiers in Cryo-EM Validation, European Bioinformatics Institute, Hinxton, Cambridge, UK, January 14-15th.

2018

- Macromolecular Crystallography Course, Cold Spring Harbor Laboratory, USA, October 14th-30th.
- Advanced Light Source User meeting, LBNL, Berkeley CA, October 2nd.
- European Spallation Source Ikon 15 meeting, Lund University, Lund, Sweden, September 10-12th.
- Phenix workshop, Tsinghua University, Beijing, China, September 3-6th.
- APS Upgrade Macromolecular Crystallography Workshop, Argonne National Laboratory, IL, USA, August 19-21st.
- Cryo-EM workshop, Stockholm, Sweden, August 13-17th.
- Phenix Low Resolution Structure Solution Workshop, Technical University of Vienna, Vienna, May 29th.
- Modern Concepts in Structural Biology Seminar, Technical University of Vienna, Vienna, May 28th.
- Macromolecular Crystallography School, Instituto de Quimica-Fisica, Madrid, Spain, May 3rd-11th.
- Tsinghua International Symposium of Computational Structural Biology and Biophysics, Beijing, China, April 17th-22nd.
- 3rd International Symposium on Cryo-3D Image Analysis, Lake Tahoe, USA, March 21st-24th.

- Single Particle Cryo-EM Course, Cold Spring Harbor Laboratory, USA, March 9th-12th.

2017

- Macromolecular Crystallography Course, Cold Spring Harbor Laboratory, USA, October 26th-31st.
- American Crystallographic Association Annual Meeting, New Orleans, LA, May 27-29th.
- Macromolecular Crystallography School, Instituto de Quimica-Fisica, Madrid, Spain, May 3rd-11th.
- CCP-EM Spring Symposium, Diamond Light Source, Harwell, United Kingdom, April 24th-26th.
- DOE/BER Advisory Council meeting, Gaithersburg MD, USA, April 19-21th.
- West Coast Protein Crystallography Workshop, Asilomar, USA, March 14th-16th.

2016

- SBGrid/NE-CAT Phenix workshop, Boston, MA, November 9-11th.
- Macromolecular Crystallography Course, Cold Spring Harbor Laboratory, USA, October 21st-25th.
- DOE/BER Molecules to Mesoscale workshop, Rockville, MD, September 20th-23rd.
- 12th International Conference on Biology and Synchrotron Radiation, Palo Alto, CA, August 22nd-24th.
- 5th International Symposium on Diffraction Structural Biology, Knoxville, TN, August 7-9th.
- American Crystallographic Association Annual Meeting, Denver, CO, July 25-26th.
- Diffraction Methods in Structural Biology Gordon Conference, Lewiston, ME, July 17th-22nd.
- Macromolecular Crystallography School, Instituto de Quimica-Fisica, Madrid, Spain, May 19th-23rd.
- Phenix workshop, Tsinghua University, Beijing, China, May 6-12th.
- Phenix workshop, EPFL, Lausanne, Switzerland, February 19-24th.
- BioStruct-X Workshop on Ensemble Refinement, Lisbon, Portugal, January 29th-February 4th.
- Nanomedicine Symposium on Basic & Translational Sciences, MD Anderson, Houston, USA January 27-28th.
- Phenix workshop, Shanghai University, Shanghai, China, January 12-18th.
- CCP4 Study weekend, Nottingham, UK, January 7-11th.

2015

- Bay Area Cryo-EM meeting, Berkeley, California, USA, December 4th.
- wwwPDB X-ray Validation Task Force Meeting, Cambridge, UK, November 12-18th.
- Macromolecular Crystallography Course, Cold Spring Harbor Laboratory, USA, October 23-27th.
- Phenix Workshop, Kansas University, Lawrence Kansas, USA, August 5-7th.
- 3D Electron Microscopy Gordon Conference, New London, NH, June 21st-26th.
- Canadian Light Source Crystallography School, Saskatoon, Canada, June 3rd-6th.
- Macromolecular Crystallography School, Instituto de Quimica-Fisica, Madrid, Spain, May 19th-23rd.
- Phenix workshop, Rice University, Houston, USA, April 9-10th.

