

CURRICULUM VITAE

Collin Leslie Broholm

Office Address:

Department of Physics and Astronomy
The Johns Hopkins University
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Employment:

2015- Professor, Dept. of Materials Science & Engineering, JHU
2008- Director, Institute for Quantum Matter, JHU
2010-2019 Associate Fellow, Canadian Institute for Advanced Research
2008- Gerhard H. Dieke Professor, The Johns Hopkins University
1997- Professor of Physics, The Johns Hopkins University
1994-1997 Associate Professor of Physics, The Johns Hopkins University
1990-1994 Assistant Professor of Physics, The Johns Hopkins University
1988-1990 Postdoctoral Member of Technical Staff,
AT&T Bell Laboratories, Murray Hill, New Jersey
1985-1988 Research Assistant, Department of Solid State Physics,
Risø National Laboratory, Denmark.

Education:

1985-1988 The University of Copenhagen, Denmark
Ph. D., Physics, September 1988
1980-1985 The Technical University of Denmark
M. S., Physics and Electrical Engineering, September 1985
1977-1980 Roskilde Katedralskole August 8, 1977 to June 27, 1980,
Studentereksamen June 1980.

Grants and Awards:

2023-2026 DOE-BES "Neutron Scattering from Confined and Perturbed
Quantum Matter" with Satoru Nakatsuji (\$1.1 M)
2019-2025 Moore Foundation. Experimentalist in Quantum Materials (\$1.8M)
2014-2019 Moore Foundation. Experimentalist in Quantum Materials (\$1.8M)
2018-2024 DOE-EFRC "Institute for Quantum Matter" with 12 co-PIs (\$11.25M)
2014-2017 DOE "Institute for Quantum Matter" with 5 co-PIs (\$4.2M)
2011-2014 DOE "Institute for Quantum Matter" with 5 co-PIs (\$3.9M)
2010 Sustained Research Prize of the Neutron Scattering Society of America
2008-2009 NSF MRI "Acquisition of a high field, multi-probe cryogenic
system for quantum and nanostructured materials research (\$501k)"
2008-2011 DoE "Institute for Quantum Matter" with 5 co-PIs (\$3.2M)

- 2006-2008 NSF “IMR-MIP Conceptual and Engineering Design of Instrumentation for Probing Matter in Magnetic Fields above 30 Tesla through Neutron Scattering” (\$1.7M)
- 2005 Fellow of the American Physical Society
- 2003-2007 NSF “Dynamic Correlations in Strongly Fluctuating Cond. Matt.” (\$460k).
- 2002-2005 DOE “Pulsed Neutron Scattering Studies of Strongly Fluct. Solids” (\$375k).
- 2001-2006 NSF “Development of High Intensity Cold Neutron Spectrometer with Multichannel Analyzer” (\$1.6M)
- 2000-2003 NSF “Neutron Scattering Studies of Solids with Strong Fluctuations” (\$330k)
- 1998-2001 NIST “Development of High Intensity Cold Neutron Spectrometers” (\$216k)
- 1998-2001 NSF “Magnetized States of Quantum Spin Chains” with D. H. Reich (\$270k)
- 1997 NSF “High Field Low T Cryo-System for Neutron Scattering” (\$100k)
- 1995-1998 NIST “design of doubly focusing cold neutron spectrometer (\approx \$150k)
- 1994-1999 NSF “Presidential Faculty Fellowship” (\$500k)
- 1993-1996 NSF “Low Dimensional Quantum Magnetism” with D. H. Reich (\$275k)
- 1987 Travel Grant from the Danish Research Academy
- 1987 The Danish J. Angelo Award for excellence in research.

Professional Activities:

- 2019- Chair of the Neutron Advisory Board, Oak Ridge National Laboratory
- 2019- Member of the Science Advisory Board, Oak Ridge National Laboratories
- 2018-2024 Director of IQM Energy Frontier Research Center
- 2017-2019 Member of the Advisory Committee for the TRIUMF facility, Canada
- 2016 Chair of NSF workshop on midscale instrumentation for quantum materials
Arlington, Virginia, December 5-7 2016
- 2015-2016 Chair of DOE Basic Research needs workshop on quantum materials
and Energy Relevant Technology, Gaithersburg, February 8-10, 2016
- 2015-2017 Advisory Committee for the International Conference on
Low Temperature Physics in Gothenburg, Sweden in 2017
- 2015- Lee-Osheroff-Richardson prize selection committee
- 2015-2016 Member of the International Advisory Committee for HFM 2016
- 2013-2015 Member of the International Advisory Committee for the
Conference on Materials and Mechanisms of Superconductivity M2S 2015
- 2013 Program advisory committee for the 27th International Conference on
Low Temperature Physics in Buenos Aires Argentina
- 2012-2014 Chair of the Focus session on Frustrated Magnetism
at the 2013 and 2014 APS March meetings
- 2012-2013 International Advisory Committee for the 2013 Conference
on Magnetic Materials and Applications organized by the Magnetism
Society of India, IIT Guwahati
- 2012-2013 International Advisory Committee for the 2013 International
Conference on Neutron Scattering
- 2012 Committee of Visitors, Basic Energy Sciences, Division of Materials
Sciences and Engineering
- 2012 Particle theory faculty search committee Johns Hopkins University

2011-2012 Materials 2022, NSF DMR advisory committee on Instrumentation
 2011 Prize Committee for Neutron Scattering Society of America
 2011- Member of Materials Council, Materials Sciences and Engineering
 Basic Energy Sciences, Department of Energy
 2011-2014 Peer Review Panels of the Danish Council for Independent Research
 2010-2011 Member of external advisory committee for the conference on
 Novel Phenomena in Frustrated Systems, Santa Fe, NM 2011
 2010-2011 Member of program committee for the 2011 Conference on
 Low Temperature Physics, Beijing China
 2010-2011 Member of the international advisory committee for NASCES 2011
 Tokao, Ibaraki, Japan.
 2009-2010 Member of organizing Committee for the HFM 2010 International
 Conference on Highly Frustrated Magnetism
 2010 Member of the program committee for SENSE 2010, Grenoble, France
 2009-2010 Co-Chair of the Program Committee for the American Conference
 on Neutron Scattering
 2009-2010 Member of the Program Committee for the SCES 2010 International
 Conference on Strongly Correlated Electron Systems
 2007- Member of the Advisory Committee for the Center for Nanophase
 Materials Science, ORNL
 2008-2014 Member of the Advisory Committee for the Helmholtz Zentrum
 Berlin Research Facility
 2006-2008 Member of NAS/BPA/SSSC panel to assess the status of
 New Materials Synthesis and Crystal Growth
 2007-2010 Member of beam time allocation committee for the
 Spallation Neutron Source
 2007- Member of beam time allocation committee for the NIST Center
 for Neutron Research Expansion
 2006-2007 Member of the National Advisory Committee for the SCES2007
 meeting on Strongly Correlated Electron Systems
 2005-2011 Member of the Solid State Sciences Advisory Committee, under
 the Board on Physics and Astronomy, the National Academy of Sciences
 2005-2006 Member of the International Advisory Committee for the HFM2006
 meeting on Highly Frustrated Magnetism
 2004-2005 Member of the National Advisory Committee for the LT24 conference
 on Low Temperature Physics
 2004- Member of the editorial board of the Journal of Statistical Mechanics:
 Theory and Experiment
 2003 Member of BESAC sub-panel for a 20-year DoE Facilities Road-map
 2003-2005 Member of the NIST Center for Neutron Research Users group
 2002-2003 Member of International Advisory Committee for HFM2003 conference on
 Highly Frustrated Magnetism to be held at ILL, Grenoble, France, Aug. 2003
 2002-2006 Chair of the Experimental Facilities Advisory Committee for the
 Spallation Neutron Source
 2001-2002 Member of International Advisory Committee for workshop on Single Crystal

Neutron Spectroscopy held at ILL, Grenoble, France Dec. 2002

2001-2002 International Advisory Panel for 23th International Conference on Low Temperature Physics, Japan, 2002

2001-2003 Member of ISIS spallation neutron source instrument scheduling panel

2001-2002 Symposium Co-Organizer MRS 2002 Fall meeting

2000 Member of BESAC sub-panel evaluating LANSCE and IPNS

1999-2000 International Advisory Committee for HFM2000 conference on Highly Frustrated Magnetism held at Waterloo University, Canada June 2000

2000- Referee for Science and Nature

1999-2002 Member of SNS Instrumentation Oversight Committee

1999-2003 Member of the DOE Basic Energy Sciences Advisory Committee

1997-1998 Chairman of the executive committee of the Los Alamos Neutron Science Center Users Group

1996-1997 Vice chairman of the executive committee of the Los Alamos Neutron Science Center Users Group

1996 Member of subpanel evaluating upgrade proposals at US spallation neutron sources for the DOE

1995 Invited participant in work shop evaluating the merits of a long pulse spallation neutron source in the USA

1988- Editorial Consultant: Physical Review Letters (sometimes as Divisional Associate Editor), Physical Review B, Physica B and Journal of Applied Physics

1993 Chairman, Condensed Matter Physics Working Group at workshop on Opportunities at Future Spallation Neutron Sources

1991-1994 Summer visitor, National Institute of Standards and Technology

1991 Summer Visitor, Risø National Laboratory

1987 Visiting Scientist, AECL, Chalk River Nuclear Labs, Canada

1987 Visiting Scientist, AT&T Bell Laboratories, Murray Hill, New Jersey.

Graduate Students:

Leshan Zhao, 2024-present

Christos Kakogiannis. 2023-present

Mikia Balkew, 2022-present

Rowan Ranson, 2022-2023

Chris Lygouras, 2019-present

Tim Reeder, 2017-present

Vincent Morano, 2019-2024

Alireza Ghasemi, 2018-2024

Yi Luo, Ph. D. 2023. Postdoc at ORNL

Tom Halloran, Ph. D. 2023. Postdoc at U. Maryland

Dr. Youzhe Chen, Ph. D. 2021. Postdoc at Berkeley with R. J. Birgeneau

Dr. Alan Scheie, Ph. D. 2019. Postdoc at ORNL

Dr. Guy Marcus, Ph. D. 2018. Software Engineer at Google

Dr. Wes Fuhrman, Ph. D. 2018. Research staff at JHU-APL

Dr. Lin Lin, second year student visiting from Nanjing University

Dr. Shan Wu, Ph. D. 2017. Tenure track assistant professor, U. Santa Clara
 Dr. Jiajia Wen, Ph. D. 2014. Research staff at SLAC
 Dr. Vivek Thampy, Ph. D. 2012, Research staff at SLAC, Stanford
 Dr. Ivelisse Cabrera, Ph. D. 2010. Research staff at JHU-APL
 Dr. Hong Tao, Ph. D. 2007, Instrument scientist at ORNL
 Dr. Seth Jonas, Ph. D. 2008, Science and Technology Policy Institute
 Dr. Matthew Stone, Ph. D. 2002, shared with D. H. Reich. Instrument scientist at ORNL
 Dr. Ying Chen Ph. D. 2002, shared with D. H. Reich
 Dr. Goran Gasparovic Ph. D. 2004. Directs accounting company in Croatia
 Dr. Yiming Qiu Ph. D. 2002. Instrument scientist at NIST
 Dr. Guangyong Xu, Ph. D. 1998. Instrument scientist at NIST
 Dr. Philip Hamar, Ph. D. 1998, shared with D. H. Reich. In Industry
 Dr. Daniel Dender, Ph. D. 1999, shared with D. H. Reich. Staff at NIST
 Dr. Seunghun Lee, Ph.D. March 1996. Professor at University of Virginia
 Dr. Wei Bao, Ph.D. 1995. Chair Professor at City University of Hong Kong
 Dr. Shaolong Ma, Ph.D. 1994. In Industry.

