

Edoardo Baldini

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Professional Experience

The University of Texas at Austin, USA Department of Physics Assistant Professor	01/2022 - present
Massachusetts Institute of Technology, USA Department of Physics Postdoctoral Fellow Faculty Mentor: Nuh Gedik	05/2017 - 12/2021

Education

École Polytechnique Fédérale de Lausanne, Switzerland Ph.D. in Physics (with honors) Advisors: Majed Chergui, Fabrizio Carbone	10/2012 - 04/2017
University of Pavia, Italy Master's Degree in Quantum Electronics (110/110 <i>summa cum laude</i>)	10/2010 - 09/2012
University of Pavia, Italy Bachelor's Degree in Electronic Engineering (110/110 <i>summa cum laude</i>)	10/2007 - 07/2010

Honors and Awards

1. The University of Texas STARs Award (2022)
2. MDPI Materials 2021 Young Investigator Award (2020)
3. Materials Research Society (MRS), MRS Postdoctoral Award (2020)
4. American Chemical Society (ACS), ACS Physical Chemistry Young Investigator Award (2020)
5. MDPI Physics 2020 Young Investigator Award (2020)
6. American Physical Society (APS), Division of Laser Science "Carl E. Anderson" Award (2019)
7. IBM Award in Condensed Matter Physics, Zürich, Switzerland (2019)
8. Swiss National Science Foundation, Postdoc Mobility Fellowship (2018)
9. EPFL Doctorate Award 2018, "*Special distinction to the 10 best PhD theses in all fields*" (2018)

10. Springer Theses Award, “*for outstanding PhD research*” (2017)
11. EPFL Physics Doctoral School Award, “*Special distinction to the 3 best PhD theses in physics*” (2017)
12. Dimitris N. Chorafas Foundation Award, “*for outstanding work in selected fields in the engineering sciences, medicine and the natural sciences*” (2017)
13. Swiss National Science Foundation, Early Postdoc Mobility Fellowship (2016)
14. University of Pavia, Best Undergraduate Student Award (2013)
15. European iGEM Competition (Amsterdam), Gold Medal (2011)
16. University of Pavia, Merit Scholarship (2007/2008 - 2011/2012)

Publications

Books

1. **E. Baldini**, “*Nonequilibrium Dynamics of Collective Excitations in Quantum Materials*,” Springer (2018).

Articles

† These authors contributed equally to this work

* Corresponding author

1. D. Azoury[†], **E. Baldini**[†], A. Devarakonda, J. Li, S. Fang, P. Williams, R. Comin, J. Checkelsky, and N. Gedik*, “Probing Two-Dimensional Charge Order in NbSe₂ within a Bulk Crystal,” *arXiv:2308.02772*, in review (2023).
2. D. Choi[†], C. Yue[†], D. Azoury, Z. Porter, J. Chen, F. Petocchi, **E. Baldini**, B. Lv, M. Mogi, Y. Su, S. D. Wilson, M. Eckstein, P. Werner*, N. Gedik*, “Light-Induced Insulator-Metal Transition in Sr₂IrO₄ Reveals the Nature of the Insulating Ground State,” *arXiv:2305.07619*, in review (2023).
3. Z. Zhang[†], F. Y. Gao[†], J. B. Curtis, Z.-J. Liu, Y.-C. Chien, A. von Hoegen, T. Kurihara, T. Suemoto, P. Narang, **E. Baldini***, K. A. Nelson*, “Three-Wave Mixing of Anharmonically Coupled Magnons,” *arXiv:2301.12555*, in review (2023).
4. Z. Zhang[†], F. Y. Gao[†], Y.-C. Chien, Z.-J. Liu, J. B. Curtis, E. R. Sung, X. Ma, W. Ren, S. Cao*, P. Narang, A. von Hoegen, **E. Baldini***, K. A. Nelson*, “Nonlinear Coupled Magnonics: Terahertz Field-Driven Magnon Upconversion,” *arXiv:2207.07103*, in review (2023).
5. J.-J. Shi[†], Y.-Q. Bie^{†,*}, A. Zong[†], S. Fang, W. Chen, J. Han, Z. Cao, Y. Zhang, T. Taniguchi, K. Watanabe, V. Bulović, E. Kaxiras, **E. Baldini**, P. Jarillo-Herrero*, K. A. Nelson*, “Intrinsic $1T'$ Phase Induced in Atomically Thin $2H$ -MoTe₂ by a Single Terahertz Pulse,” *arXiv:1910.13609*, in press at *Nature Communications* (2023).
6. **E. Baldini***, “Binding Charges with Magnetic Strings,” in press at *Nature Physics* (2023).
7. Z. Zhang[†], J. Zhang[†], Z.-J. Liu[†], N. S. Dahodl, W. Paritmongkol, N. Brown, Y.-C. Chien, Z. Dai, K. A. Nelson*, W. A. Tisdale, A. M. Rappe, **E. Baldini***, “Discovery of Enhanced Lattice Dynamics in a Single-Layered Hybrid Perovskite,” *Science Advances* 9, eadg4417 (2023).