2014

- Macromolecular Crystallography Course, Cold Spring Harbor Laboratory, USA, October 24-27th.
- mmCIF developers meeting, European Bioinformatics Institute, Hinxton, UK, October 8th.
- UC Berkeley BioE Departmental Seminar, Berkeley, CA, USA, September 17th.
- BioXFEL workshop, Berkeley, CA, USA, August 21st.
- CCP4/NIH workshop, Argonne National Laboratory, USA, June 27th-July 1st.
- Advanced Methods in Crystallography, Melbourne, Australia June 17-25th.
- Phenix workshop, Harvard University, Boston, USA, June 7th.
- Macromolecular Crystallography School, Instituto de Quimica-Fisica, Madrid, Spain, May 27th-30th.
- Mid Atlantic Crystallography meeting/SERCAT Phenix Workshop, U. Maryland, Maryland, USA, April 26th.

- University of Lincoln Nebraska Departmental Seminar, Lincoln Nebraska, USA, April 8th.
- Recent trends in Macromolecular Structure and Function, Chennai, India, January 22nd-25th.
- Phenix workshop, Madras University, Chennai, India, January 21st.

2013

- NMR/mmCIF developers meeting, European Bioinformatics Institute, Hinxton, UK, November 18th-21st.
- Macromolecular Crystallography Course, Cold Spring Harbor Laboratory, USA, October 25th-29th.
- Theoretical Model Validation Symposium, Rutgers University, USA, October 21st-22nd.
- International Conference on Structural Genomics, Sapporo, Japan, July 27th-August 1st.
- CCP4/NIH workshop, Argonne National Laboratory, USA, June 21st-25th.
- Canadian Light Source Crystallography School, Saskatoon, Canada, June 11-15th.
- Joint UCSF/LBNL Imaging Workshop, UCSF, USA, June 7th.
- Macromolecular Crystallography School, Instituto de Quimica-Fisica, Madrid, Spain, May 6-13th.
- Frontiers in Neutron Structural Biology, Oak Ridge National Laboratory, USA, April 16-18th.
- UC Berkeley Structure Supergroup, Berkeley, USA, April 9th.
- European Spallation Source, Neutron Protein Crystallography, Aarhus University, Denmark, March 21st-22nd.

2012

- Macromolecular Crystallography Course, Cold Spring Harbor Laboratory, USA, October 26th-November 1st.
- New Developments of Methods and Software for Protein Crystallography, Xi'An, China, August 26th-28th.
- Phenix workshop, Harvard Medical School, Boston, USA, July 27th.
- CCP4/NIH workshop, Argonne National Laboratory, USA, June 23rd-26th.
- Macromolecular Crystallography School, Instituto de Quimica-Fisica "Rocasolano", Madrid, Spain, May 26th-29th.
- Phenix workshop, Universidad Nacional Autónoma de México, Mexico City, Mexico, April 17th-22nd.
- Phenix workshop, UT Austin, Texas, USA, Feb 22nd.
- Macromolecular Crystallography Workshop, Australian Synchrotron, Melbourne, Australia, February 9th-16th.

2011

- Macromolecular Crystallography Course, Cold Spring Harbor Laboratory, USA, October 26th-30th.
- Phenix workshop, ILL Grenoble, October 21st.
- Neutrons in Biology, ILL Grenoble, October 19th-20th.
- SBGrid Annual Meeting, Harvard Medical School, Boston, USA, June 23rd-24th.
- CCP4 workshop, Argonne National Laboratory, Illinois, June 12th-15th.
- Phenix workshop, American Crystallographic Association Annual Meeting, New Orleans, USA, May 28th.
- Phenix workshop, Utrecht University, Utrecht, Netherlands, May 22nd.
- Canadian Light Source Crystallography School, Saskatoon, Canada, May 16th-19th.
- Phenix workshop, International Conference on Structural Genomics, Toronto, Canada, May 10th.