Postdoctoral fellows supervised:

Dr. Tong Chen 2022-
 Dr. Yishu Wang 2018-2022. Tenure track assistant professor, UTK
 Dr. Jonathan Gaudet 2018-2021. Research Scientist, NCNR, NIST
 Dr. Huiyuan Man 2016-2019. Research Scientist at Stanford University
 Dr. Jonas Kindervater 2015-2018. Project leader, Carl Zeiss, Oberkochen, Germany
 Dr. Mingxuan Fu 2015-2016. Research Scientist, University of Tokyo, Japan
 Dr. Kemp Plumb 2014-2017. Assistant Professor at Brown University
 Dr. Jon Leiner 2013-2015. Instrument Scientist, ORNL
 Dr. Kate Ross, 2012-2014. Associate Professor at Colorado State University until 2021
 Dr. Martin Mourigal, 2011-2014. Associate Professor at Georgia Tech.
 Dr. Harini Barath, 2010-2011. Freelance Science Writer in India
 Dr. Yang Zhao, 2008-2010. Instrument scientist at NIST
 Dr. Yusuke Nambu, 2008-2009. Associate Professor at Tohoku University, Japan
 Dr. Andrei Savici, 2007-2009. Scientific software developer at SNS/ORNL
 Dr. Christopher Stock 2004-2006. Reader at the University of Edinburgh
 Dr. Michel Kenzelmann 2001-2004. Head of Lab. for Neutron Scattering and Imaging, PSI
 Dr. Clemens Ulrich 1999-2000. Professor at Univ. of New South Wales, Australia
 Dr. Igor Zaliznyak 1996-1999. Scientific staff at BNL.

Courses taught :

2024 Fall 171.201 "Special Relativity and Waves"
 2024 Spring Sabbatical at U. Tokyo and UNAM, Mexico
 2023 Fall 171.107 "General Physics I, active learning"
 2023 Spring 171.312 "Statistical Physics and Thermodynamics"
 2022 Fall 171.107 "General Physics I, active learning"
 2022 Spring 171.312 "Statistical Physics and Thermodynamics"
 2021 Fall 171.301 "Electromagnetism Theory II"

2021 Spring 171.764 “ Experimental Techniques in Condensed Matter Physics”
 2020 Fall 171.301 “Electromagnetism Theory II”
 2019 Fall 171.621 “Condensed Matter Physics I”
 2019 Spring 171.622 “Condensed Matter Physics II”
 2018 Fall 171.103 “General Physics I for Biological Sciences”
 2018 Spring 171.622 “Condensed Matter Physics II”
 2017 Fall 171.103 “General Physics I for Biological Sciences”
 2017 Spring 171.622 “Condensed Matter Physics II”
 2016 Fall 171.103 “General Physics I for Biological Sciences”
 2016 Spring 171.622 “Condensed Matter Physics II”
 2015 Fall 171.103 “General Physics I for Biological Sciences”
 2015 Spring 171.102 “General Physics II for Physical Sciences”
 2014 Fall 171.751 “Neutron Scattering and Quantum Condensed Matter Physics”
 2014 Spring 171.102 “General Physics II”
 2013 Spring 171.102 “General Physics II”
 2012 Fall 171.751 “Neutron Scattering and Quantum Condensed Matter Physics”
 2012 Spring 171.102 “General Physics II”
 2011 Spring 171.712 “Intermediate Seminar for Physics Graduate Students”
 2010 Fall 171.101 “General Physics”
 2010 Spring 171.106 “Electromagnetic Theory I”
 2009 Fall 171.634 “Topics in Magnetism”
 2009 Spring 171.106 “Electromagnetic Theory I”
 2008 Fall 171.303 “Introduction to Quantum Mechanics I”
 2008 Spring 171.304 “Introduction to Quantum Mechanics II”
 2007 Fall 171.303 “Introduction to Quantum Mechanics I”
 2007 Spring 172.632 “Physics Seminar”
 2007 Spring 171.304 “Introduction to Quantum Mechanics II”
 2006 Fall 172.631 “Physics Seminar”
 2006 Fall 171.303 “Introduction to Quantum Mechanics I”
 2006 Spring 172.632 “Physics Seminar”
 2006 Spring 171.304 “Introduction to Quantum Mechanics II”
 2005 Fall 172.631 “Physics Seminar”
 2005 Fall 171.303 “Introduction to Quantum Mechanics I”
 2005 Spring 172.632 “Physics Seminar”
 2005 Spring 171.302 “Topics in Advanced Electromagnetic Theory”
 2004 Fall 172.631 “Physics Seminar”
 2004 Fall 171.301 “Introduction to Electromagnetic Theory”
 2004 Spring 171.302 “Topics in Advanced Electromagnetic Theory”
 2003 Fall 171.301 “Introduction to Electromagnetic Theory”
 2003 Spring Sabbatical leave
 2002 Fall 171.301 “Introduction to Electromagnetic Theory”
 2002 Spring 171.312 “Statistical Physics and Thermodynamics”
 2001 Fall 171.764 “ Experimental Techniques in Condensed Matter Physics”
 2001 Spring 171.312 “Statistical Physics and Thermodynamics”
 2000 Fall Graduate course on “Magnetism”

2000 Spring 171.104 "General Physics for Bio-Science Majors II"
1999 Fall 171.103 "General Physics for Bio-Science Majors I"
1999 Spring 171.112 "General Physics Laboratory."
1998 Fall 171.103 "General Physics for Bio-Science Majors I"
1998 Spring 171.112 "General Physics Laboratory."
1997 Fall 171.103 "General Physics for Bio-Science Majors I"
1997 Spring 171.764 "Experimental Techniques in Condensed Matter Physics"
1996 Fall 171.103 "General Physics for Bio-Science Majors I"
1996 Spring 171.634 "Magnetism"
1995 Fall 171.621 "Condensed Matter Physics I"
1995 Spring 171.632 "Scattering Techniques in Materials Science"
1994 Fall 171.621 "Condensed Matter Physics I"
1994 Spring 171.622 "Condensed Matter Physics II"
1993 Fall 171.621 "Condensed Matter Physics I"
1993 Spring 171.302 "Introduction to E & M"
1992 Fall 171.621 "Condensed Matter Physics I"
1992 Spring 171.622 "Condensed Matter Physics II"
1991 Fall 171.621 "Condensed Matter Physics I"
1991 Spring 172.632 "Physics seminar."

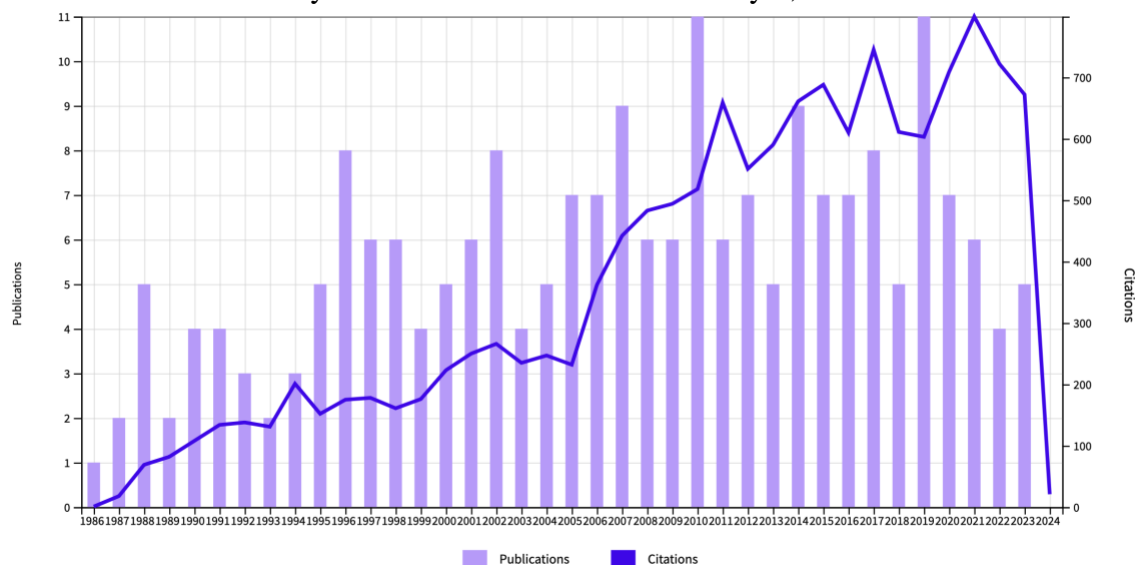
Publication List for Collin L. Broholm

ResearcherID: [E-8228-2011](https://orcid.org/E-8228-2011)

ORCID: [0000-0002-1569-9892](https://orcid.org/0000-0002-1569-9892)

Publons: <https://publons.com/researcher/1649598/collin-broholm/>

Citation counts and analysis from Web of Science February 4, 2024.



Total number of citations on ISI: **14,117**

Average Citations per ISI paper: **65.4**

h-number: **63** (number of papers with h or more citations)

m-number: **1.66** (annual rate of increase in h-number)

- Boxed papers were cited more than 100 times.
- **Bold papers** were cited at least 10 times in the most recent full calendar year.

1. “Zero-field Hall effect emerging from a non-Fermi liquid in the collinear antiferromagnet $V_{1/3}\text{NbS}_2$,” Mayukh Kumar Ray Mingxuan Fu, Youzhe Chen, Taishi Chen, Takuya Nomoto, Shiro Sakai, Motoharu Kitatani, Motoaki Hirayama, Shusaku Imajo, Takahiro Tomita, Akito Sakai, Daisuke Nishio-Hamane, Gregory T. McCandless, MichiTo Suzuki, Zhijun Xu, Yang Zhao, Tom Fennell, Yoshimitsu Kohama, Julia Y. Chan, Ryotaro Arita, Collin Broholm, Satoru Nakatsuji, preprint intended for Nature Physics (2024).
2. “Anisotropic magnetic domains in the Weyl semimetal $\text{Co}_3\text{Sn}_2\text{S}_2$,” Yi Luo, J. Gaudet, M. Sinha, C. Lygouras, C. M. Hoffmann, A. A. Aczel, L. DeBeer-Schmitt, T. M. McQueen, and C. Broholm, preprint intended for Phys. Rev. B (2024).

