

BIOGRAPHICAL SKETCH

Manh-Huong Phan

Associate Professor
Group Leader, Laboratory for Advanced Sensor Technologies
Department of Physics
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Research Interest & Expertise

Thermomagnetic and thermoelectric materials for energy-efficient refrigeration technologies; Giant magneto-impedance materials for magnetic sensor technology; Multiferroic thin films and heterostructures for spintronic devices; Magnetic polymer composites for structural health self-monitoring applications; Nanobiosensors and magnetic nanoparticles for biomedical applications; Advanced medical devices and technologies for health care; Collective phenomena in complex oxides and magnetic nanostructures.

Professional Preparation

2006 Ph.D. (Engineering Physics) University of Bristol, United Kingdom
2003 M.S. (Applied Physics) Chungbuk National University, South Korea
2000 B.S. (Solid State Physics) Hanoi National University, Vietnam

Appointments

2015-present Associate Professor (*Permanent*), Physics Dept., University of South Florida, USA
2010-15 Assistant Professor (*Research*), Physics Dept., University of South Florida, USA
2008-10 Senior Research Associate, Physics Dept., University of South Florida, USA
2006-07 Postdoctoral Fellow, Advanced Composites Centre for Innovation and Science, University of Bristol, UK
2001-03 Research Assistant, Physics Dept., Chungbuk National University, South Korea
2000-01 Research Scientist, Physics Dept., Hanoi National University, Vietnam

Publications (*selected from a total of 215 peer-reviewed publications; h-index: 34 from [Google Scholar](#); total citations: 4899*)

- “Giant Magnetoimpedance Materials: Fundamentals and Applications” -**M.H. Phan** and H.X. Peng, invited review paper in **Progress in Materials Science** **53**, 323 (2008); impact factor: **32.97** – [the top 10 most cited articles in this journal \(2008-2013\)](#).
- “Review of the Magnetocaloric Effect in Manganite Materials”-**M.H. Phan** and S.C. Yu, invited review paper in **Journal of Magnetism and Magnetic Materials** **308**, 325 (2007); > **800** citations – [the most cited article of the year 2012 in this journal](#).
- “Exchange Bias Effects in Iron Oxide Based Nanoparticle Systems,” **M.H. Phan**, J. Alonso, H. Khurshid, P. Lampen-Kelley, S. Chandra, K. Stojak, Z.N. Porshokouh, R. Das, Ò. Iglesias, and H. Srikanth, invited review paper in **Nanomaterials** **6**, 221 (2016)
- “Cooling achieved by rotating an anisotropic superconductor in a constant magnetic field: A new perspective,” **M.H. Phan** and D. Mandrus, **AIP Advances** **6**, 125022 (2016).
- “Spin-glass-like freezing of inner and outer surface layers in hollow gamma-Fe₂O₃ nanoparticles,” H. Khurshid, P. Lampen-Kelley, Ò. Iglesias, J. Alonso, **M.H. Phan**, M.L Saboungie, C.G. Sun, and H. Srikanth, **Nature - Scientific Reports** **5**, 15054 (2015).