8. **E. Baldini**, A. Zong, D. Choi, C. Lee, M. H. Michael, L. Windgätter, I. I. Mazin, S. Latini, D. Azoury, B. Lv, A. Kogar, Y. Su, Y. Wang, Y. Lu, T. Takayama, H. Takagi, A. J. Millis, A. Rubio, E. A. Demler, N. Gedik*, “The Spontaneous Symmetry Breaking in Ta₂NiSe₅ is Structural in Nature,” *Proceedings of the National Academy of Sciences* 120, e2221688120 (2023).
9. D. S. Kim^{†,*}, Di Huang^{†,*}, C. Guo, K. Li, D. Rocca, F. Y. Gao, J. Choe, D. Lujan, **E. Baldini**, S. Sharma, R. Shankar, S.-F. Lee, Y. Ping*, X. Li*, “Strongly Bound Excitons Reveal Local Spin Order in a van der Waals Antiferromagnet,” *Advanced Materials* 2206585 (2023).
10. D. Shin, S. Latini, C. Schäfer, S. A. Sato, **E. Baldini**, U. De Giovannini, H. Hübener, A. Rubio*, “Simulating Terahertz Field-Induced Transient Ferroelectricity in Quantum Paraelectric SrTiO₃,” *Physical Review Letters* 129, 167401 (2022).
11. F. Dirnberger^{†,*}, R. Bushati[†], B. Datta, A. Kumar, A. H. MacDonald, **E. Baldini***, V. M. Menon*, “Observation of Spin-Correlated Exciton-Polaritons in a van der Waals Magnet,” *Nature Nanotechnology* 17, 1060-1064 (2022).
12. F. Y. Gao[†], Z. Zhang[†], Z. Sun, L. Ye, Y.-H. Cheng, Z.-J. Liu, J. G. Checkelsky, **E. Baldini***, K. A. Nelson*, “Snapshots of a Light-Induced Metastable Hidden Phase Driven by the Collapse of Charge Order,” *Science Advances* 8, eabp9076 (2022).
13. J.-J. Shi, F. Y. Gao, Z. Zhang, H. Utzat, U. Barotov, A. Farahvash, J. Han, J. Deschamps, C.-W. Baik, K.-S. Cho, V. Bulović, A. P. Willard, **E. Baldini**, N. Gedik, M. G. Bawendi, K. A. Nelson*, “Terahertz Field-Induced Reemergence of Quenched Photoluminescence in Quantum Dots,” *Nano Letters* 4, 1718 (2022).
14. C. A. Belvin[†], **E. Baldini**[†], I. Ö. Ozel, D. Mao, H. C. Po, C. J. Allington, S. Son, B. H. Kim, J. Kim, I. Hwang, J. H. Kim, J.-G. Park*, T. Senthil, N. Gedik*, “Exciton-Driven Antiferromagnetic Metal in a Correlated van der Waals Insulator,” *Nature Communications* 12, 4837 (2021).
15. P. Piekarczyk*, D. Legut, **E. Baldini**, C. A. Belvin, T. Kołodziej, W. Tabiś, A. Kozłowski, Z. Kakol, Z. Tarnawski, J. Lorenzana, N. Gedik, A. M. Oleś, J. M. Honig, K. Parlinski, “Trimeron-Phonon Coupling in Magnetite,” *Physical Review B* 103, 104303 (2021).
16. **E. Baldini**[†], C. A. Belvin[†], M. Rodriguez-Vega, I. Ö. Ozel, D. Legut, A. Kozłowski, A. M. Oleś, K. Parlinski, P. Piekarczyk, J. Lorenzana, G. A. Fiete, N. Gedik*, “Discovery of the Soft Electronic Modes of the Trimeron Order in Magnetite,” *Nature Physics* 16, 541-545 (2020).
17. C. Lee, T. Rohwer, E. J. Sie, A. Zong, **E. Baldini**, J. Straquadine, P. Walmsley, D. Gardner, Y. S. Lee, I. R. Fisher, N. Gedik*, “High Resolution Time- and Angle-Resolved Photoemission Spectroscopy with 11 eV Laser Pulses,” *Review of Scientific Instruments* 91, 043102 (2020).
18. **E. Baldini***, T. Palmieri, A. Dominguez, A. Rubio, M. Chergui*, “Giant Exciton Mott Density in Bulk Anatase TiO₂,” *Physical Review Letters* 125, 116403 (2020).
19. J.-J. Shi[†], **E. Baldini**[†], S. Latini, S. A. Sato, Y. Zhang, B. C. Pein, P.-C. Shen, J. Kong, A. Rubio, N. Gedik, K. A. Nelson*, “Room Temperature Terahertz Electroabsorption Modulation by Excitons in Monolayer Transition Metal Dichalcogenides,” *Nano Letters* 20, 5214-5220 (2020).
20. **E. Baldini***, M. A. Sentef, S. Acharya, T. Brumme, E. Sheveleva, F. Lyzwa, E. Pomjakushina, C. Bernhard, M. van Schilfgaarde, F. Carbone, A. Rubio*, C. Weber*, “Electron-Phonon-Driven Three-Dimensional Metallicity in an Insulating Cuprate,” *Proceedings of the National Academy of Sciences* 117, 6409-6416 (2020).