3. "Formation of a simple cubic antiferromagnet through charge ordering in a double Dirac material," T. Berry, V. C. Morano, T. Halloran, X. Zhang, T. J. Slade, A. Sapkota, S. L. Bud'ko, W. Xie, D. H. Ryan, Z. Xu, Y. Zhao, J. W. Lynn, T. Fennell, P. C. Canfield, C. L. Broholm, and T. M. McQueen, <https://arxiv.org/abs/2303.02218>, preprint intended for Phys. Rev. B (2024).
4. "Non-coplanar Long Wavelength Magnetism in the Weyl Semimetal Mn_3Sn ," Y. Chen, J. Gaudet, G. G. Marcus, T. Chen, T. Tomita, M. Ikhlas, Y. Zhao, W. C. Chen, J. Stremper, S. Nakatsuji, and C. Broholm, submitted to Phys. Rev. Lett. (2024).
5. "Non-collinear 2k antiferromagnetism in the Zintl semiconductor $Eu_5In_2Sb_6$," Vincent C. Morano, Jonathan Gaudet, Nicodemos Varnava, Tanya Berry, Thomas Halloran, Xiaoping Wang, Christina M. Hoffman, Guangyong Xu, Jeffrey Lynn, Tyrel McQueen, David Vanderbilt, and Collin L. Broholm, [Phys. Rev. B **109**, 014432 \(2024\)](#).
6. "Anisotropic anomalous transport in the kagome-based topological antiferromagnetic Mn_3Ga epitaxial thin films," M. Raju, Ralph Romero, Daisuke Nishio-Hamane, Ryota Uesugi, Mihiro Asakura, Zhenisbek Tagay, Tomoya Higo, N. P. Armitage, Collin Broholm, and Satoru Nakatsuji, [Phys. Rev. Materials **8**, 014204 \(2024\)](#) [Editors' Suggestion].
7. "Magnetic Material with a Kagome Net of Dimers," Kasey P. Devlin, Tong Chen, Weiwei Xie, Collin L. Broholm, and Robert J. Cava, [ACS Applied Electronic Materials **5** \(5\), 2482-2486 \(2023\)](#).
8. "Topological surface states in the Kondo insulator YbB_{12} revealed via planar tunneling spectroscopy," A. Gupta, A. Weiser, L. Pressley, Y. Luo, C. Lygouras, J. Trowbridge, W. A. Phelan, C. L. Broholm, T. M. McQueen, and W. K. Park, [Phys. Rev. B **107**, 165132 \(2023\)](#).
9. "Spin-orbital order and excitons in magnetoresistive $HoBi$," J. Gaudet, H.-Y. Yang, E. M. Smith, T. Halloran, J. P. Clancy, J. A. Rodriguez-Rivera, Guangyong Xu, Y. Zhao, W. C. Chen, G. Sala, A. A. Aczel, B. D. Gaulin, F. Tafti, and C. Broholm, [Phys. Rev. B **107**, 104423 \(2023\)](#).
10. "Quantum paramagnetism in a non-Kramers rare-earth oxide: Monoclinic $Pr_2Ti_2O_7$," H. Man, A. Ghasemi, M. Adnani, M. A. Siegler, E. Anber, Y. Li, C. L. Chien, M. L. Taheri, C. W. Chu, C. L. Broholm, and S. M. Koohpayeh, [Phys. Rev. Materials **7**, 063401 \(2023\)](#).
11. "Spin-orbital liquid state and liquid-gas metamagnetic transition on a pyrochlore lattice," N. Tang, Y. Gritsenko, K. Kimura, S. Bhattacharjee, A. Sakai, Mingxuan Fu, H. Takeda, Huiyuan Man, K. Sugawara, Y. Matsumoto, Y. Shimura, Jiajia

- Wen, C. Broholm, H. Sawa, M. Takigawa, T. Sakakibara, S. Zherlitsyn, J. Wosnitza, R. Moessner, and S. Nakatsuji, [Nature Physics, 19, 92–98 \(2023\)](#).
12. “Geometrical frustration versus Kitaev interactions in $\text{BaCo}_2(\text{AsO}_4)_2$,” Thomas Halloran, Félix Desrochers, Emily Z. Zhang, Tong Chen, Li Ern Chern, Zhijun Xu, Barry Winn, M. K. Graves-Brook, M. B. Stone, Alexander I. Kolesnikov, Yiming Qiu, Ruidan Zhong, Robert Cava, Yong Baek Kim, Collin Broholm, [Proceedings of the National Academy of Sciences 120 \(2\), e2215509119 \(2023\)](#).
 13. “A magnetic continuum in the cobalt-based honeycomb magnet $\text{BaCo}_2(\text{AsO}_4)_2$,” X. S. Zhang, Yuanyuan Xu, T. Halloran, Ruidan Zhong, C. Broholm, R. J. Cava, N. Drichko, N. P. Armitage, [Nature Materials 22, 58–63 \(2023\)](#).
 14. “A flexible neutron spectrometer concept with a new ultra-high field steady-state vertical-bore magnet,” B. L. Winn, C. Broholm, M. D. Bird, B. Haberl, G. E. Granroth, and J. Katsaras, [Review of Scientific Instruments, 93, 123903 \(2022\)](#).
 15. “Magnetic excitations and interactions in the Kitaev hyperhoneycomb iridate $\beta\text{-Li}_2\text{IrO}_3$ ” T. Halloran, Yishu Wang, Mengqun Li, Ioannis Rousochatzakis, Prashant Chauhan, M. B. Stone, Tomohiro Takayama, Hidenori Takagi, N. P. Armitage, N. B. Perkins, and Collin Broholm, [Physical Review B 106, 064423 \(2022\)](#).
 16. “Beyond magnons in $\text{Nd}_2\text{ScNbO}_7$: An Ising pyrochlore antiferromagnet with all in all out order and random fields”, A. Scheie, M. Sanders, Xin Gui, Yiming Qiu, T.R. Prisk, R.J. Cava, and C. Broholm, [Phys. Rev. B 104, 134418, \(2021\)](#).
 17. “Neutron scattering study of the kagome metal $\text{Sc}_3\text{Mn}_3\text{Al}_7\text{Si}_5$ ”, X. Y. Li, D. Reig-i-Plessis, P. -F. Liu, S. Wu, B. -T. Wang, A. M. Hallas, M. B. Stone, C. Broholm, and M. C. Aronson, [Phys. Rev B 104, 134305 \(2021\)](#).
 18. **“Weyl-mediated helical magnetism in NdAlSi ,” Jonathan Gaudet, Hung-Yu Yang, Santu Baidya, Baozhu Lu, Guangyong Xu, Yang Zhao, Jose A. Rodriguez, Christina M. Hoffmann, David E. Graf, Darius H. Torchinsky, Predrag Nikolić, David Vanderbilt, Fazel Tafti, and Collin L. Broholm, [Nature Materials 20, 1650–1656 \(2021\)](#).**
 19. “Monopolar and dipolar relaxation in spin ice $\text{Ho}_2\text{Ti}_2\text{O}_7$,” Yishu Wang, T. Reeder, Y. Karaki, J. Kindervater, T. Halloran, N. Maliszewskyj, Yiming Qiu, J. A. Rodriguez, S. Gladchenko, S. M. Koohpayeh, S. Nakatsuji, and C. Broholm, [Sci. Adv. 16, eabg0908, \(2021\)](#).
 20. “Pristine quantum criticality in a Kondo semimetal,” W. T. Fuhrman, A. Sidorenko, J. Hänel, H. Winkler, A. Prokofiev, J. A. Rodriguez-Rivera, Y. Qiu, P. Blaha, Q. Si, C. L. Broholm, and S. Paschen, [Sci. Adv. 7, eabf0134, \(2021\)](#).
 21. “Noncollinear ferromagnetic Weyl semimetal with anisotropic anomalous Hall effect,” Hung-Yu Yang, Bahadur Singh, Jonathan Gaudet, Baozhu Lu, Cheng-Yi

- Huang, Wei-Chi Chiu, Shin-Ming Huang, Baokai Wang, Faranak Bahrami, Bochao Xu, Jacob Franklin, Ilya Sochnikov, David E. Graf, Guangyong Xu, Yang Zhao, Christina M. Hoffman, Hsin Lin, Darius H. Torchinsky, Collin L. Broholm, Arun Bansil, Fazel Tafti, [Phys. Rev. B **103**, 115143, 2021.](#)
22. “Impact of the lattice on magnetic properties and possible spin nematicity in the $S=1$ triangular antiferromagnet NiGa_2S_4 ,” M. E. Valentine, T. Higo, Y. Nambu, D. Chaudhuri, J. Wen, C. Broholm, S. Nakatsuji and N. Drichko, [Phys. Rev. Lett. **125**, 197201, \(2020\).](#)
 23. “Multiphase Magnetism in $\text{Yb}_2\text{Ti}_2\text{O}_7$,” A. Scheie, J. Kindervater, S. Zhang, H.J. Changlani, G. Sa la, G. Ehlers, A. Heinemann, G. S. Tucker, S.M. Koohpayeh, C. Broholm, [Proceedings of the National Academy of Sciences, 202008791, \(2020\).](#)
 24. “Device for magnetic stimulation of the vestibular system,” Daniel H Reich, Collin L Broholm, David Zee, Dale Roberts, Michael C Schubert, Jorge Otero-Millan, Bryan Ward, US Patent Number 10646723, May 12, (2020).
 25. “Low energy magnons in the chiral ferrimagnet Cu_2OSeO_3 : a coarse-grained approach,” Yi Luo, G. G. Marcus, B. A. Trump, J. Kindervater, M. B. Stone, J. A. Rodriguez-Rivera, Yiming Qiu, T. M. McQueen, O. Tchernyshyov, and C. Broholm, [Phys. Rev. B **101**, 144411 \(2020\).](#)
 26. “Antichiral spin order its Goldstone modes and their hybridization with phonons in the topological semimetal Mn_3Ge ,” Y. Chen, J. Gaudet, S. Dasgupta, G. G. Marcus, J. Lin, T. Chen, T. Tomita, M. Ikhlas, Y. Zhao, W. C. Chen, M. B. Stone, O. Tchernyshyov, S. Nakatsuji, C. Broholm, [Phys. Rev. B **102**, 054403, \(2020\).](#)
 27. “Orientation dependence of the magnetic phase diagram of $\text{Yb}_2\text{Ti}_2\text{O}_7$,” S. Säubert, A. Scheie, C. Duvinage, J. Kindervater, S. Zhang, H. J. Changlani, Guangyong Xu, S. M. Koohpayeh, O. Tchernyshyov, C. L. Broholm, and C. Pfleiderer, [Phys. Rev. B **101**, 174434, \(2020\).](#)
 28. “Anisotropic effect of a magnetic field on the neutron spin resonance in FeSe ,” Tong Chen, Youzhe Chen, D. W. Tam, B. Gao, Y. Qiu, A. Schneidewind, I. Radelytskyi, K. Prokes, S. Chi, M. Matsuda, C. Broholm, and P. Dai, [Phys. Rev. B **101**, 140504\(R\) \(2020\).](#)
 - 29. “Quantum spin liquids,” C. Broholm, R. J. Cava, S. A. Kivelson, D. G. Nocera, M. R. Norman, and, T. Senthil, [Science, Vol. 367, Issue 6475, \(2020\).](#)**
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Invited Talks at International Meetings

1. “Probing nano-structured quantum magnetism with neutrons,” Annual meeting of DOE neutron scattering program, January 10 (2024).
2. “Quantum fluctuations on triangular lattices of Ising spins,” Conference on Fractionalization and Emergent Gauge Fields in Quantum Matter, International Center for Theoretical Physics, Trieste, Italy, December 5 (2023).
3. “Adding a time dimension to neutron scattering,” Workshop on Transient Phenomena, Oak Ridge National Laboratory, November 7 (2023).
4. “High pressure studies of quantum materials with neutron scattering,” 80th Pittsburgh Diffraction Conference, Pittsburg, PA, October 7 (2023).
5. “Quantum Magnetism on Some Triangular Lattices,” Annual meeting of the EPIQS investigators of the Gordon and Betty Moore Foundation, Rancho Bernardo Inn, San Diego, CA, July 31 (2023).
6. “Non-coplanar Long Wavelength Magnetism in the Weyl Semimetal Mn_3Sn ,” workshop at the University of Tokyo, Japan, March 8, (2023).
7. “Quantum Spin Liquids and their Instabilities,” Korean Academy of Science and Technology, online inter-academy workshop on quantum materials, December 9, (2022).
8. “Emerging applications of quantum technologies,” Canadian Institute for Neutron Scattering, Quantum Frontier Symposium: Emerging quantum materials, their applications, and the need for neutron scattering techniques. Online symposium December 9, (2022).
9. “Magnetism in some topological semi-metals,” International Workshop on Frustrated Magnetism and Topology, Organized by MPI Dresden, My talk delivered online, Radisson Blu Radebeul, Nov 7 - 8, (2022).
10. “Quantum Critical and Incommensurate Magnetism in Topological Semi-metals,” Workshop on Frustrated Magnets and Insulators, My talk delivered online, International Centre for Theoretical Sciences (ICTS), Bangalore, India, September 5 -16, (2022).
11. “Magnetic Excitations and Interactions in the Honeycomb Antiferromagnet $BaCo_2(AsO_4)_2$,” Brookhaven National Laboratory, NSLS-2 & CFN Users' Meeting Workshop #3 “Correlated Topological Materials for Quantum Information Sciences,” May 23 (2022).
12. “Magnetic Excitations and Interactions in the Honeycomb Antiferromagnet $BaCo_2(AsO_4)_2$,” Trends in Quantum Magnetism Workshop 2020, Switzerland April 26, (2022).