- “Enhanced Magnetism in Highly Ordered Magnetite Nanoparticle-filled Nanohole Arrays,” - B. Duong, H. Khurshid, P. Gangopadhyay, J. Devkota, K. Stojak, H. Srikanth, L. Tetard, R.A. Norwood, N. Peyghambarian, J. Thomas, and **M.H. Phan**, *Small* **10**, 2840 (2014): [Featured cover](#).
- “Synthesis, inductive heating, and magnetoimpedance based detection of multifunctional Fe₃O₄ nanoconjugates” - J. Devkota, M.T. Trang, N.X. Phuc, P. Mukherjee, H. Srikanth, and **M.H. Phan**, *Sensors and Actuators B – Chemical* **190**, 715 (2014)
- “Macroscopic phase diagram and magnetocaloric study of metamagnetic transitions in spin chain Ca₃Co₂O₆,” - P. Lampen, N.S. Bingham, **M.H. Phan**, H.T. Yi, S.W. Cheong, and H. Srikanth, *Physical Review B* **89**, 144414 (2014)
- “Tuning exchange bias in Fe/γ-Fe₂O₃ core/shell nanoparticles: Impacts of interface and surface spins” - H. Khurshid, **M.H. Phan**, P. Mukherjee, and H. Srikanth, *Applied Physics Letters* **104**, 072407 (2014)
- “Exchange bias effect in Au-Fe₃O₄ composite nanoparticles” - S. Chandra, N. A. Frey, **M.H. Phan**, S. Srinath, M. A. Garcia, Y.M. Lee, C. Wang, S. Sun, O. Iglesias, and H. Srikanth, *Nanotechnology* **25**, 055702 (2014)
- “Mechanical and magnetocaloric properties of Gd-based amorphous microwires fabricated by melt-extraction technique” - F. Qin, H. Wang, H.X. Peng, N.S. Bingham, D.W. Xing, J.F. Sun, V. Franco, H. Srikanth, and **M.H. Phan**, *Acta Materialia* **61**, 1284 (2013)
- “The scaling and universality of conventional and inverse magnetocaloric effects in Heusler alloys” – A. Biswas, P. Zhang, T-L Phan, T.D. Thanh, N.H. Dan, S.C. Yu, H. Srikanth, and **M.H. Phan**, *Applied Physics Letters* **103**, 162410 (2013)
- “Impact of reduced dimensionality on the magnetic and magnetocaloric response of La_{0.7}Ca_{0.3}MnO₃” - P. Lampen, N. S. Bingham, **M.H. Phan**, H. Kim, M. Osofsky, A. Piqué, T.L. Phan, S.C. Yu, and H. Srikanth, *Applied Physics Letters* **102**, 062414 (2013)
- “Excellent magnetocaloric properties of melt-extracted Gd-based amorphous microwires” - N. S. Bingham, H. Wang, F. Qin, H. X. Peng, J. F. Sun, V. Franco, H. Srikanth, and **M.H. Phan**, *Applied Physics Letters* **101**, 102407 (2012)
- “Impact of nanostructuring on the magnetic and magnetocaloric properties of microscale phase-separated La_{5/8-y}Pr_yCa_{3/8}MnO₃ manganites” - N.S. Bingham, P. Lampen, **M.H. Phan**, N.D. Hoang, H.D. Chinh, C.L. Zhang, S.W. Cheong, and H. Srikanth, *Physical Review B* **86**, 064420 (2012)
- “Surface spin disorder and exchange-bias in hollow maghemite nanoparticles” - H. Khurshid, W. Li, **M.H. Phan**, P. Mukherjee, H. Srikanth, and G.C. Hadjipanayis, *Applied Physics Letters* **101**, 022403 (2012)
- “Spin dynamics and criteria for onset of exchange bias in superspin glass Fe/γ-Fe₂O₃ core-shell nanoparticles” -S. Chandra, H. Khurshid, W. Li, G. C. Hadjipanayis, **M.H. Phan**, and H. Srikanth, *Physical Review B* **86**, 014426 (2012)
- “Asymmetric hysteresis and its dependence on magnetic anisotropy in exchange biased Co/CoO core-shell nanoparticles” -S. Chandra, H. Khurshid, **M.H. Phan**, and H. Srikanth, *Applied Physics Letters* **101**, 232405 (2012)
- “Coexistence of conventional and inverse magnetocaloric effects and critical behaviors in Ni₅₀Mn_{50-x}Sn_x (x = 13 and 14) alloy ribbons” - T.L. Phan, P. Zhang, N. H. Dan, N. H. Yen, P. T. Thanh, T. D. Thanh, S.C. Yu, and **M.H. Phan**, *Applied Physics Letters* **101**, 202408 (2012)
- “Table-like magnetocaloric effect and enhanced refrigerant capacity in Eu₈Ga₁₆Ge₃₀-EuO composite materials” - A. Chaturvedi, S. Stefanoski, **M.H. Phan**, G.S. Nolas, and H. Srikanth, *Applied Physics Letters* **99**, 162513 (2011)
- “Origin of the magnetic anomaly and tunneling effect of europium on the magnetism in Eu₈Ga₁₆Ge₃₀ type-I clathrates” - **M.H. Phan**, V. Franco, A. Chaturvedi, S. Stefanoski, G.S. Nolas, and H.