21. T. Palmieri[†], **E. Baldini**^{†,*}, A. Steinhoff, A. Akrap, M. Kollár, E. Horváth, L. Forró, F. Jahnke, M. Chergui*, “Mahan Excitons in Room-Temperature Methylammonium Lead Bromide Perovskites,” *Nature Communications* 11, 850 (2020).
22. **E. Baldini***, A. Dominguez, T. Palmieri, O. Cannelli, A. Rubio, P. Ruello, M. Chergui*, “Exciton Control in a Room-Temperature Bulk Semiconductor with Coherent Strain Pulses,” *Science Advances* 5, eaax2937 (2019).
23. X. Li, T. Qiu, J. Zhang, **E. Baldini**, J. Lu, A. M. Rappe, K. A. Nelson*, “Terahertz-Field-Induced Ferroelectricity in Quantum Paraelectric SrTiO₃,” *Science* 364, 1079-1082 (2019).
24. A. Zong[†], A. Kogar[†], Y.-Q. Bie, T. Rohwer, C. Lee, **E. Baldini**, E. Ergeçen, M. B. Yilmaz, B. Freelon, E. J. Sie, H. Zhou, J. Straquadine, P. Walmsley, P. E. Dolgirev, A. V. Rozhkov, I. R. Fisher, P. Jarillo-Herrero, B. V. Fine, N. Gedik*, “Evidence for Topological Defects in a Photo-Induced Phase Transition,” *Nature Physics* 15, 27-31 (2019).
25. I. Ö. Ozel, C. A. Belvin, **E. Baldini**, I. Kimchi, S. Do, K.-Y. Choi, N. Gedik*, “Magnetic Field-Dependent Low-Energy Magnon Dynamics in α -RuCl₃,” *Physical Review B* 100, 085108 (2019).
26. **E. Baldini***, T. Palmieri, A. Dominguez, P. Ruello, A. Rubio, M. Chergui*, “Phonon-Driven Selective Modulation of Exciton Oscillator Strengths in Anatase TiO₂ Nanoparticles,” *Nano Letters* 18, 5007-5014 (2018).
27. **E. Baldini***, T. Kubacka, B. P. P. Mallett, C. Ma, S. M. Koohpayeh, Y. Zhu, C. Bernhard, S. L. Johnson, F. Carbone, “Lattice-Mediated Magnetic Order Melting in TbMnO₃,” *Physical Review B* 97, 125149 (2018).
28. **E. Baldini**, T. Palmieri, E. Pomarico, G. Auböck, M. Chergui*, “Clocking the Ultrafast Electron Cooling in Anatase Titanium Dioxide Nanoparticles,” *ACS Photonics* 5, 1241-1249 (2018).
29. **E. Baldini**, A. Mann, L. Benfatto*, E. Cappelluti*, A. Acocella, V. M. Silkin, S. V. Eremeev, A. B. Kuzmenko, S. Borroni, T. Tan, X. X. Xi, F. Zerbetto, R. Merlin, F. Carbone*, “Real-Time Observation of Phonon-Mediated σ - π Interband Scattering in MgB₂,” *Physical Review Letters* 119, 097002 (2017).
30. **E. Baldini**, T. Palmieri, T. Rossi, M. Oppermann, E. Pomarico, G. Auböck, M. Chergui*, “Ultrafast Interfacial Electron Injection Probed by a Substrate-Specific Excitonic Signature,” *Journal of American Chemical Society* 139, 11584-11589 (2017).
31. **E. Baldini***, A. Dominguez, L. Chiodo, E. Sheveleva, M. Yazdi-Rizi, C. Bernhard, A. Rubio, M. Chergui, “Anomalous Anisotropic Exciton Temperature Dependence in Rutile TiO₂,” *Physical Review B* 96, 041204(R) (2017).
32. **E. Baldini***, L. Chiodo, A. Dominguez, M. Palumbo, S. Moser, M. Yazdi-Rizi, G. Auböck, B. P. P. Mallett, H. Berger, A. Magrez, C. Bernhard, M. Grioni, A. Rubio, M. Chergui*, “Strongly Bound Excitons in Anatase TiO₂ Single Crystals and Nanoparticles,” *Nature Communications* 8, 13 (2017).
33. **E. Baldini**, A. Mann, B. P. P. Mallett, C. Arrell, F. van Mourik, T. Wolf, D. Mihailovic, J. Tallon, C. Bernhard, J. Lorenzana, F. Carbone*, “Clocking the Onset of Bilayer Coherence in a High- T_C Cuprate,” *Physical Review B* 95, 024501 (2017).
34. S. Borroni, **E. Baldini**, V. M. Katukuri, A. Mann, K. Parlinski, D. Legut, C. Arrell, F. van Mourik, J. Teyssier, A. Kozłowski, P. Piekarz, O. V. Yazyev, A. M. Oleś, J. Lorenzana, F. Carbone*, “Coherent Generation of Symmetry-Forbidden Phonons by Light-Induced Electron-Phonon Interactions in Magnetite,” *Physical Review B* 96, 104308 (2017).