13. “Helical magnetism in Weyl materials,” Invited talk at the 2022 APS March meeting, March 14, (2022).
14. “Emergent quasi-particles in frustrated magnets,” 1st international symposium on trans-scale quantum systems, University of Tokyo (remote meeting), October 28, (2021).
15. “Quantum critical and incommensurate magnetism in topological semi-metals,” Annual meeting of the EPIQS program by the Gordon and Betty Moore Foundation, August 10, (2021).
16. “Exploring quantum magnetism with neutrons,” Lecture 2 at the PARADIM summer school on quantum materials, Johns Hopkins University, August 2, (2021).
17. “Neutron scattering & quantum materials,” Lecture 1 at the PARADIM summer school on quantum materials, Johns Hopkins University, (remote meeting), August 2, (2021).
18. “Rare earth magnetism in non-centrosymmetric semi-metals,” Workshop on Quantum Materials: New Insights from Neutron Scattering, Department of Physics and Astronomy, University of Minnesota, (remote meeting), June 9, (2021).
19. “Magnetism in SmB₆,” [video](https://virtualseienceforum.org/), Quantum Oscillations in Insulators, <https://virtualseienceforum.org/>, (remote meeting), February 18-19 (2021).
20. “Combining neutrons and muons to understand quantum materials,” Scientific Opportunities for a US-based Muon Spectroscopy Facility, <https://www.mrs.org/muon-2021>, February 1-2 (2021).
21. “Probing Quantum Materials with Neutrons,” Tutorial at the annual meeting of the Japanese Neutron Scattering Society, Virtual meeting, <http://octa.tagen.tohoku.ac.jp/JSNS2020/program.html>, (remote meeting), November 9, (2020).
22. “Frustrated Magnetism in Mott Insulating (V_{1-x}Cr_x)₂O₃,” KITP virtual conference on Correlated Systems with Multicomponent Local Hilbert Spaces, <https://www.kitp.ucsb.edu/activities/correlated20>, (remote meeting), November 5, (2020).
23. “Magnetic structure and excitations in Mn₃X,” Mn₃X workshop, Virtual meeting organized by Argonne National Laboratory, <https://www.youtube.com/watch?v=YkdvET4b4KM>, (remote meeting), August 19 (2020).
24. “Towards the experimental realization of a quantum spin liquid,” Munich Conference on Quantum Science and Technology 2020, remote conference presentation, <https://www.mcqst.de/mcqst2020/home/>, (remote meeting), July 6, (2020).

25. “Magneto-elasticity in Fragile Magnets,” SPICE workshop on Elastic Tuning and Response of Electronic Order, Schloß Waldthausen, Mainz, Germany, December 9 – 11, (2019).
26. “The Quest for a Quantum Spin Liquid,” Plenary talk, International Conference on Strongly Correlated Electrons, Okayama, Japan September 27, 2019.
27. “En Route to a Spin Liquid?” Cargese Summer School on Emergent Phenomena in Correlated Quantum Matter, August 16, 2019.
28. “Exploring Quantum Magnetism with Neutrons,” Cargese Summer School on Emergent Phenomena in Correlated Quantum Matter, August 15, 2019.
29. “Entangled and out of equilibrium: New methods to probe dynamic magnetism with neutrons,” Advanced Working Group on Quantum Spin Dynamics 2019, Cambridge University, July 22, 2019.
30. “Origins of diffuse inelastic scattering from frustrated quantum magnets,” Nanjing Conference on Quantum Materials, June 2019.
31. “Origins of diffuse inelastic scattering from frustrated quantum magnets,” CIFAR meeting on quantum materials, Vancouver, Canada, April 13, 2019.
32. “Incommensurate magnetism in Ce-based heavy fermion systems,” Topological Phases and Functionality of Correlated Electron Systems 2019, <http://tpfc.issp.u-tokyo.ac.jp/index.htm>, Kashiwanoha Campus Station Satellite, the University of Tokyo, February 20, 2019.
33. “Frustrated Magnetism in Mott Insulating $(V_{1-x}Cr_x)_2O_3$,” The ICAM-NCTS Annual Meeting and Frontiers of Condensed Matter Workshop on Jan. 14th -18th, Hsinchu, Taiwan (2019).
34. “Quantum Materials,” at NSF sponsored workshop on “Enabling Quantum Leap: Convergent Approach to the Challenges of Moore's Law,” Georgetown University November 13-15, 2018.
35. “Intrinsic and Extrinsic Magnetism of SrB_6 ,” FOTOK 2018 Workshop at MPIPKS in Dresden, Germany July 23-27, 2018.
36. “Frustrated Magnetism in Pyrochlore Fluorides,” Invited talk at HFM-2018 at U. California, Davis, July 14, 2018.
37. “A brief introduction to magnetic neutron scattering,” Tutorial at the American Conference on Neutron Scattering, College Park, MD, June 24, 2018.
38. “The Quest for a Quantum Spin Liquid,” Correlated Electron Systems, Novel Developments, Workshop at the Fine Institute University of Minnesota, Minneapolis San Paul, May 17-19, 2018.
39. “The Quest for a Quantum Spin Liquid,” Symposium for Ian Affleck, Vancouver, BC, Canada, April 26-28, 2018.

40. "The Quest for a Quantum Spin Liquid," Quantum Materials Symposium 2018 QMS2018 in South Korea. Muju Ski Resort February 24-March 1 2018.
41. "How to Know When We Have a Spin Liquid and Why We Should Care," at the "New Directions" winter-school on Fundamentals of Quantum Materials, Winter-school held at The Hotel, The University of Maryland January 12, 2018.
42. "Incommensurate magnetism in Ce-based heavy fermion systems," Aspen Winter Conference "High Temperature Superconductivity - Unifying Themes in Diverse Materials," January 16, 2018.
43. "Exploring Quantum Materials with Neutrons at the NCNR," 50th Anniversary of the NBSR facility, Gaithersburg, MD December 7, 2017.
44. "The Continuing Story of Simple Cubic SmB₆," Gordon Research Conference on "Structure and Dynamics of Materials on Many Length and Time Scales," Hong Kong University of Science and Technology, August 9, 2017.
45. "Incommensurate magnetism in Ce-based heavy fermion systems," International Conference on Strongly Correlated Electron Systems, Prague, Czech Republic, July 19, 2017.
46. "Incommensurate magnetism in Ce-based heavy fermion systems," at 8th HTC London Summer Programme in Condensed Matter Physics, July 6, 2017.
47. "Disorder versus fractionalization in frustrated quantum magnets," 15th Theoretical and Experimental Magnetism Meeting (TEMM), UK-Korea workshop on strongly correlated systems and IOP Magnetism-TCM joint group symposium, July 6, 2017.
48. "Disorder versus fractionalization in frustrated quantum magnets," at 3rd Conference of Condensed Matter Physics of China, Shanghai, June 26, 2017.
49. "Quantum Magnetism on the Pyrochlore Lattice," Gordon Research Conference on "Topological Phases: From Fundamentals to New Discoveries," Hong Kong University of Science and Technology, June 21, 2017.
50. "Lobed phase diagram of Yb₂Ti₂O₇ in (111) magnetic field," International workshop on quantum spin ice at the Perimeter Institute, Waterloo, Canada, June 7, 2017.
51. "Exploring quantum materials with intense beams of cold & polarized neutrons on MACS," Workshop on cold neutron spectroscopy at HFIR (MANTA), May 4, 2017.
52. "Disorder versus fractionalization in frustrated quantum magnets," TPFC 2017, Symposium on Topological Phases and Functionality of Correlated Electron Systems 2017, Kashiwanoha Campus Station, Japan, February 20, 2017.

53. "Incommensurate Magnetism in Ce-based Heavy Fermion Systems," RCQM Workshop on Strongly Correlated Materials: Topology and Quantum Phase Transitions. Rice University, January 24, 2017.
54. "A quantum leap in high magnetic field neutron scattering," Meeting of the American Chemical Association, Denver Colorado, July 24-28, 2016.
55. "Neutron scattering as a probe of hybridized bands in Kondo insulators," Gordon Research Conference on New Kinds of Electronic Order in Quantum Materials, Mount Holyoke College, South Hadley, MA, June 26 - July 1, 2016.
56. "Exotic local moment magnetism probed by neutron scattering," and "Spin correlations in conducting and superconducting materials" at FTPI Summer school on Advances in strongly correlated electronic systems (ASCES2016), June 13-18, 2016.
57. "Basic Research Needs Workshop on Quantum Materials for Energy Relevant Technology," Presentation to the DOE Basic Energy Sciences Advisory Committee. June 9, 2016.
58. "Neutron scattering from the Kondo insulator SmB₆," International Meeting on Strongly Correlated Electrons (SCES2016), Hangzhou, China on May 8-13, 2016.
59. "Neutron scattering from the Kondo Insulator SmB₆," APS Meeting, Baltimore, March 17, 2016.
60. "Neutron scattering as a probe of hybridized bands in Kondo insulators," at RCQM Workshop on Strongly Correlated Electron Materials, Rice University, November 20, 2015.
61. "Summary of QCMD Grand Challenge Workshop," Second Target Station workshop, Spallation Neutron Source, Oak Ridge National Laboratories, October 27, 2015.
62. "Spin ice order in Pr_{2+x}Ir_{2-x}O_{7-y}," CIFAR fall meeting, Montreal, Canada, October 3, 2015.
63. "Spin-Peierls-like Phase Transitions in Materials with Competing Exchange Interactions," Quantum Magnets 2015, Kolymbari, Crete September 16, 2015.
64. "Magnetic Excitations in the Kondo Insulator SmB₆," KITP workshop on "Novel States in Spin-Orbit Coupled Quantum Matter: from Models to Materials," July 31, 2015.
65. "Neutrons and Quantum Materials," EPIQS meeting of investigators, San Francisco, August 15, 2015.
66. "Spin Fluctuations in Frustrated Magnets; Insulating, Metallic, and Superconducting" at meeting of Advanced Working Group on Itinerant Frustration 2015, Cambridge, UK July 21, 2015.

