

Jiao Lin

Neutron Scattering Division
Oak Ridge National Lab
1 Bethel Valley Rd
Oak Ridge, TN 37830
U.S.A.

Phone: 626-200-5247

email: linjiao@ornl.gov

URL: <http://linjiao.info/>

Current position

Software Scientist, Neutron Data Sciences Group, Neutron Scattering Division, ORNL

Areas of specialization

Neutron Scattering Sciences • Inelastic neutron scattering/ Neutron imaging
Computational Sciences • Software design/ Data reduction/ Data analysis and visualization/ Monte Carlo simulation/ Image processing

Previous positions

2012-2015 Visiting Scientist, Oak Ridge National Lab
2008-2015 Computational Scientist, California Institute of Technology
2005-2008 Assistant Scientist, California Institute of Technology
2004-2005 Postdoctoral Fellow, California Institute of Technology

Education

2004 PhD in Materials Science, Caltech
1999 MSc in Condensed Matter Physics, Chinese Academy of Sciences
1996 BSc in Physics, Peking University

Funding

2017- ORNL LDRD “*Super-resolution reconstruction for Inelastic Neutron Scattering Spectra from Direct Geometry Chopper Spectrometers*”. \$190K/year. Principal Investigator
2012-2015 ORNL subcontract “*Virtual Neutron Facility at SNS*”. \$170K/year. Lead Investigator
2013-2014 Caltech/JPL President’s and Director’s Fund “*The Advanced Rapid Imaging and Analysis (ARIA) Co-laboratory for Natural Hazards Research*”. \$298K/year. Co-Investigator
2011-2013 KISS technical program “*Monitoring Earth Surface Changes from Space*” \$240K/year. Architect
2006-2012 NSF DANSE software project. \$2.4M/year. Lead developer of the inelastic group

Selected Publications & talks

JOURNAL ARTICLES

- 2016 **Jiao Y. Y. Lin**, Hillary L. Smith, Garrett E. Granroth, Douglas L. Abernathy, Mark D. Lumsden, Barry Winn, Adam A. Aczel, Michael Aivazis, and Brent Fultz, *MCViNE – An object oriented Monte Carlo neutron ray tracing simulation package*, NIMA 810: 86-99, FEB 2016.
<http://dx.doi.org/10.1016/j.nima.2015.11.118>
- 2015 Frederic Herman, Olivier Beyssac, Mattia Brughelli, Stuart N Lane, Sebastien Leprince, Thierry Adate, **Jiao Y Y Lin**, Jean-Philippe Avouac, and Simon C Cox, *Erosion by an Alpine glacier*, Science, Vol. 350 no. 6257 pp. 193-195, 2015 <https://www.sciencemag.org/content/350/6257/193.abstract>
- 2004 **Lin, Jiao**, *Mossbauer diffractometry: principles, practice, and an application to a study of chemical order in $^{57}\text{Fe}_3\text{Al}$* . Dissertation (Ph.D.), California Institute of Technology. 2004.
<http://resolver.caltech.edu/CaltechETD:etd-05192004-092347>
- 1999 **Lin J**, Lee MH, Liu ZP, and Chen CT. *Mechanism for linear and nonlinear optical effects in beta-BaBzO₄ crystals*, Phys Rev B 60 (19): 13380-13389 NOV 15 1999
<http://journals.aps.org/prb/abstract/10.1103/PhysRevB.60.13380>

→ For a full list of publications, see <https://orcid.org/0000-0001-9233-0100>

BOOKS

- 2006- Fultz B, Kelley T, **Lin JYY**, Lee JD, Delaire O, Kresch M, Mckerns M, Aivazis M, Experimental Inelastic Neutron Scattering, Introduction to DANSE (Springer-Verlag, in preparation)

TALKS

- 2014 Jiao Lin et al, Invited talk, Monte Carlo simulations of multiple scattering from samples and sample environments, WINS, Grenoble, France, May 2014
- 2009 Jiao Lin, DrChops, Direct Geometry Spectrometer Software Meeting, May 2009
- 2005 Jiao Lin, Ryan Monson, and Brent Fultz, Long-range order of defects revealed by Mossbauer powder diffractometry, APS 2005 March Meeting

Selected Software projects

- 2005- MCViNE: Monte Carlo neutron ray-tracing simulation
<http://mcvine.org>
- 2016- multiphonon: powder phonon data reduction for direct-geometry neutron spectrometers
<https://github.com/sns-chops/multiphonon>
- 2015- iMars3D: neutron tomography reconstruction workflow
<https://github.com/ornlneutronimaging/iMars3D>
- 2016- BraggEdgeModeling: neutron Bragg edge modeling
<https://github.com/ornlneutronimaging/braggedge modeling>
- 2015- Mantid: data reduction, analysis, and visualization framework for neutron and muon data
<https://github.com/mantidproject/mantid>
- 2007- histogram: histogram data object
<http://docs.danse.us/histogram>
- 2007- pyre: integration framework for high-performance computing
<http://docs.danse.us/pyre/sphinx>

Last updated: February 16, 2018 • Typeset in Xe_{La}TeX

<http://linjiao.info/CV.pdf>