Srikanth, **Physics Review B** **84**, 054436 (2011)

- “Collapse of charge ordering and enhancement of magnetocaloric effect in nanocrystalline $\text{La}_{0.35}\text{Pr}_{0.275}\text{Ca}_{0.375}\text{MnO}_3$ ” –**M.H. Phan**, S. Chandra, N.S. Bingham, H. Srikanth, C.L. Zhang, S.W. Cheong, T.D. Hoang, H.D. Chinh, **Applied Physics Letters** **97**, 242506 (2010)
- “Carbon Nanostraws: Nanotubes filled with superparamagnetic particles” –S. Pal, S. Chandra, **M.H. Phan**, P. Mukherjee and H. Srikanth, **Nanotechnology** **20**, 485604 (2009)
- “Novel nanostructure and magnetic properties of CoFeHfO films” -N.D. Ha, **M.H. Phan** and C.O. Kim, **Nanotechnology** **18**, 155705 (2007)

Synergistic Activities, Distinctions, and Selected Achievements

- **Managing Editor**, [Journal of Science: Advanced Materials and Devices](#) (VNU-Elsevier: an open access journal), 2016 - present
- **Associate Editor**, [Journal of Electronic Materials](#), Springer Publishers (ISI journal, IF = 1.798), 2015-present
- **Conference Co-chair**, [The 8th Energy Materials Nanotechnology \(EMN\) Fall Meeting](#), November 22 - 25, 2014, Orlando, USA
- **Outstanding referee**, Journal of Alloys and Compounds (2016)
- **Outstanding referee**, Physica Status Solidi A (2016)
- **Outstanding referee**, Journal of Magnetism and Magnetic Materials (2013, 2015)
- **Organizing Committee**, The MMM - 2017 Conference on Magnetism and Magnetic Materials, November 6-10, 2017, Pittsburgh, Pennsylvania, USA
- **Organizing Committee**, The IEEE International Magnetics Conference, INTERMAG Europe 2017, April 24-28, 2017, Dublin, Ireland
- **International Advisory Committee**, *EMN Spain Meeting: Energy Materials Nanotechnology*, September 1 - 4, 2015, San Sebastian, Spain
- **Lead Editor**, Special issue "*Advanced Electronic Materials and Devices*", papers selected from the International Workshop on Nanoscience and Nanotechnology: Opportunities for Academia & High Tech Industry, November 2 - 4, 2015, Da Nang City, Vietnam
- **Lead Editor**, Special issue "*Functional Nanomaterials and Devices for Biomedical Engineering and Sensing Applications*"; papers selected from the Energy Materials Nanotechnology (EMN) Fall Meeting, November 22–25, 2014, Orlando, USA.
- **Guest Editor**, Special Issue on “*Advanced Magnetic Materials: Genetics, Mechanism, and Therapies*” Hindawi Publishing Corporation, 2012
- **International Advisory Committee**, The International Workshop on Advanced Materials and Nanotechnology (IWAMN2016), November 3-5, 2016, Hanoi, Vietnam
- **International Advisory Committee and Organizer**, The Joint 4th Asia-Pacific Chemical and Biological Microfluidics Conference, November 2 - 4, 2015, Da Nang City, Vietnam
- **International Advisory Committee**, The Donostia International Workshop on Energy, Materials and Nanotechnology, September 1 - 4, 2015, San Sebastian, Spain
- **International Advisory Committee**, Donostia International Conference on Nanoscale Magnetism and Applications (DICNMA), September 9 - 13, 2013, San Sebastián, Spain
- **Membership Referee**, The World Academy of Science (TWAS), 2013
- **Co-organizer**, the Session “*Soft Magnetic Materials, GMI and Applications*” at Donostia International Conference on Nanoscale Magnetism and Applications (DICNMA), September 9 - 13, 2013, San Sebastián, Spain