67. “Quantum Fluctuations in Spin Ice-like $\text{Pr}_2\text{Zr}_2\text{O}_7$,” International Conference on Magnetism, Barcelona, Spain July 9, 2015.
68. “Magnetic Neutron Scattering,” Summer School on Neutron and X-ray scattering, Oak Ridge National Laboratory, June 2015.
69. “Exciton in the Topological Kondo Insulator SmB_6 ,” Michigan meeting on “Strongly Correlated Topological Insulators: SmB_6 and Beyond,” University of Michigan, June 5, 2015.
70. “Excitons in Kondo Lattices,” Vancouver meeting on frontiers in condensed matter physics organized by Y. Uemura, TRIUMF, Vancouver, May 17, 2015.
71. “Excitons in Kondo Lattices,” NSF workshop on Emerging Frontiers in Experimental Condensed Matter Physics of Strongly Correlated Electron Systems, Arlington, VA May 15, 2015.
72. “Exciton in the Topological Kondo Insulator SmB_6 ,” Yukawa Workshop on Novel Quantum States in Condensed Matter 2014, Yukawa Institute for Theoretical Physics, Kyoto, Japan, November 19, 2014.
73. “Magnetic Excitations in SmB_6 ,” Twenty-Third Congress and General Assembly of the International Union of Crystallography, Montreal, Canada, August 12, 2014.
74. “Metastability & Incommensurability in frustrated magnets,” 2014 Conference on Highly Frustrated Magnetism, Cambridge, United Kingdom, July 7, 2014.
75. “Unraveling the Complex Dynamics of Frustrated Magnets with Neutrons,” Tutorial at the 2014 Conference on Highly Frustrated Magnetism, Cambridge, United Kingdom, July 6, 2014.
76. “Magnetic Excitations in SmB_6 ,” Workshop on Quantum Magnetism at the Aspen Center for Physics, Aspen, Colorado, June 2014.
77. “Molecular Quantum Magnetism in $\text{LiZn}_2\text{Mo}_3\text{O}_8$,” Spring meeting of the German Physical Society, Dresden, Germany, March 31, 2014.
78. “Magnetic Excitations in SmB_6 ,” International Workshop on Topological Materials Out of Equilibrium, MPIPKS, Dresden Germany, March 2014.
79. “Excitons in Kondo Lattices,” Aspen Center for Physics 2014 Winter Conference “Beyond Quasiparticles: New Paradigms for Quantum Fluids,” January 12 - 18, (2014).
80. “Neutron scattering from short range ordered quantum spin systems”, Advances in quantum Magnets – dynamics, Workshop at Kolymbari, Crete, Greece September 15, (2013).
81. “Neutron Scattering & Frustrated Magnetism”, International Materials Conference, Cancun, Mexico, August 14 (2013).

82. "Entangled Magnetism," C. Broholm, International Workshop on "New states of matter and their excitations," Berlin, Germany April 22-24, (2013).
83. "Entangled magnetism: synthesis, detection, and potential applications," C. Broholm, Symposium on Industrial Physics, March Meeting of the American Physical Society, Baltimore, MD March (2013).
84. "Incommensurate correlations & mesoscopic spin resonance in YbRh₂Si₂," March Meeting of the American Physical Society, Baltimore, MD March (2013)
85. "Incommensurate correlations & mesoscopic spin resonance in YbRh₂Si₂," second workshop on "Heavy Fermions and Quantum Phase Transitions" at the Institute of Physics, Chinese Academy of Sciences in Beijing from November 11 (2012).
86. "Quantum fluctuations in exchange based spin-ice," International Workshop on Exotic Phases of Strongly Correlated Electron Systems, Kavli Institute for Theoretical Physics, Santa Barbara, California, October 10 (2012).
87. "Multichannel Cold Neutron Spectroscopy on MACS," Tenth International Conference on Quasielastic Neutron Scattering and Workshop on Inelastic Neutron Scattering Instrumentation, Nikko, Japan October 2 (2012).
88. "Incommensurate correlations & mesoscopic spin resonance in YbRh₂Si₂," Workshop on Frontiers in Quantum Materials Fields Institute Center for Quantum Materials, University of Toronto, Toronto, Canada, September 25 (2012).
89. "Incommensurate correlations & mesoscopic spin resonance in YbRh₂Si₂," Innovations in Strongly Correlated Electronic Systems: School and Workshop, Trieste, Italy August 15 (2012).
90. "Friedel-like Oscillations in Superconducting Fe_{1+y}Te_{0.62}Se_{0.38}," Materials and Mechanisms of Superconductivity, M2S, Washington DC, July 30 (2012).
91. "Spin-orbital short-range order on a honeycomb-based lattice," International Conference on Magnetism, Busan, South Korea, July 9, (2012).
92. "Quantum fluctuations in exchange based spin-ice," International Conference on Highly Frustrated Magnetism, Hamilton, Ontario, Canada, June 8 (2012).
93. "Spin-orbital short-range order on a honeycomb-based lattice," Meeting of the Canadian Institute for Advanced Research, Quantum Materials Program, Toronto, Canada, May 19 (2012).
94. "Scientific progress & opportunities using advanced neutron sources & instrumentation", International Workshop on instrumentation for the European Spallation Neutron Source, Abingdon, United Kingdom, February 24 (2012).
95. "Field Dependent Spin Resonance in CeCoIn₅", International Conference on Low Temperature Physics, Beijing, China August 13, (2011).

96. "Magnetic Excitations in the different phases of URu₂Si₂", Japanese conference on heavy Fermion Physics, Institute for Solid State Physics, Kashiwa, Japan, June 23, (2011).
97. "Continuum scattering in the triangular lattice s=1 antiferromagnet NiGa₂S₄", International Conference on Novel Phenomena in Frustrated Systems, Santa Fe, NM, May (2011).
98. "Neutron Scattering from Magnetized Quantum Magnets", International Meeting on new Opportunities for Neutron Scattering at High Magnetic Fields, Helmholtz Zentrum, Berlin, Germany, March 31, (2011).
99. "Continuum scattering in the triangular lattice s=1 antiferromagnet NiGa₂S₄", C. Broholm, International Conference on Frustration in Condensed Matter (ICFCM), Sendai, JAPAN, Jan. 11-14, (2011).
100. "Five Neutron Experiments that Advanced Hard Condensed Matter", New Opportunities in Hard Condensed Matter through Neutron Scattering, Oak Ridge NL, TN, December 16-18, (2010).
101. "Magnetic Fluctuations in Iron Superconductors", The 23rd General Conference of the Condensed Matter Division. of the European Physical Society, August 31 (2010).
102. "The Edge of Magnetism", C. Broholm, the American Conference on Neutron Scattering, Ottawa, Canada, June 26, (2010).
103. "Magnetic Neutron Scattering", C. Broholm, Tutorial at the American Conference on Neutron Scattering, Ottawa, Canada, June 26, (2010).
104. "Frustration and iron based superconductivity", International Conference on Spectroscopy in Novel Superconductors, Shanghai, China, May (2010).
105. "Frustration and iron based superconductivity", CIFAR meeting Montreal, Canada, May (2010).
106. "Spin Resonance in Superconductors near Magnetic Instabilities", ninth International Conference on Materials and Mechanisms of Superconductivity, Tokyo, Japan, September 9, (2009).
107. "Ferroelectricity in Frustrated Magnets", Euro-Japan Frustration 2009, Lyon, France, May 13, (2009).
108. "Quantum Critical Spin Fluctuations in YbRh₂Si₂", C. Broholm, International Workshop on Quantum Critical Phenomena and Novel Phases in Super-clean Materials, Hawaii Imin International Conference Center , Honolulu, Hawaii, January 13 (2009).

109. "Ferroelectricity out of Magnetic Frustration", 2nd International Symposium on Anomalous Quantum Materials (ISAQM2008) and the 7th Asia-Pacific Workshop, Tokyo, Japan November 9 (2008).
110. "Surprises on Triangular Lattices", 3rd International Workshop on Ordering Phenomena in Transition Metal Oxides, Augsburg, Germany, October 6 (2008).
111. "Probing Frustration through Neutron Scattering", Tutorial at the International Conference on Highly Frustrated Magnetism, Braunschweig, September 7 (2008).
112. "Spin fluctuations and Superconductivity in CeCoIn₅", Workshop on Strongly Correlated Electron Superconductivity, The Inn at Aspen, CO, August 27 (2008).
113. "Exploring Quantum Magnetism Through Neutron Scattering", C. Broholm, International Conference on Neutron Scattering, Knoxville, Tennessee, May 4-7, (2009).
114. "Neutron Scattering from Magnetically Frustrated Ruthenium Pyrochlores", Invited talk at the March meeting of the American Physical Society, New Orleans, Louisiana, March 10, (2008).
115. "Spin Resonance in the d-wave Superconductor CeCoIn₅", The 1st Korea University - KAERI Joint International Workshop On Condensed Matter Physics and Neutron Scattering, Seoul, South Korea December 21, (2007).
116. "Magnetism and Ferroelectricity on a Kagome Staircase", Workshop on Motterials, Kavli Institute for Theoretical Physics, Santa Barbara, CA, September 5 (2007).
117. "Spin Resonance in the d-wave Superconductor CeCoIn₅", International Conference on Crystal Growth, Salt Lake City, UT, August 31 (2007).
118. "Neutron Scattering from Frustrated Magnets", Workshop on Frustrated Magnetism, International Center for Theoretical Physics, Trieste Italy, August 10 (2007).
119. "Scattering Neutrons from Magnons, Spinons, Solitons, and Breathers", Physics and Mathematics of Interacting Quantum Systems in Low Dimensions, Workshop in Honor of Prof. Minoru Takahashi, Media Hall, Kashiwa Library, University of Tokyo, April 25, (2007).
120. "Cold Neutron Spectroscopy on MACS", Invited talk at US-Japan Workshop on Neutron Scattering Instrumentation, SNS, March 1 (2007).
121. "Ferro-electricity in Frustrated Magnets", Invited talk at the International Materials Research Conference, Cancun Mexico, August 22, (2006).
122. "Science and Technology with Neutrons", Tutorial at the International Materials Research Conference, Cancun Mexico, August 20, (2006).

123. "Ferro-electricity in Frustrated Magnets", Annual meeting of the Center for Nanophase Materials Science, Oak Ridge, Tennessee, June 14 (2006).
124. "Spinons Solitons and Breathers in Quasi-one-dimensional Magnets, Invited talk at the March meeting of the American Physical Society, Baltimore, MD March 16 (2006)."
125. "Spin Correlations in Magnets Close to Quantum Criticality", International Conference on Spin- and charge-correlations in molecule-based materials Physical properties, Chemistry and material aspects, Konigstein, Germany, October 19 (2005).
126. "Science and Technology with Neutrons", Tutorial at the International Materials Research Conference, Cancun Mexico, August 21, (2005).
127. "Quasi Particle Breakdown in a Two-Dimensional Spin Liquid", Workshop on Theoretical and Experimental Magnetism, Coseners House, Abingdon, UK August 3, (2005).
128. "Frustrated Magnetism in 2D", Workshop on Strongly Correlated Electron Systems, University of Kentucky, April 24-26, (2005).
129. "Glassy Phases in Two Dimensional Quantum Magnets" and "Phase diagram for a 2D spin-1/2 system with a singlet ground state", Workshop on Quantum Critical Phenomena, Kavli Institute for Theoretical Physics, March 29 and April 1, (2005).
130. "From Spin to Quantum Order in Coordination Polymer Magnets", Annual Meeting of the German Physical Society, Berlin, Germany, March 7, (2005).
131. "Frustrated Magnetism in two dimensions", Princeton Center for Complex Materials, workshop on strongly correlated electron systems, January 28 (2005).
132. "Quantum Magnetism with Time of Flight Neutron Scattering", Annual meeting of the Canadian Institute for Neutron Scattering, Nova Scotia, Canada September 24-25, (2004).
133. "Level Splitting in Frustrated non-Kramers Doublet Systems", International Workshop on Frustrated Magnetism, Montauk Yacht Club, Long Island, NY September 13-17 (2004).
134. "Frustrated Magnetism and Heavy Fermions", at conference on Strongly Correlated Electron Systems, Karlsruhe, Germany, July 29 (2004).
135. "Spin-1/2 Chains in Uniform and Staggered Fields", at conference on "Transport and Magnetism from the thermodynamic to the Nano-Scale" honoring Amnon Aharony on his 60th birthday, Eilat, Israel January 2-6 (2004).
136. "Structure and Dynamics of Spin Polarons Induced by Doping a Spin-1 Chain", The 3rd International Workshop on Novel Quantum Phenomena in Transition