35. M. Oppermann, N. S. Nagornova, A. Oriana, **E. Baldini**, L. Mewes, B. Bauer, T. Palmieri, T. Rossi, F. van Mourik, M. Chergui*, “The LOUVRE Laboratory: State-of-the-Art Ultrafast Ultraviolet Spectroscopies for Molecular and Materials Science,” *CHIMIA International Journal for Chemistry* 71, 5, 288-294 (2017).
36. **E. Baldini**[†], A. Mann[†], S. Borroni, C. Arrell, F. van Mourik, F. Carbone*, “A Versatile Setup for Ultrafast Broadband Optical Spectroscopy on Strongly Correlated Quantum Systems,” *Structural Dynamics* 3, 064301 (2016).
37. A. Mann, **E. Baldini**, A. Odeh, A. Magrez, H. Berger, F. Carbone*, “Probing the Coupling between a Doublon Excitation and the Charge-Density Wave in TaS₂ by Ultrafast Optical Spectroscopy,” *Physical Review B* 94, 115122 (2016).
38. J. Rajeswari, H. Ping, G. F. Mancini, Y. Murooka, T. Latychevskaia, D. McGrouther, M. Cantoni, **E. Baldini**, J. S. White, A. Magrez, T. Giamarchi, H. M. Rønnow, F. Carbone*, “Filming the Formation and Fluctuation of Skyrmion Domains by Cryo-Lorentz Transmission Electron Microscopy,” *Proceedings of the National Academy of Sciences* 112, 46, 14212-14217 (2015).
39. F. G. Santomauro, A. Lubcke, J. Rittmann, **E. Baldini**, A. Ferrer, M. Silatani, P. Zimmermann, S. Grubel, J. A. Johnson, S. O. Marianger, P. Beaud, D. Grolimund, C. Borca, G. Ingold, S. L. Johnson, M. Chergui*, “Femtosecond X-Ray Absorption Study of Electron Localization in Photoexcited Anatase TiO₂,” *Scientific Reports* 5, 14834 (2015).
40. A. Mann, **E. Baldini**, A. Tramontana, E. Pomjakushina, K. Conder, C. Arrell, F. van Mourik, J. Lorenzana, F. Carbone*, “Probing the Electron-Phonon Interaction in Correlated Systems with Coherent Lattice Fluctuation Spectroscopy,” *Physical Review B* 92, 035147 (2015).
41. C. Lacava, P. Minzioni, **E. Baldini**, L. Tartara, J. M. Fedeli, I. Cristiani, “Nonlinear Characterization of Hydrogenated Amorphous Silicon Waveguides and Analysis of Carrier Dynamics,” *Applied Physics Letters* 103, 141103 (2013).
42. L. Ferrara, **E. Baldini**, P. Minzioni, F. Bragheri, C. Liberale, E. Di Fabrizio, I. Cristiani, “Experimental Study of the Optical Forces Exerted by a Gaussian Beam within the Rayleigh Range,” *Journal of Optics* 13, 075712 (2011).