2010

- BHT Meeting, Queen's University, Kingston, Canada, November 5th.
- Departmental Seminar, University of Waterloo, Waterloo, Canada, November 4th.
- Departmental Seminar, Sick Children's Hospital, Toronto, Canada, November 3rd.
- Macromolecular Crystallography Course, Cold Spring Harbor Laboratory, USA, October 22nd-26th.
- SSRL User Meeting, Workshop 8, Stanford, USA, October 20th.
- Phenix workshop, Rockefeller University, New York, USA, October 6th.
- European Crystallography Meeting, Darmstadt, Germany, August 28th-31st.

- Canadian Light Source Annual Users Meeting, Saskatoon, Canada, June 17th.
- CCP4/NIH workshop, Argonne National Laboratory, USA, June 11th-14th.
- Phenix workshop, University of Houston, Texas, USA, May 30th.
- Bio207 (The Life and Death of Proteins), Stanford University, Palo Alto, USA, April 29th.
- Recent trends in Macromolecular Structure and Function, Chennai, India, January 7th-14th.

2009

- NCCR Workshop on Crystallographic Computing with Phenix, ETH, Zurich, Switzerland, December 4th.
- XXX, IGBMC, Strasbourg, France, December 3rd.
- Phenix Workshop, IGBMC, Strasbourg, France, December 2nd.
- Macromolecular Crystallography Course, Cold Spring Harbor Laboratory, USA, October 23rd-27th.
- SSRL Summer School, Stanford, USA, September 10th.
- American Crystallographic Association Annual Meeting, Toronto, Canada, July 26th-30th.
- CCP4/NIH workshop, Argonne National Laboratory, USA, June 29th-July 2nd.
- Mid Atlantic Structural Biology meeting, University of Maryland, Maryland, USA, May 29th.
- Quantitative Biology Seminar Series, Los Alamos National Laboratory, USA, May 27th.
- Bio207 (The Life and Death of Proteins), Stanford University, Palo Alto, USA, April 29th.
- Teach SG workshop, Prague, Czech Republic, April 1st-5th.
- DOE Genomics:GTL awardees meeting, Bethesda, USA, February 7th-11th.

2008

- Macromolecular Crystallography Course, Cold Spring Harbor Laboratory, USA, October 24th-28th.
- International Structural Genomics Conference, Oxford, UK, September 21st-24th.
- International Union of Crystallography Congress, Osaka, Japan, August 23rd-28th.
- Diffraction Methods in Molecular Biology, Gordon Research Conference, Lewiston, Maine, USA, July 13-18th.
- Macromolecular Crystallography Course, Beijing, China, May 10th-15th.
- New Validation Tools for the Macromolecular Crystallography, Cambridge, UK, April 14th-16th.
- Pittsburgh Conference, New Orleans, USA, March 4th-5th.
- Recent trends in Macromolecular Structure and Function, Chennai, India, January 7th-14th.

2007

- 16th CoLuAa meeting, Aarhus, Denmark, November 9th.
- X-ray Crystallography Computing Workshop, Aarhus, Denmark, November 7th-8th.
- Macromolecular Crystallography Course, Cold Spring Harbor Laboratory, USA, October 26th-30th.
- RapiData course, Brookhaven National Laboratory, Brookhaven, USA, April XXXX.
- CCP4/MAX-INF Workshop on Phasing and Refinement, York University, UK, April XXXX.
- The Molecular Replacement method, CCP4 Study Weekend, University of Reading, UK, January XXXX.

2006

- Macromolecular Crystallography Course, Cold Spring Harbor Laboratory, USA, October 26th-31st.
- International Conference on Structural Genomics workshop, Yokohama, Japan, October 19th-20th.
- Distributed Data Analysis for Neutron Scattering Experiments (DANSE) meeting, Caltech, USA, Aug 15th-16th.
- European Crystallography Meeting, Leuven, Belgium, August 9th-10th.
- Neutron Diffraction Workshop, American Crystallographic Association Annual Meeting, Honolulu, Hawaii, USA, August 22nd-26th.
- Canadian Light Source 9th Annual Users Meeting, Saskatoon, Canada, June 15th-17th.
- 8th International School on the Crystallography of Biological Macromolecules, Como, Italy, May 21st-25th.