- Metal Oxides and The 1st Asia-Pacific Workshop on Strongly Correlated Electron Systems, Sendai, Japan, November 8, (2003).
137. "Satisfied Simplexes in Frustrated Magnets", International Conference on Pulsed Neutron Scattering, Tsukuba, Japan October 27 (2003).
 138. "Frustration and Field-driven Quantum Criticality", Workshop on Quantum Critical Phenomena and High Temperature Superconductivity", Institute of Theoretical Physics (ITP) & Interdisciplinary Center of Theoretical Studies (ICTS) Beijing, China October 25 (2003).
 139. "Quantum Critical Spin-1/2 Chains", Workshop on Quantum Critical Phenomena and High Temperature Superconductivity", Institute of Theoretical Physics (ITP) & Interdisciplinary Center of Theoretical Studies (ICTS) Beijing, China October 24 (2003).
 140. "Quantum Coherence in Magnets", 24th Risø International Symposium on Materials Science, Roskilde, Denmark, September 10 (2003).
 141. "The Frustrated Magnetism of ZnCr₂O₄", International Highly Frustrated Magnetism, ILL, Grenoble, France August 26 (2003).
 142. "Composite Spin in Fluctuating Magnets", International Workshop on Theory Modeling and Neutron Scattering, NIST, August 12 (2003).
 143. "Spin 1/2 Chains in Uniform and Staggered Fields", International Workshop on Strongly correlated transition metal compounds, Cologne, Germany, August 5 (2003).
 144. "Current and Future Neutron Scattering Instrumentation", at workshop on Neutrons In solid state Chemistry and the Earth Sciences Today and Tomorrow, Oak Ridge, Tennessee, March 13, (2003).
 145. "Structure and Dynamics of Spin Polarons induced by Doping a Haldane Spin-1 Chain", Invited talk at March meeting of the American Physical Society, Austin, Texas, March 5, (2003).
 146. "Spin Liquids in Frustrated Magnets - are they Stable in Real Materials?" Aspen Winter Conference on "Complex Quantum Order", February 9 (2003).
 147. "Spin Peierls Effect in Frustrated Magnets", Workshop on Single Crystal Neutron Spectroscopy, Institute Laue Langevin, Grenoble, France, December 12 (2002).
 148. "Doubly Focusing Monochromator for MACS", American Conference on Neutron Scattering, Knoxville, Tennessee, June 24 (2002).
 149. "Frustrated Quantum Antiferromagnets", Physics of Frustration from Proteins to Pyrochlores, Santa Fe, NM June 19 (2002).
 150. "Two and Three Dimensional Spin Systems with an Isolated Singlet Ground State", International conference on mSR, Williamsburg, VA June 4 (2002).

151. "Magnetized Quantum Spin Chains", Invited talk at European Condensed Matter Conference CMD-19. Bristol, UK April (2002).
152. "Spin Correlations in Magnetized Haldane Chains", Invited talk at conference on "Physical Properties at High Magnetic Fields IV", Santa Fe, New Mexico, October 24, (2001).
153. "Past and Future Insights from Neutron Scattering" Invited panel presentation at workshop on "Future of Materials Physics", Los Alamos, NM August (2001).
154. "Quantum Magnets in High Magnetic Fields", summer school on "Trends in High Magnetic Fields", Cargese Corsica, May 7 (2001).
155. "Condensed Matter Physics with Neutrons", March Meeting of the American Physical Society, Seattle, Washington March (2001).
156. "Finite Temperature Spin Correlations in Quantum Magnets with a Spin Gap" International Conference on Magnetism 2000, Recife, Brazil, August (2000).
157. "Solving Impurity Structures Using Inelastic Neutron Scattering" Annual meeting of the American Crystallographic Association St. Paul Minnesota, July 24 (2000).
158. "Magnetic Neutron Scattering", talk at workshop on neutron scattering at Chalk River Nuclear Laboratories, Canada June 20 (2000).
159. "Neutron Scattering Studies of Frustrated Magnets", Workshop on Highly Frustrated Magnetism 2000, Waterloo University, Canada, June 11 (2000).
160. "Impurities and Finite Temperature Effects in a one-Dimensional spin-1 Antiferromagnet", Workshop on "Magnetic Excitations in Strongly Correlated Electron systems" CUREAC, Japan August 20 (1999).
161. "Neutron Scattering from Geometrically Frustrated Antiferromagnets" International Conference on Low temperature Physics, Helsinki, Finland August 7 (1999).
162. "Magnetism Close to the Metal Insulator Transition in V_2O_3 " Workshop on Exotic Oxides, Brookhaven National Laboratory, March 18-20 (1999).
163. "High Field Neutron Scattering Experiments on Quantum Spin Systems" Workshop on Opportunities for Neutron Scattering at 30 T, Los Alamos National Laboratory, Los Alamos, NM January 14-15 (1999).
164. "Excitations in an Alternating Spin-1/2 Chain", Conference on "The dynamics of single crystals measured by time-of-flight neutron scattering techniques" held at the Cosensers house of the ISIS facility, Abingdon, UK December 4 (1998).
165. "Temperature and Doping Effects on Dynamics of Gapped Spin Chains" Gordon Research Conference on Correlated Electron Systems Plymouth, NH July 19-24 (1998).

166. "High Sensitivity Spectroscopy at Reactor Neutron Sources" Workshop on Inelastic Scattering Probes of Condensed Matter University of Chicago May 13-15 (1998).
167. "The Metal Insulator Transition in V_2O_3 ", Workshop on Probing Frontiers in Matter with Neutron Scattering held at Los Alamos National Laboratory December 12-14 (1997).
168. "Neutron Scattering Studies of Metallic and Insulating Phases of V_2O_3 " International Conference on Neutron Scattering, Toronto August (1997).
169. "Triple Axis Neutron Spectrometry" Workshop on High Resolution Cold Neutron Neutron Spectroscopy, National Institute of Standards and Technology, August 13 (1997).
170. "Neutron Scattering Studies of Non-Metallic Low-dimensional Quantum Antiferromagnets", NATO-ASI School on dynamical properties of unconventional magnetic systems, Geilo, Norway April (1997).
171. "Magnetic Field Effects in One Dimensional $S=1/2$ Systems", March Meeting of the American Physical Society, Kansas City, March 18 (1997).
172. "Scattering Studies of Low Dimensional Magnets" Miniworkshop on "Disorder and Interactions in Quantum Systems and their Classical Analogs", International Center for Theoretical Physics Trieste, Italy July 8 (1996).
173. "Strong Magnetic Fluctuations in Transition Metal Oxides" Symposium on Neutron Scattering in honor of the (1994) Physics Nobel Laurates, MMM95 Philadelphia November (1995).
174. "Neutron Scattering Studies of Magnetism and Superconductivity in UPt_3 ", The International Conference on Strongly Correlated Electron Systems, Amsterdam August (1994).
175. "Spin Correlations Close to the Metal Insulator Transitions in $V_{2-y}O_3$ ", March Meeting of the American Physical Society Pittsburgh, PA March (1994).
176. "Incommensurate Spin Correlations Close to the Metal Insulator Transitions in $V_{2-y}O_3$ ", Conference on Strongly Correlated Electron Systems, San Diego, CA, August (1993).
177. "Incommensurate Spin Correlations Close to the Metal Insulator Transitions in $V_{2-y}O_3$ ", ICTP, Trieste, Italy, June (1993).
178. "Incommensurate Spin Correlations Close to the Metal Insulator Transition in $V_{2-y}O_3$ ", National Institute of Standards and Technology Internal Review, May (1993).
179. "Dynamic Correlations in $S=1$ and $S=1/2$ Antiferromagnets", Institute for Theoretical Physics. University of California Santa Barbara, June (1992).

180. “Vortex Lattice and Antiferromagnetism of Superconducting UPt₃”, 1992 Aspen Winter Conference, January (1992).
181. “Neutron Scattering in a Quasi-2D Kagomé Magnet”, The 1991 March Meeting of the American Physical Society, Cincinnati, OH, March (1991).
182. “A Strongly Fluctuating Quasi-Two-Dimensional Insulator”, 35th Annual Conference on Magnetism and Magnetic Materials, San Diego, CA, October (1990).
183. “Neutron Scattering From Heavy Fermion Systems”, Workshop on Magnetic Excitations and Fluctuations II, Turin, Italy, May (1987).

Seminars and Colloquia

1. “Quantum Spin Liquids and their Instabilities,” Instituto de Fisica, Universidad Nacional Autonoma de Mexico, November 21, (2023).
2. “Quantum Spin Liquids and their Instabilities,” Condensed Matter Colloquium, Paul Scherrer Institute, Switzerland, May 6, (2022).
3. “Quantum critical and incommensurate magnetism in topological semi-metals,” Materials Science Colloquium, Argonne National Laboratory, (remote meeting), December 9, (2021).
4. “Emergent quasi-particles in frustrated magnets,” Infosys Condensed Matter seminar series, Tata Institute of Fundamental Research, Mumbai, (remote meeting), November 15, (2021).
5. “Emergent quasi-particles in frustrated magnets,” Department of Physics and Astronomy, University of Kentucky, November 12, (2021).
6. “Time resolved elastic and inelastic neutron scattering on MACS,” Presentation to the annual review of the NIST Center for High Resolution Neutron Scattering, (remote meeting), July 21, (2021).
7. “What’s special about quantum materials?” Johns Hopkins University, Applied Physics Laboratory, (remote meeting), May 10, (2021).
8. “What’s special about quantum materials?” One Chemistry Symposium, Department of Chemistry, (remote meeting), Johns Hopkins University, April 20, (2021).
9. “Magnetism and quantum transport in the kagome lattices of semi-metallic Mn_3X ,” Mid-Atlantic virtual APS meeting, <https://meetings.aps.org/Meeting/MAS20/Session/G04.1> , (remote meeting), December 5, (2020).
10. “Magnetism and quantum transport in the kagome lattices of semi-metallic Mn_3X ,” Colloquium, Department of Materials Science and Engineering, California Institute of Technology, (remote meeting), September 30, (2020).
11. “Spooky action at a distance in a solid?” Colloquium, Department of Physics and Astronomy, Johns Hopkins University, (remote meeting), September 17, (2020).
12. “Impact of MACS on Quantum Materials Research,” National Science Foundation Site Visit Review, Center for High Resolution Neutron Scattering (CHRNS), National Institute of Standards and Technology, Remote Site Visit Schedule, March 11, (2020).
13. “The Quest for a Quantum Spin Liquid,” Colloquium, Department of Physics and Astronomy, Rutgers University, February 26, 2020.