Patents

1. **E. Baldini**, Y.-C. Chien, F. Y. Gao, Z.-J. Liu, K. A. Nelson, E. R. Sung, A. Von Hoegen, Z. Zhang, “Nonlinear Coupled Magnonics: Terahertz Field-Driven Magnon Upconversion” UT Tech ID 8016/BAL M.I.T. Case No. 24504J United States of America Serial No. 63/367607 (Filed July 2nd, 2022)

Teaching Experience

Teaching as Instructor:

- PHY 392P: Advanced Optical Spectroscopy, Graduate Degree in Physics, The University of Texas at Austin
Fall 2022 Instructor Evaluation: pending

- PHY 303L: Engineering Physics II, Bachelor's Degree in Engineering, The University of Texas at Austin
Spring 2022 Instructor Evaluation: 4.7/5
Fall 2022 Instructor Evaluation: 4.6/5

Complementary lectures as Teaching Assistant:

- 2014 - 2015 General Physics II (30 hours), Bachelor's Degree in Civil Engineering, EPFL
- 2013 - 2016 Electronic Spectroscopy (60 hours), Master's Degree in Physical Chemistry, EPFL
- 2012 - 2014 Atoms and Radiation (30 hours), Bachelor's Degree in Physics, EPFL

Support as Teaching Assistant:

- 2011 - 2012 Experimental Physics Laboratory (40 hours), Bachelor's Degree in Physics, University of Pavia
- 2011 - 2012 Electronics (30 hours), Bachelor's Degree in Electrical Engineering, University of Pavia
- 2009 - 2012 General Physics I, II (> 200 hours), Bachelor's Degree in Electrical Engineering, University of Pavia

Advising

- Postdoctoral Researchers: Dr. Frank Yi Gao (2022 - present), Dr. Wenjing You (2022 - present), Dr. Francesco Barantani (2023 - present)
- Ph.D. Thesis Advisees: Ms. Xinyue Peng (2022 - present)
- Undergraduate Research Advsees: Ms. Sophia Garcia (2023 - present), Ms. Prakruti Raghunarayan (2022 - present), Mr. Neal Jare (2022), Mr. Nicholas P. Verzic (2022), Ms. Ingalena Bucher (2015 - 2016)

Member of Ph.D. Committees

- Member of the Ph.D. Qualifying Exam Committee of Hanran Jin, graduate student in Physics, working with Prof. Alexander Demkov (October 2023).
- Member of the Ph.D. Defense Committee of David Lujan, graduate student in Physics, working with Prof. Xiaoqin Li (April 2023).
- Member of the Ph.D. Qualifying Exam Committee of Ameya S. Riswadkar, graduate student in Electrical Engineering, working with Prof. Shyam Shankar (July 2023).
- Member of the Ph.D. Qualifying Exam Committee of Ritwik Sain, graduate student in Physics, working with Prof. Björn M. Hegelich (May 2023).
- Member of the Ph.D. Qualifying Exam Committee of Bishoy Kousa, graduate student in Physics, working with Prof. Allan H. MacDonald (April 2023).