- CCP4/MAX-INF Workshop on Phasing and Refinement, Barcelona, Spain, March 1st-7th.
- Trends in Macromolecular Structure and Function, Chennai, India, January 18th-20th.

2005

- EMBL M2M Practical Course, EMBL Hamburg, Germany, November 9th-15th.
- Get Phases workshop, Peking University, Beijing, China, October 29th-November 4th.
- Macromolecular Crystallography Course, Cold Spring Harbor Laboratory, USA, October 20th-24th.
- NCCR Practical Course, Swiss Light Source, Villigen, Switzerland, October 3rd-7th.
- SSRL Summer School, Stanford, USA, September 13-15th.
- 12th Northern Protein Structural Workshop, Galashiels, Scotland, September 7th-9th.
- EMBO Anomalous Diffraction Workshop, ESRF, Grenoble, France, June 15th-22nd.
- American Crystallographic Association Annual Meeting, Orlando, Florida, USA, May 28th-June 1st.
- Evolving Methods in Crystallography, Erice, Italy, May 11th-22nd.
- Data management for high-throughput crystallography, Cambridge University, Cambridge, UK, Feb 9th-11th.

2004

- American Crystallographic Association mmCIF workshop, CARB, Gaithersburg, Maryland, USA, Nov 16th.
- Macromolecular Crystallography Course, Cold Spring Harbor Laboratory, USA, October 30th-Nov 2nd.
- NIH Protein Structure Initiative Advisory Committee meeting, NIH, Bethesda, USA, October 28th.
- ALS Users Meeting, Macromolecular Crystallography Workshop, USA, October 19th.
- SSRL Summer School, Stanford, USA, August 16-20th.
- EMBO course on Automated Macromolecular Structure Solution, Amsterdam, Netherlands, May 23rd-Jun 2nd.

2003

- UC Berkeley department of Bio-engineering colloquium talk, Berkeley, December 18th.
- NIH Protein Structure Initiative Advisory Committee meeting, NIH, Bethesda, USA, December 2nd.
- Frontiers in Structural Biology – the Western Canadian Structural Biology Workshop, Banff, Canada, November 21st-23rd.
- SSRL Summer School, Stanford, USA, September 16-19th.
- Aminoff Symposium, Royal Swedish Academy of Sciences, Stockholm, Sweden, September 11-12th.
- Macromolecular Crystallography Course, Cold Spring Harbor Laboratory, USA, October 25th-30th.
- American Crystallographic Association Annual Meeting, Covington, Kentucky, USA, July 26-30th.
- NIH Data Management Workshop, NIH, Bethesda, Maryland, USA, July 10-11th.
- EMBO Anomalous Diffraction Workshop, ESRF, Grenoble, France, June 17-23rd.
- International Symposium on Diffraction Structural Biology, Tsukuba, Japan, May 28th-31st.
- Data management aspects of high-throughput structure determination, European Bioinformatics Institute, Hinxton, UK, March 14th-15th.

2002

- Getting the most from biological data: bridging the gap between experiment, analysis and simulation, LBNL offices, Washington DC, December 13th.
- Automation for High Throughput Structure Determination, Lawrence Berkeley Laboratory, USA, Dec 6th-8th.
- High-throughput Synchrotron Crystallography, Argonne National Laboratory, USA, November 20th-22nd.
- Macromolecular Crystallography Course, Cold Spring Harbor Laboratory, USA, October 25th-28th.
- Automation of X-ray Structure Determination for Structural Genomics, Berlin, Germany, October 8th-9th.
- Diffraction Methods in Molecular Biology, Gordon Research Conference, New London, Connecticut, USA, July 14-19th.

- Berkeley & Stanford Synchrotron Radiation Summer School, Stanford, USA, July 8-12th.
- Structural Genomics Informatics and Software Integration Workshop, San Antonio, USA, May 22nd-23rd.
- EMBO Course on Automated Macromolecular Structure Solution, Heidelberg, Germany, May 7-16th.
- Interdisciplinary workshop promoting collaboration in high-throughput X-ray structure determination, Santa Fe, USA, March 22-23rd.
- High-throughput structure determination, CCP4 Study Weekend, University of York, UK, January 4-5th.