- **Local Organizing Committee**, Nano-Bio Collaborative International Conference, March 22-24, 2012, Tampa, Florida, USA
- **Magnetic Materials Committee Member**, the Minerals Metals and Materials Society (TMS), 2011-present
- **Technical Reviewer** for over 100 physical & engineering journals, such as *Nature*, *Nature Materials*, *Scientific Reports*, *Advanced Materials*, *Advanced Functional Materials*, *Advanced Energy Materials*, *ACS Nano*, *Small*, *Nanoscale*, *Applied Physics Letters*, *Nanotechnology*, and *Journal of Applied Physics*.
- **Research Grant Reviewer/ Physics Panel Reviewer** for National Science Foundation (2015, 2016), American Association for the Advancement of Science (2014), USF Research Foundation (2014), CRDF Global-Urals Branch of the Russian Academy of Sciences Joint Basic Research Competition, USA (2013, 2014), Engineering and Physical Sciences Research Council (EPSRC), United Kingdom (2011, 2015), and Kentucky Science and Engineering Foundation R&D Excellence Awards, USA (2009, 2011, 2014)
- **eBook Proposal Reviewer**, Bentham Science Publishers, 2012
- **Book Chapter Reviewer**, Bentham Science Publishers, 2012
- **Book chapter reviewer**, Elsevier Publishers, 2013
- **International Adjudicator**, PhD dissertations, Indian Institute of Science, Bangalore, India (2013, 2014); Andhra University, India (2012, 2013)
- **Session Chairs**, *59th Annual MMM Conference on Magnetism and Magnetic Materials* – 2014, *58th Annual MMM Conference on Magnetism and Magnetic Materials* – 2013, *Donosita International Conference on Nanoscale Magnetism and Applications (DICNMA)- 2013*; *12th Joint MMM/Intermag Conference* – 2012; *19th International Conference on Magnetism (ICM)* -2012; *56th Annual MMM Conference on Magnetism and Magnetic Materials* – 2011; *Symposium on Magnetic Materials for Energy Applications* – 2011; *55th Annual MMM Conference on Magnetism and Magnetic Materials* – 2010; *American Physical Society (APS) Meeting* – 2009; *53rd Annual Conference on Magnetism and Magnetic Materials* – 2008; and *International Symposium on Advanced Magnetic Materials and Applications* – 2007
- **Coordinator**, [The Global Education Program between USF and Vietnamese Univ.](#) (2011-present)

Selected Invited Talks:

- "*Recent Developments in Gd Alloy Microwires for Energy-Efficient Magnetic Refrigeration*," The 2017 MRS Spring Meeting and Exhibit, April 17-21, 2017, Phoenix, Arizona, USA
- "*Functional Magnetic Nanoparticles for Hyperthermia Based Therapy*," The International Workshop on Advanced Materials and Nanotechnology (IWAMN2016), November 3-5, 2016, Hanoi, Vietnam (*Plenary Talk*)
- "*Reduced Dimensionality Effects in Magnetocaloric Materials*," The XXV International Materials Research Congress, August 14-19, 2016, Cancún, México
- "*Novel Magnetic Nanoparticles in Nanomedicine*," The International Workshop on Advanced Materials and Devices, Hanoi, Vietnam, July 8-9, 2016 (*Plenary Talk*)
- "*Roles of interface and surface spins in exchange-coupled magnetic nanostructures*," The American Physical Society (APS) March Meeting, March 14-18, 2016, Baltimore, MD, USA
- "*Current Trends in Giant Magnetoimpedance Materials Research*," in "Advanced Magnetic Materials: An FMD Symposium in Honor of Michael E. McHenry," TMS 2016 Annual Meeting & Exhibition, February 14 – 18, 2016, Nashville, Tennessee, USA
- "*A novel biosensing platform for detection of magnetically labeled cancer cells and biomolecules*," Joint 4th Asia-Pacific Chemical and Biological Microfluidics Conference, November 2 - 4, 2015, Da

Nang City, Vietnam (*Plenary Talk*)