14. "Polarized Neutrons," Presentation to BESAC subcommittee chaired by R. J. Birgeneau tasked with evaluating the long-term strategy for the HFIR facility. November 15, (2019).
15. "Frustrated Magnetism in Mott Insulating $(V_{1-x}Cr_x)_2O_3$ " Condensed Matter Seminar, Argonne National Laboratory, September 11, (2019).
16. "The Institute for Quantum Matter," presentation to the CATS EFRC at their annual meeting September 11, (2019).
17. "New materials and neutron scattering techniques en-route to the quantum spin liquid," EPIQS symposium August 7, 2019.
18. "The Institute for Quantum Matter," presentation to the Condensed Matter Experimental area of BES/DOE annual PI meeting. July 1, 2019.
19. "Origins of diffuse inelastic scattering from frustrated quantum magnets," IBS Center for Correlated Electron Systems, June 18, 2019.
20. "Quantum Materials: Multiferroics and Spin Liquids," seminar at JHU Applied Physics Laboratory, June 12, 2019.
21. "On the way to a Quantum Spin Liquid?" Condensed Matter Seminar, University of Illinois Urbana Champaign, April 19, 2019.
22. "The Quest for a Quantum Spin Liquid," Quantum and Energy Materials Seminar (QEMS) series, Oak Ridge National Laboratory, February 13, 2019.
23. "Fluctuating and disordered magnetism in insulating materials at low T," Theory Winter School on Strongly Correlated and Quantum Spin Liquid Physics, Weyl and Topological Physics, and New Computational Techniques, National High Magnetic Field Laboratory, Florida State University, January 7-11
<https://nationalmaglab.org/news-events/events/for-scientists/winter-theory-school> 2019.
24. "Spin fluctuations in strongly correlated electron systems," Theory Winter School on Strongly Correlated and Quantum Spin Liquid Physics, Weyl and Topological Physics, and New Computational Techniques, National High Magnetic Field Laboratory, Florida State University, January 7-11
<https://nationalmaglab.org/news-events/events/for-scientists/winter-theory-school> 2019.
25. "Quantum Materials: The New Frontier," with Tyrel M McQueen, presentation to the KSAS advisory board at the New York City Yacht Club, November 2, 2018.
26. "The Quest for a Quantum Spin Liquid," Colloquium, Arizona State University, October 4, 2018.
27. Presentation and roundtable discussion with BESAC about future neutron scattering facilities, Rockville, MD July 11, 2018.

28. "Impacts of MACS on Understanding Magnetism and Superconductivity," Presentation to NRC committee evaluating the NIST Center for Neutron Research, July 10, 2018.
29. "Frustrated Magnetism in Mott Insulating $(V_{1-x}Cr_x)_2O_3$," Condensed Matter Seminar, University of Colorado, Boulder, May 3, 2018.
30. "The Quest for a Quantum Spin Liquid," Colloquium, University of Colorado, Boulder, May 2, 2018.
31. "The Continuing Story of SrB_6 ," Seoul National University, IBS CCES, March 3, 2018.
32. "Basic Research Needs Workshop on Quantum Materials for Energy Relevant Technology," DOE BES Condensed Matter Physics, Principal Investigators Meeting, Gaithersburg, MD, September 11, 2017.
33. "Neutron Scattering at the High Field Frontier," NSF Workshop on Exploring quantum phenomena and quantum matter in ultrahigh magnetic fields, Alexandria, Virginia, Sep 22, 2017.
34. "Incommensurate magnetism in Ce-based heavy fermion systems," Condensed Matter Colloquium, Department of Physics, University of Maryland, September 14, 2017.
35. "Broad band spin dynamics on the pyrochlore lattice," EPIQS annual conference, Monterey, California, August 1, 2017.
36. "Disorder versus fractionalization in frustrated quantum magnets," Colloquium, Argonne National Laboratory, April 13, 2017.
37. "The Rise of Quantum Materials: Scientific Challenges and Technological Opportunities," MSED Neutron Scattering Principal Investigator Workshop, Gaithersburg, MD December 19-21, 2016.
38. C. Broholm, N. P. Armitage, R. J. Cava, T. M. McQueen, and O. Tchernyshyov, (joint presentation) "Exploring Quantum Materials," MSED Neutron Scattering Principal Investigator Workshop, Gaithersburg, MD December 19-21, 2016.
39. "Strange Magnetism Exposed by Neutron Scattering," Colloquium in the Department of Physics and Astronomy of the University of Tennessee, Knoxville, November 14, 2016.
40. C. Broholm, "Neutron Scattering at the High Field Frontier," Workshop on ultra-high field scattering at the Shull Wollan Center for Neutron Scattering, Oak Ridge National Laboratory, August 17-18, 2016.

41. "Magnetic Neutron Scattering," Princeton Summer School on Condensed Matter Physics, PSSCMP 2016: Many-Body Localization and Frustrated Magnetism, Princeton, New Jersey, August 8-August 11, 2016.
42. "Quantum magnetism in insulating solids," Princeton Summer School on Condensed Matter Physics, PSSCMP 2016: Many-Body Localization and Frustrated Magnetism, Princeton, New Jersey, August 8-August 11, 2016.
43. "Spin correlations in conducting and superconducting materials," Princeton Summer School on Condensed Matter Physics, PSSCMP 2016: Many-Body Localization and Frustrated Magnetism, Princeton, New Jersey, August 8-August 11, 2016.
44. "Strange Magnetism Exposed by Neutron Scattering," Colloquium, Rutgers University, November 11, 2015.
45. "Strange Magnetism Exposed by Neutron Scattering," Colloquium, Universite de Montreal, Montreal, Canada, October 2, 2015.
46. "Magnetic Excitations and Electronic Functionality in Quantum Materials," presentation at three year review of the Neutron Scattering Science Division of Oak Ridge National Laboratory, August 31, 2015.
47. "Diffuse scattering from crystalline solids," National Research Council assessment of the NIST Center for Neutron Research, NIST, Gaithersburg, MD July 7, 2015.
48. "Impacts of MACS on Quantum Materials Research," Presentation to NSF panel evaluating the renewal proposal for the Center for High Resolution Neutron Scattering at the NIST Center for Neutron Research. Gaithersburg, MD January 14, 2015.
49. "Strange Magnetism Exposed by Neutrons," Colloquium, Department of Physics, Indiana University, Bloomington, Indiana, December 3, 2014.
50. "Interacting Electrons on the Pyrochlore Lattice," Special Lecture Series, Institute for Solid State Physics, University of Tokyo, Kashiwanoha, Japan November 13, 2014.
51. "Anomalous Correlated States of Matter in Frustrated Magnets," Frontiers in Condensed Matter Physics, Johns Hopkins University, Simulcast to Columbia, Rice University, Harvard, and Brookhaven National Laboratory, October 14, 2014.
52. "Magnetic Neutron Scattering and 1D Quantum Magnetism," Frontiers in Condensed Matter Physics, Columbia University, Simulcast to Rice, Johns Hopkins, Harvard, and Brookhaven National Laboratory, October 7, 2014.
53. "Neutron Scattering from Corner-sharing Simplexes," Symposium for Chris Henley's 59th Birthday, Cornell University, Ithaca, New York, September 12, 2014.

54. "The high field frontier and quantum matter," Workshop on Neutron Scattering in High Magnetic Fields, ORNL, September 4-5, 2014.
55. "Impacts of Neutron Scattering on Hard Condensed Matter Physics," NIST Center for Neutron Scattering Workshop on Neutron Measurements for Materials Design and Characterization, the Bolger Center, Potomac, MD, August 21-22, 2014.
56. "Exploring Quantum Materials with Neutrons," Neutron Scattering Principal Investigators' Meeting Materials Sciences and Engineering Division Office of Basic Energy Sciences U. S. Department of Energy, July 29-30, 2014.
57. "Multichannel Cold Neutron Spectroscopy on MACS," Workshop on inelastic neutron scattering techniques at ORNL, June 5-6, 2014.
58. "Entangled Magnetism," C. Broholm, Colloquium, Department of Physics, University of Missouri, November 11, (2013).
59. "Quantum fluctuations in spin-ice-like $\text{Pr}_2\text{Zr}_2\text{O}_7$ ", Chez Pierre Seminar at MIT, October 7 (2013).
60. "Magnetic Neutron Scattering", Summer School on Neutron and X-ray Scattering, Oak Ridge National Laboratory, August 23 (2013).
61. "Entangled Magnetism", NIST summer school on neutron scattering, National Institute of Standards and Technology, June 19 (2013).
62. "Invitation to Neutron Scattering", Neutrons for Novices workshop at Oak Ridge National Laboratories, June 18 (2013).
63. "Neutron Scattering & Hard CMP: Enhanced impact", seminar presentation at Strategic planning workshop, Oak Ridge National Laboratory, June 18 (2013).
64. "Entangled Magnetism", Chalk River summer school on neutron scattering, Chalk River, Ontario, Canada, June 7 (2013).
65. "Magnetic Neutron Scattering" Chalk River summer school on neutron scattering, Chalk River, Ontario, Canada, June 6 (2013).
66. "Entangled Magnetism", Colloquium, Oak Ridge National Laboratory, May 6 (2013).
67. "Continuum Excitations in Crystalline Magnets," C. Broholm, Seminar, Department of Physics, Princeton University, March 4 (2013).
68. Colloquium, Department of Physics and Astronomy, Georgia Institute of Technology, February 18 (2013).
69. "Quantum Correlated Materials," DoE program manager visit to Institute for Quantum Matter, December 3 (2012).

70. "Quantum fluctuations in exchange based spin-ice", German-ORNL collaborative meeting, Oak Ridge National Laboratory, September 13, (2012).
71. "Hard Condensed Matter: Synthesis & Spectroscopy," Department of Physics and Astronomy, Johns Hopkins University, Fall 2012 Research Jamboree, August 30 (2012).
72. "Magneto-elasticity in frustrated magnets," DoE Review of the Neutron Scattering Science Division of Oak Ridge National Laboratory, Oak Ridge, TN August 28 (2012).
73. "Quantum Correlated Materials & Phenomena," Neutron Scattering Principal Investigators' Meeting, Gaithersburg Marriott Washingtonian Center Gaithersburg, Maryland, July 22-25 (2012).
74. "Neutron Scattering at High Magnetic Fields," Presentation to National Research Council committee on opportunities in high magnetic field research, May 17 (2012).
75. "Fractionalized quasi-particles in frustrated quantum magnets," Distinguished Lecture in Quantum Magnetism, Department of Physics, Rice University, April 18 (2012).
76. "Spin correlations in unconventional superconductors," JHU-Nanjing meeting at Johns Hopkins University, March 5 (2012).
77. "The Edge of Magnetism," Colloquium, Department of Physics and Astronomy, University of Florida, November 10 (2011).
78. "The Edge of Magnetism", Summer School on Cold Atoms and Magnetism, Department of Physics, Princeton University, Princeton, NJ, August 10, (2011).
79. "Magnetic Neutron Scattering", Summer School on Cold Atoms and Magnetism, Department of Physics, Princeton University, Princeton, NJ, August 10, (2011).
80. Lecture series on neutron scattering science and instrumentation, 8 x 50 min. lectures at the Institute for Solid State Physics, University of Tokyo, Kashiwa Campus, June-July (2011).
81. "Physics and Sports", Ryuki Keisei University High School, Kashiwa, Japan, July 26, (2011).
82. "The Edge of Magnetism", Japanese Atomic Energy Agency, Ibaraki, Japan, June (2011).
83. "Overview and Status of the MACS Instrument", Japanese Atomic Energy Agency, Ibaraki, Japan, June (2011).