- Member of the Ph.D. Qualifying Exam Committee of Adam Christensen, graduate student in Physics, working with Prof. Alexander Demkov (November 2022).

Oral Presentations

Invited Talks

1. Flatiron Institute, “Nonlinear Spectroscopies of Quantum Materials,” New York City, USA, February 2024
2. Gordon Research Conference “Ultrafast Phenomena in Cooperative Systems,” Lucca, Italy, February 2024
3. Physics and Chemistry of Surfaces and Interfaces, Santa Fe, New Mexico, January 2024
4. University of Pavia (*Colloquium*), Pavia, Italy, December 2023
5. Materials Research Society Fall Meeting, Boston, Massachusetts, December 2023
6. The University of Texas at Dallas (*Colloquium*), Dallas, Texas, November 2023
7. The University of Texas at Austin, Acoustics Seminar, Austin, Texas, October 2023
8. APS New Laser Scientists Conference, Tahoma, Washington, October 2023
9. SSRL/LCLS-II User Meeting, Stanford University, California, September 2023
10. Dynamic Control of Quantum Materials, Dresden, Germany, May 2023
11. Texas A&M University, College Station, Texas, March 2023
12. University of California, San Diego, California, March 2023
13. TU Dortmund, Dortmund, Germany, May 2022
14. Clemson University, Clemson, South Carolina, February 2022
15. University of Notre Dame, Notre Dame, Indiana, December 2021
16. ACS Southwest Regional Meeting, Austin, Texas, November 2021
17. University of California, Los Angeles, October 2021
18. University of Birmingham, Birmingham, United Kingdom, June 2021
19. Radboud University, Nijmegen, Netherlands, April 2021
20. University of Toronto, Toronto, Canada, March 2021
21. University of Pennsylvania, Philadelphia, Pennsylvania, USA, March 2021
22. The University of Texas at Austin, Austin, Texas, USA, March 2021
23. California Institute of Technology, Pasadena, California, USA, February 2021
24. University of California, Berkeley, California, USA, January 2021
25. Massachusetts Institute of Technology (*Chez Pierre Seminar*), Cambridge, Massachusetts, USA, December 2020
26. MRS Spring/Fall Meeting 2020 (*Awards session*), November 2020
27. ACS Fall Meeting 2020 (*Awards session*), August 2020
28. University of Pittsburgh, Pittsburgh, Pennsylvania, USA, July 2020
29. Brookhaven National Laboratory, Upton, New York, USA, June 2020
30. ARO Condensed Matter Physics Workshop, Raleigh, NC, USA, February 2020
31. Frontiers in Optics (*Awards session*), Washington, DC, USA, September 2019
32. Swiss Physical Society Meeting (*Awards session*), Zürich, Switzerland, August 2019
33. Flatiron Institute, “Materials in Quantum Cavities and Excitonic Insulators,” New York City, USA, July 2019