- *"Tunable Exchange Bias in Magnetic Nanostructures for Nanoptronics and Nanomedicine,"* The Magnetically Stimulated Soft Materials Conference, May 11- 12, 2015, Georgia, USA
- *"Advanced magnetoimpedance based biosensing using functionalized nanoparticles,"* The 59th Annual Magnetism and Magnetic Materials (MMM) Conference, November 3-7, 2014, Hawaii, USA
- *"Magneto-impedance Based Detection of Magnetic Biomarkers: Opportunities and Challenges,"* The Energy Materials Nanotechnology (EMN) Fall Meeting, December 7 – 10, 2013 Orlando, Florida, USA
- *"Nanostructured Magnetocaloric Materials for Energy-efficient Refrigeration: Current Research and Future Directions,"* The Materials Research Society (MRS) Meeting, April 1-5, 2013, Moscone West, San Francisco, USA
- *"Novel Clathrate-based Composite Materials for Energy-efficient Refrigeration,"* The 19th International Conference on Magnetism (ICM), July 8-13, 2012, Busan, Korea
- *"Nanostructured Multiphase Materials for Energy-efficient Refrigeration,"* The 2nd International Workshop on Functional Materials, July 16, 2012, Cheongju, South Korea
- *"Recent Advances and Future Research Directions in Giant Magneto-impedance Materials,"* The Advanced Electromagnetics Symposium, April 16-19, 2012, Paris, France
- *Magnetocaloric Manganites: Progress and Challenges,"* The International Symposium on Advanced Magnetic Materials and Applications (ISAMMA07), 28 May – 1 June 2007, Jeju, South Korea

Thesis/Dissertation Committees:

- Ms. H. Belliveau*, PhD dissertation, 2016 (*Major Professor*)
- Ms. K. Stojak, PhD dissertation, 2016 (*Co-Major Professor*)
- Ms. Z. Nemati Porshokouh, PhD dissertation, 2016 (*Co-Major Professor*)
- Mr. J. Devkota, PhD dissertation, 2015 (*Major Professor*)
- Ms. P. Lampen, PhD dissertation, 2015 (*Co-Major Professor*)
- Mr. N. Bingham, PhD dissertation, 2013 (*Co-Major Professor*)
- Mr. A. Chaturvedi, PhD dissertation, 2011 (*Co-Major Professor*)
- Mr. B. Casas, MS thesis, 2015 (*Co-Major Professor*)
- Ms. K. Stojak, MS thesis, 2013 (*Co-Major Professor*)
- Mr. P. Anh, MS thesis, 2012 (*Committee Member*)
- Mr. J. Gass, PhD dissertation, 2012 (*Committee Member*)
- Mr. T. Wangensteen, PhD dissertation, 2012 (*Committee Member*)
- Mr. C. Bauer, MS thesis, 2011 (*Committee Member*)
- Mr. S. Chandra, PhD dissertation, 2013 (*Committee Member*)
- Mr. N. Le, PhD dissertation, 2016 (*Committee Member*)
- Mr. H. Tran, PhD dissertation, 2016 (*Committee Member*)
- Mr. K. Bhattari, PhD dissertation, 2015 (*Committee Member*)
- Mr. M. Hordagoda, PhD dissertation, 2015 (*Committee Member*)
- Mr. C. Hettiarachchi, PhD dissertation, 2016 (*Committee Member*)
- Mr. D. Denmark, PhD dissertation, 2016 (*Committee Member*)
- Ms. C. Kons, MS thesis, 2015 (*Committee Member*)
- Mr. V. Kalappattil, PhD dissertation, 2018 (*Co-Major Professor*)
- Ms. E. Clements, PhD dissertation, 2018 (*Co-Major Professor*)

- Ms. T. Eggers, PhD dissertation, 2018 (*Major Professor*)
- Mr. O. Thiabgoh, PhD dissertation, 2018 (*Major Professor*)
- Mr. Joshua Robles, PhD dissertation, 2017 (*Co-Major Professor*)
- Mr. Pooja Puri, PhD dissertation, 2015, Thapar University, India (*International Adjudicator*)
- Mr. Ankush, PhD thesis, 2014, Jaypee University of Information Technology, India (*International Adjudicator*)
- Mr. Kaustuv Manna, PhD dissertation 2013, Indian Institute of Science, Bangalore, India (*International Adjudicator*)
- Mr. Chanchal Sow, PhD dissertation 2013, Indian Institute of Science, Bangalore, India (*International Adjudicator*)
- Mr. Ramesh Singampalli, PhD dissertation 2013, Andhra University, India (*International Adjudicator*)
- Mr. D. Tirupathi Swamy, PhD dissertation 2012, Andhra University, India (*International Adjudicator*)
- Mr. Venkateswararao Alaparthi, PhD dissertation 2012, Andhra University, India (*International Adjudicator*)
- Mr. K. Venkata Lakshmi Narayana, PhD dissertation 2012, Andhra University, India (*International Adjudicator*)