84. "Continuum Scattering in the Triangular Lattice Antiferromagnet NiGa₂S₄", Tokyo Institute of Technology, June 2, (2011).
85. "Attempts at Magnetism on the Kagome Lattice", Colloquium, Institute for Solid State Physics, University of Tokyo, Kashiwa Campus, May 11 (2011).
86. "The Edge of Magnetism", Seminar, Department of Materials Science, Caltech, Los Angeles, CA, April 26, (2011).
87. "The Edge of Magnetism", University of Minnesota, Minneapolis-San Paul, Minnesota, April 13, (2011).
88. "Recent Results from MACS", talk to NSF panel evaluating the NIST Center for Neutron Research, October 26, (2010).
89. "MACS: A new High Flux Multi-Detector Neutron Spectrometer at NIST", talk to NRC evaluation panel at the NIST Center for Neutron Research, March 29, (2010)
90. "When Magnets Superconduct", Seminar at ETH, Zurich, Switzerland, February 19, 2010.
91. "MACS: A new High Flux Multi-Detector Neutron Spectrometer at NIST", Paul Scherer Institute, Switzerland, February 18, 2010.
92. "When Magnets Superconduct", Colloquium in Department of Physics and Astronomy, University of Utah, January 14, 2010.
93. "Magnetism Exposed – an Evolving View from Neutron Scattering", C. Broholm, Symposium in honor of Dr. Dir. Michel Steiner, Helmholtz-Zentrum Berlin für Materialien und Energie, June 2-3, 2009.
94. "Surprises on Triangular Lattices", Condensed Matter Seminar, MIT, Boston, MA, November 3 (2008).
95. "Spin Resonance in the d-wave Superconductor CeCoIn₅", Materials Science Colloquium, Argonne National Laboratory, Chicago, Illinois, March 27 (2008).
96. "Scattering neutrons from magnons, spinons, solitons, and breathers", Colloquium, Department of Physics and Astronomy, University of Tennessee, Knoxville, Tennessee, February 25, (2008).
97. "Spin Resonance in the d-wave Superconductor CeCoIn₅", Condensed Matter Science Distinguished Lecture, Brookhaven National Laboratory, November 8 (2007).
98. "Spin Resonance in the d-wave Superconductor CeCoIn₅", Rutgers University, New Brunswick, New Jersey, October 30 (2007).
99. "Quantum magnets confined to the nano-scale", University of Austin, workshop on strongly correlated electrons, October 12 (2007).

100. "Applying Spin", Annual meeting of the SNS and HFIR Users Group, Oak Ridge, TN, October 8 (2007).
101. "Ferroelectricity in Frustrated Magnets", Max Planck Institute for the Chemical Physics of Solids, Dresden July 19 (2007).
102. "Spin Resonance in the d-wave Superconductor CeCoIn₅", Max Planck Institute for the Chemical Physics of Solids, Dresden July 19 (2007).
103. "Scattering Neutrons from Magnons, Spinons, Solitons, and Breathers", NIST Summer school on neutron scattering, June 28 (2007).
104. "Ferroelectricity in Frustrated Magnets", Institute for Solid State Physics, Kashiwa Campus, University of Tokyo, May 22, (2007).
105. "Ferroelectricity in Frustrated Magnets", National High Magnetic Field Laboratory, February 23, (2007).
106. "Ferroelectricity in Frustrated Magnets", Princeton University, December 4, (2006).
107. "Ferroelectricity in Frustrated Magnets", MRSEC workshop presentation at the University of Maryland November 17, (2006).
108. "Ferroelectricity in Frustrated Magnets", Condensed Matter Physics Colloquium at Louisiana State University, November 16, (2006).
109. "Ferroelectricity in Frustrated Magnets", Condensed Matter Physics Seminar at the University of Virginia, October 5, (2006).
110. "Science with Intense Polarized Neutrons", NIST Expansion Initiative meeting, Bethesda, MD July 17 (2006).
111. "Neutron Scattering, Correlation Functions, & Linear Response Functions", Summer School on Neutron Scattering, Deep River, Ontario, Canada, June 6 (2006).
112. "Spinons, Solitons and Breathers in Quasi-One-Dimensional Magnet", Symposium for W. J. L. Buyers, Deep River, Ontario, Canada June 4 (2006).
113. "Science with Intense Polarized Neutrons", Invited talk at NIST Center for Neutron Research Expansion Meeting, Baltimore, MD March 14 (2006).
114. "Magnetic Surprises on a Triangular Lattice", Condensed Matter Physics Seminar, Rutgers University, November 15 (2005).
115. "Frustrated Quantum Magnetism", Presentation to the Faculty of the Department of Physics and Astronomy, Johns Hopkins University, April 28 (2005).

116. "Cold Neutron Spectroscopy on MACS", talk presented to NSF panel evaluating the renewal proposal for the Center for High Resolution Neutron Scattering at NIST. January 5 (2005).
117. "Inhomogeneous Level Splitting in $\text{Pr}_{1-x}\text{Bi}_x\text{Ru}_2\text{O}_7$ ", Paul Scherrer Institute, Switzerland, December 3, (2004).
118. "Spinons, Solitons, and Breathers in Quasi-One-Dimensional Magnets", Department of Physics and Astronomy, Temple University, October 11 (2004).
119. "Striving for Excellence with MACS", Presentation to the director of the Materials Science and Engineering Laboratory, NIST, June 17 (2004).
120. "Spinons, Solitons, and Breathers in Quasi-One-Dimensional Magnets", Department of Physics and Astronomy, Johns Hopkins University, April 8, (2004).
121. "Spinons, Solitons, and Breathers in Quasi-One-Dimensional Magnets", Dartmouth College, Hanover, New Hampshire, Jan 30, (2004).
122. "Spin-1/2 chains in Uniform and Staggered Fields", Braunschweig Technical University, Braunschweig, Germany, Jan 19, (2004).
123. "Quantum Coherence in Magnets", Colloquium in the Department of Physics, University of Virginia, November 21 (2003).
124. "Satisfied Simplexes in Frustrated Magnets", Department of Physics, Kyoto University, Kyoto Japan, October 30 (2003).
125. "Composite Spin in Fluctuating magnets", Colloquium in the department of Physics and Astronomy, Kent State University, April 17 (2003).
126. "Realizing Neutron Vision - a compact digital camera for radiography", talk to JHU senior project engineering students, September 20, (2002).
127. "MACS concept presentation", NIST Center for Neutron Research, September 24 (2002).
128. "Two and Three Dimensional Spin Systems with an Isolated Singlet Ground State", ISIS meeting on neutron spectroscopy and MERLIN, June 11 (2002).
129. "Experimental Planning, Visualization, and Analysis for Condensed Matter Physicists", ARCS software workshop, Caltech, March 15 (2002).
130. "Quantum Phase Transition in a Two-Dimensional Frustrated Magnet", Seminar, AECL, Chalk River, Canada February 15 (2002).
131. "Building MACS", NIST Center for Neutron Research for NSF site visit. January 8, (2002).

132. "Quantum Phase Transition in a Two-Dimensional Frustrated Magnet", Seminar, National High Magnetic Field Laboratory, Tallahassee, Florida, December 14, (2001).
133. "Quantum Phase Transition in a Two-Dimensional Frustrated Magnet", Seminar, Yale University, November 29, (2001).
134. "Magnets without direction", Colloquium, Department of Physics and Astronomy, Rutgers University, October 17, (2001).
135. "Magnets without direction", Colloquium, Department of Physics, Georgetown University, September 27, (2001).
136. "Holes in a Quantum Spin Liquid", Condensed Matter Seminar Princeton University, March 2 (2001).
137. "Resolving a Magnetic Quandary", Condensed Matter seminar NEC Research Institute, November 3 (2000).
138. "One Dimensional Magnetic Systems", Solid State Sciences Advisory Committee to the National Academy of Sciences, NIST Center for Neutron Research, Gaithersburg, MD June 26 (2000).
139. "Holes in a Quantum Spin Liquid", Condensed Matter Seminar Johns Hopkins University, April 26 (2000).
140. "Holes in a Quantum Spin Liquid", Colloquium Waterloo University, Canada April 13 (2000).
141. "Holes in a Quantum Spin Liquid", Colloquium McMaster University, Canada April 12 (2000).
142. "Impurities and finite temperature effects in a one-dimensional spin-1 antiferromagnet", National High Magnetic Field Laboratory, November 19 (1999).
143. "Inelastic Neutron Scattering: Science and Instrumentation", Presentation to a panel organized by the National Research Council about facilities for Materials Research. National Academy of Sciences, Washington DC January 11 1999.
144. "Excitations in an Alternating Spin-1/2 Chain", Theoretical Physics Department of Oxford University December 3 (1998).
145. "Magnetized States of Quantum Spin Chains", Workshop on Applications of Polarized X-rays, Advanced Photon Source, Argonne National Laboratory, September 28-29 (1998).
146. "Proposal for a High Intensity Chopper Spectrometer at LANSCE" Los Alamos National Laboratory, March 23 (1998).

147. "Field induced incommensurate spin correlations in a spin 1/2 antiferromagnetic chain", University of British Columbia, March 13, (1997).
148. "Fluctuating Magnetism in Quantum Spin Chains" Los Alamos National Laboratory August (1996).
149. "Magnetic Fluctuations in Low Dimensional Magnets" Los Alamos National Laboratory December (1995).
150. "How Neutron Beams Probe Structural and Dynamical Properties of Solids" Society of Physics students, Johns Hopkins University, March 31 (1995).
151. "From Radio-waves to Neutron Waves", 3 times at Baltimore Polytechnic Institute January 10 (1995).
152. "Spin Correlations Close to the Metal Insulator Transition in $V_{2-y}O_3$ " University of Toronto February (1994).
153. "Neutron Scattering from Kagomé Antiferromagnets", Rutgers University, October (1993).
154. "Dynamic Correlations in One Dimensional Antiferromagnets", AT&T Bell Laboratories General Physics Colloquium, October (1992).
155. "Spin Correlations in One Dimensional Antiferromagnets", Towson State University, October (1992).
156. "Dynamic Correlations in Quantum Antiferromagnetic Spin Chains", The Ohio State University, May (1992).
157. "Dynamic Correlations in Quantum Antiferromagnetic Spin Chains", University of Chicago, May (1992).
158. "Neutron Scattering Studies of Magnets with Strong Fluctuations", National Institute of Standards and Technology, December (1991).
159. "Superconductivity of $U\text{Pt}_3$ Studied by Neutron Diffraction and $\mu^+\text{SR}$ ", Colloquium The Johns Hopkins University, January (1991).
160. "Superconductivity of $U\text{Pt}_3$ Studied by Neutron Scattering and $\mu^+\text{SR}$ ", March meeting of the American Physical Society, San Diego, CA (1991).
161. "Superconductivity of $U\text{Pt}_3$ Studied by SANS and $\mu^+\text{SR}$ ", The Johns Hopkins University, MD, February (1991).
162. "Superconductivity of $U\text{Pt}_3$ Studied by Neutron Scattering Techniques", AT&T Bell Laboratories, October (1990).
163. "Superconductivity of $U\text{Pt}_3$ Studied by Neutron Scattering and $\mu^+\text{SR}$ ", National Institute of Standards and Technology, April (1990).

164. "Magnetic Fluctuations and Short-Range Order in Frustrated $\text{SrCr}_{8-x}\text{Ga}_{4-x}\text{O}_{19}$ ", Rutgers University, NJ March (1990).
165. "Magnetic Penetration Depth and Pairing State of UPt_3 ", American Physical Society, Anaheim, CA, March (1990).
166. "Frustration in FCC Antiferromagnets Studied by Neutron Scattering", American Physical Society, Anaheim, CA, March (1990).
167. "Magnetic Fluctuations and short range order in a Kagomé Lattice", 34th Annual Conference on Magnetism and Magnetic Materials, Boston, MA, November (1989).
168. "Magnetic Fluctuations in Heavy Fermion Systems", Escuela Superior de Fisica y Matematica, Mexico, D.F., Mexico Fall (1989).
169. "Magnetic Fluctuations in Frustrated Antiferromagnets", AT&T Bell Laboratories, Fall (1989).
170. "Spin Correlations in FCC Antiferromagnets", Risø National Laboratory, Denmark, Spring (1989).
171. "Magnetic Fluctuations in Heavy Fermion Systems", Risø National Laboratory, Denmark, Fall (1988).
172. "Magnetism of Heavy Fermion Systems", Copenhagen University, September (1988).
173. "Magnetic Fluctuations in U_2Zn_{17} ", Meeting of the Danish Physical Society (1987).