2001

- Polarizability in Biomolecular Simulations, Utah, USA, December 13th-14th.
- Macromolecular Crystallography Course, Cold Spring Harbor Laboratory, USA, October 19th-21st.
- ALS Users Meeting, Macromolecular Crystallography Workshop, USA, October 16th.
- EMBO/MAX-INF Anomalous Diffraction Workshop, ESRF, Grenoble, France, June 18-23rd.
- West Coast Protein Crystallography Workshop, Asilomar, USA, March 25th-28th.
- ESRF High-throughput workshop, ESRF, Grenoble, France, February 20-21st.
- CCP4 Workshop on Refinement of Macromolecular Structure, York University, UK, January 3-9th.

2000

- Computational methods in structural biology, Florida State University, Tallahassee, USA, December 5th.
- SCBMB seminar, Baylor College of Medicine, Houston, USA, November 6th.
- RTG Student Seminar, Arizona State University, Tempe, USA, November 16th.
- Macromolecular Crystallography Course, Cold Spring Harbor Laboratory, USA, October 21-23rd.
- SSRL Summer School, Stanford, USA, September 18-23rd.
- Diffraction Methods in Molecular Biology, Gordon Research Conference, Andover New Hampshire, USA, July 2-7th.
- EMBO workshop for automated macromolecular structure solution, EMBL, Grenoble, France, Mar 15-25th.
- CNS workshop, Uppsala University, Uppsala, Sweden, February 7-8th.

1999

- High-throughput methods for structural genomics, Argonne National Lab, USA, November 15-16th.
- Macromolecular Crystallography Course, Cold Spring Harbor Laboratory, USA, October 25-27th.
- International School of Crystallography of Biological Macromolecules, Barcelona, Spain, September 9-15th.
- IUCr Crystallographic Computing School, Cambridge, UK, August 14-20th.
- XVIIIth IUCr Congress and General Assembly, Glasgow, UK, August 4-13th.
- ACA Summer Course in Crystallography, University of Georgia, USA July 12-24th.
- Automation of Structure Determination workshop, Brookhaven National Lab, USA, June 20-21st.
- 29th Mid-Atlantic Protein Crystallography Workshop, Rockville, USA, April 28-30th.
- CNS Workshop, University of Georgia, USA, April 21st.

1998

- EC and CCP4 Workshop on Refinement of Macromolecular Structure, York University, UK, Dec 14-20th.
- Advanced School of Macromolecular Crystallography, Sao Carlos, Brazil, November 29th-December 6th.
- Macromolecular Crystallography Course, Cold Spring Harbor Laboratory, USA, October 25-27th.
- Diffraction Methods in Molecular Biology, Gordon Research Conference, Andover New Hampshire, USA, June 21-26th.
- Modelling and membrane proteins, Biochemical Society UK Spring Meeting, Southampton, UK, March 31st.

1997

- CCP4 Refinement and Validation Workshop, York University, UK, September 1-6th.

- Validation and Refinement of Macromolecular Structures, Oporto, Portugal, August 29-30th.
- Modelling of Membrane Proteins, University of Toronto, Canada, May 5th.
- West Coast Crystallography Workshop, Asilomar, USA, March 15-18th.

Prior to 1997

- Macromolecular Refinement, CCP4 Study Weekend, Chester College, Chester, UK, January 5-6th (1996).
- IMA Program on Protein Structure and Dynamics, University of Minnesota, Minnesota, July 18-22nd (1994).
- CECAM Workshop on Simulations of biological macromolecules: improving sampling with parallelism and other techniques. Orsay, Paris, November 15-17th (1993).