34. Ultrafast Science from the Infrared to the X-Rays, Lausanne, Switzerland, November 2018
35. Harvard University, Cambridge, Massachusetts, USA, April 2018
36. École Polytechnique Fédérale de Lausanne, Lausanne, Switzerland, February 2017
37. Princeton University, Princeton, New Jersey, USA, June 2016
38. Massachusetts Institute of Technology, Cambridge, Massachusetts, USA, June 2016
39. Max Planck Institute für Struktur und Dynamik der Materie, Hamburg, Germany, February 2016
40. NCCR MUST Meeting (*Highlight talk*), Engelberg, Switzerland, January 2016
41. Nonequilibrium Phenomena in Complex Matter, Krvavec, Slovenia, December 2015

Contributed Talks

1. Emergent Phenomena in Quantum Materials, Beverly, Massachusetts, USA, June 2019
2. APS March Meeting 2019, Boston, Massachusetts, USA, March 2019
3. 256th ACS National Meeting, Boston, Massachusetts, USA, August 2018
4. XXIst International Conference on Ultrafast Phenomena, Hamburg, Germany, July 2018
5. Ultrafast Phenomena in Quantum Physics, Lausanne, Switzerland, April 2016
6. New Generation in Strongly Correlated Electron Systems 2015, Trogir, Croatia, September 2015
7. Materials and Mechanisms of Superconductivity, Geneva, Switzerland, August 2015
8. 3rd International Conference on Ultrafast Structural Dynamics, Zürich, Switzerland, June 2015

Synergistic Activities

Internal Activities, The University of Texas at Austin

- Physics Department Faculty Hiring Committee (Condensed Matter Experiment), 2022 - present
- Physics Department Graduate Admissions Committee, 2022 - present
- Physics Department APS Bridge Committee, 2022 - present
- Physics Department Outreach Committee, 2023 - present
- Organizer of Ψ (Physicists Supporting Inclusion) Mentoring Program for Physics Undergraduate Students from Underrepresented Minorities, 2022 - present
- Reviewer for the Office of the Vice President for Research, Scholarship and Creative Endeavors, 2022 - present

External Activities

- Conference Organization:
The Gordon and Betty Moore Foundation
Emergent Phenomena in Quantum Systems (EPiQS)
Symposium for Postdoctoral Scholars
Austin, TX (2023); Salt Lake City, UT (2024); Pasadena, CA (2025)
- Technical Program Committee: CLEO 2023-2025 “Quantum Optics of Atoms, Molecules, and Solids” session.
- Journal Reviewer: Applied Physics Letters, Applied Sciences, Condensed Matter, Journal of Applied Physics, Nano Letters, Nanomaterials, Nature, Nature Communications, Nature Physics, npj Quantum Materials, Physical Review A, Physical Review B, Physical Review Letters, Physical Review X, Proceedings of the National Academy of Sciences, Science Advances, Scientific Reports, Structural Dynamics, Symmetry.
- Proposal Reviewer: Center for Integrated Nanotechnologies, U.S. Department of Energy, Photonique Quantique Québec, Agence Nationale de la Recherche, Israeli Ministry of Innovation Science and Technology, Israel Science Foundation.
- External Faculty Hiring Committee Member: TU Dortmund.