Meetings Organized

2022

- Macromolecular Crystallography Course, Cold Spring Harbor Laboratory, USA, October 9th-25th. [Course co-organizer]
- Imaging the rhizosphere and cellular organization, online, January 26-27th. [Workshop co-organizer]

2021

- Intracellular organization, and material synthesis and decomposition, online, December 15-16th. [Workshop co-organizer]
- Molecular structures, online, October 27-28th. [Workshop co-organizer]

2019

- Macromolecular Crystallography Course, Cold Spring Harbor Laboratory, USA, October 14th-30th. [Course co-organizer]

2018

- Macromolecular Crystallography Course, Cold Spring Harbor Laboratory, USA, October 14th-30th. [Course co-organizer]

2017

- Cryo-EM model challenge, Stanford, CA, USA, October 6-8th. [Meeting co-organizer]
- Understanding Biology through Structure, Santa Fe, NM, USA, May 13-15th. [Session chair]
- Joint BSSD/ASCR session at the DOE/BER Genomic Sciences Contractors Meeting, Arlington, VA, February 7th. [Session co-chair]

2016

- DOE/BER Molecules to Mesoscale workshop, Rockville, MD, September 20th-23rd. [Meeting co-chair]

2015

- wwPDB Ligand Validation Workshop, Rutgers University, July 29-31st. [Session co-chair]
- EM Modeling Challenge Advisory meeting, MIT, Boston, June 19th-21st. [Meeting co-organizer]

2014

- Hybrid methods workshop, European Bioinformatics Institute, Hinxton, UK, October 6-7th. [Session co-chair]
- Soft X-ray sciences workshop, Advanced Light Source, Berkeley, CA, USA, October 1st-3rd. [Session co-chair]
- Diffraction Methods in Molecular Biology, Gordon Research Conference, Lewiston, Maine, USA, July 27th August 1st. [Session chair]
- Recent trends in Macromolecular Structure and Function, Chennai, India, January 22nd-25th. [Member, organizing committee]

2013

- International Conference on Structural Genomics, Sapporo, Japan, July 27th-August 1st. [Session co-chair]

2012

- Diffraction Methods in Molecular Biology, Gordon Research Conference, Lewiston, Maine, USA, July 15-20th. [Session chair]

2011

- Computational Methods session, International Union of Crystallography Meeting, Madrid, Spain, August 22-30th. [Session co-chair]
- Phenix Workshop, American Crystallographic Association Annual Meeting, New Orleans, USA, May 28th. [Session organizer]
- Phenix Workshop, International Conference on Structural Genomics, Toronto, Canada, May 10th. [Session co-organizer]

2010

- Diffraction Methods in Molecular Biology, Gordon Research Conference, Lewiston, Maine, USA, July 18-23rd. [Session chair]

2008

- Pittsburgh Diffraction Conference, Pittsburgh, USA, October 30th - November 1st. [Session co-organizer]
- Recent trends in Macromolecular Structure and Function, Chennai, India, January 7th-14th. [Member, organizing committee]

2007

- International Symposium on Diffraction Structural Biology, Tokyo, Japan, September 10th-13th. [Member, international advisory committee]
- Computational Methods Session, American Crystallographic Association Annual Meeting, Salt Lake City, Utah, USA, July 23rd-26th. [Session co-organizer]
- Multiscale Imaging Workshop, Lawrence Berkeley Laboratory, Berkeley USA, May 17th-18th. [Meeting co-organizer]

2006

- International Conference on Structural Genomics workshop, Yokohama, Japan, October 19th-20th. [Meeting co-organizer]
- Neutron Diffraction Workshop, American Crystallographic Association Annual Meeting, Honolulu, Hawaii, USA, August 22-26th. [Session co-organizer]
- Diffraction Methods in Molecular Biology, Gordon Research Conference, Lewiston, Maine, USA, July 11-16th. [Meeting organizer]

2004

- Computational Methods Session, American Crystallographic Association Annual Meeting, Chicago, Illinois, USA, July 17-23rd. [Session co-organizer]
- Diffraction Methods in Molecular Biology, Gordon Research Conference, Lewiston, Maine, USA, July 11-16th. [Meeting co-organizer]

2003

- NIH Data Management Workshop, NIH, Bethesda, Maryland, USA, July 10-11th. [Meeting co-organizer]

2002

- Automation for High Throughput Structure Determination, Lawrence Berkeley Laboratory, USA, December 6th-8th. [Meeting co-organizer]
- Interdisciplinary workshop promoting collaboration in high-throughput X-ray structure determination, Santa Fe, USA, March 22-23rd. [Meeting co-organizer]

Peer reviewed publications (295 total)

1. Tom LM, Aulitto M, Wu YW, Deng K, Gao Y, Xiao N, Rodriguez BG, Louime C, Northen TR, Eudes A, Mortimer JC, Adams PD, Scheller HV, Simmons BA, Ceja-Navarro JA, Singer SW: Low-abundance populations distinguish microbiome performance in plant cell wall deconstruction. *Microbiome* 2022 **10**:183

2. Terwilliger TC, Poon BK, Afonine PV, Schlicksup CJ, Croll TI, Millán C, Richardson JS, Read RJ, Adams PD: Improved AlphaFold modeling with implicit experimental information. *Nat Methods* 2022. Online ahead of print.
3. Liu AK, Pereira JH, Kehl AJ, Rosenberg DJ, Orr DJ, Chu SKS, Banda DM, Hammel M, Adams PD, Siegel JB, Shih PM: Structural plasticity enables evolution and innovation of RuBisCO assemblies. *Sci. Adv.* 2022, **8**:eadc9440
4. Andi B, Kumaran D, Kreitler DF, Soares AS, Keereetaweep J, Jakoncic J, Lazo EO, Shi W, Fuchs MR, Sweet RM, Shanklin J, Adams PD, Schmidt JG, Head MS, McSweeney S: Hepatitis C virus NS3/4A inhibitors and other drug-like compounds as covalent binders of SARS-CoV-2 main protease. *Sci. Rep.* 2022, **12**:12197
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7. Iwai K, Wehrs M, Garber M, Sustarich J, Washburn L, Costello Z, Kim PW, Ando D, Gaillard WR, Hillson NJ, Adams PD, Mukhopadhyay A, Garcia Martin H, Singh AK: Scalable and automated CRISPR-based strain engineering using droplet microfluidics. *Microsyst Nanoeng.* 2022, **8**:31.
8. Chen Y, Kaplan Lease N, Gin JW, Ogorzalek TL, Adams PD, Hillson NJ, Petzold CJ: Modular automated bottom-up proteomic sample preparation for high-throughput applications. *PLoS One* 2022, **17**:e0264467.
9. Hancock M, Peulen TO, Webb B, Poon B, Fraser JS, Adams P, Sali A: Integration of software tools for integrative modeling of biomolecular systems. *J. Struct. Biol.* 2022, **214**:107841.
10. Hussein R, Ibrahim M, Bhowmick A, Simon PS, Chatterjee R, Lassalle L, Doyle M, Bogacz I, Kim IS, Cheah MH, Gul S, de Lichtenberg C, Chernev P, Pham CC, Young ID, Carbajo S, Fuller FD, Alonso-Mori R, Batyuk A, Sutherlin KD, Brewster AS, Bolotovskiy R, Mendez D, Holton JM, Moriarty NW, Adams PD, Bergmann U, Sauter NK, Dobbek H, Messinger J, Zouni A, Kern J, Yachandra VK, Yano J: Structural dynamics in the water and proton channels of photosystem II during the S2 to S3 transition. *Nature Communications* 2021, **12**:6531.
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12. Ibrahim M, Moriarty NW, Kern J, Holton JM, Brewster AS, Bhowmick A, Bergmann U, Zouni A, Messinger J, Yachandra VK, Yano J, Dobbek H, Sauter NK, Adams PD: Reply to Wang et al.: Clear evidence of binding of Ox to the oxygen-evolving complex of photosystem II is best observed in the omit map. *Proc Natl Acad Sci U S A.* 2021 **118**:e2102342118
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14. Pham LTM, Deng K, Northen TR, Singer SW, Adams PD, Simmons BA, Sale KL: Experimental and theoretical insights into the effects of pH on catalysis of bond-cleavage by the lignin peroxidase isozyme H8 from *Phanerochaete chrysosporium*. *Biotechnol Biofuels.* 2021, **14**:108

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19. Kim J, Baidoo EEK, Amer B, Mukhopadhyay A, Adams PD, Simmons BA, Lee TS: Engineering *Saccharomyces cerevisiae* for isoprenol production. *Metab Eng.* 2021, **64**:154-166.
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