Student and Postdocs Advisees:

Current postdoctoral researchers: Dr. Raja Das, Dr. Javier Alonso (*funded by Spanish government*)

Current graduate students: Mr. Ongard Thiabgoh*, Ms. Tatiana Eggers*, Mr. Vijaysankar Kalappattil, Ms. Eleanor Clements, Mr. Joshua Robles, Ms. Richa Pokharel Madhogaria, Mr. Hongxian Shen* (*Ph.D. student, 10/2014-present, jointly with Prof. Sun of Harbin Institute of Technology, China*), Mr. Lam Dao* (*Ph.D. student, 2014-present, jointly with Prof. Ngo of Hanoi University of Science, Vietnam*), Ms. Nguyen Thi My Duc*, (*Ph.D. student, 2015-present, jointly with Prof. Ngo of Hanoi University of Science, Vietnam*), Mr. Sida Jiang* (*Ph.D. student, 2016-present, jointly with Prof. Sun of Harbin Institute of Technology, China*)

Current undergraduate students: Mr. J. Cardarelli* (*B.S. honor thesis*), Mr. C. Witanachchi*, and Ms. K. Malestein*

Students graduated:

Dr. H. Belliveau* (*Ph.D. dissertation ([link to dissertation](#)), 2016; now a Systems Engineer at Lockheed Martin Missiles and Fire Control Division, Orlando, USA*), Dr. Z. Nemat Porshokouh (*Ph.D. dissertation ([link to dissertation](#)), 2016; now a teaching faculty of the University of South Florida Physics*), Dr. K. Stojak, *Ph.D. dissertation ([link to dissertation](#)), 2016; now a teaching faculty of the University of South Florida Physics*), Dr. Jagannath Devkota (*Ph.D. dissertation ([link to the dissertation](#)), April 2015; now a postdoctoral research fellow at the University of Georgia*), Dr. Paula Lampen (*Ph.D. dissertation ([link to the dissertation](#)), April 2015; now a postdoctoral research fellow at the University of Tennessee*), Dr. Nicholas Bingham (*Ph.D. dissertation ([link to the dissertation](#)), April 2013; now a postdoctoral research fellow at the Paul Scherrer Institute in Switzerland*), Dr. Anurag Chaturvedi (*Ph.D. dissertation ([link to the dissertation](#)), June 2011; now a postdoctoral researcher at University of Alabama*), Mr. Brian Casas (*M.S. thesis ([link to the thesis](#)), June 2015; now a Ph.D. student at University of California - Irvine*), Ms. Kristen Stojak (*M.S. thesis ([link to the thesis](#)), June 2013; now a Ph.D. student at USF*), Ms. R. Israel*, *B.S. honor thesis ([link to thesis](#)), 2016; now a PhD student at Iowa State University*), Mr. Rupin Singh* (*B.S. honor thesis ([link to the thesis](#)), April 2015; now a PhD student at USF medicine*), Mr. A. Galati*, *B.S. Research, 2015-2016; now a Ph.D. student at New York University*), Ms. A. Stephan*, (*B.S. Research, Spring 2016; working in a company*), Ms. Trang Tran* (*B.S. Research, 2012-2013; now a M.S. student at*

USF engineering), Mr. Jeff Wingo (B.S., June 2014; *now a Ph.D. student at University of California - Irvine*), Mr. Ramon Alejandro Ruiz (B.S., June 2013; *now a Ph.D. student at University of California – Berkeley*), Ms. Marienette Morales (M.S., June 2009; *now a Ph.D. student at the University of Trieste, Italy*), Mr. Nicholas Laurita (B.S., June 2011; *now a Ph.D. student at Johns Hopkins University*)

Former postdoctoral researchers: Dr. Hafsa Khurshid (Nov. 2011-May 2015; *now a postdoctoral researcher at Dartmouth–Hitchcock Medical Center, USA*), Dr. Anis Biswas (Nov. 2011 – Nov. 2013; *now a postdoctoral researcher at Ames Laboratory, USA*); Dr. Sayan Chandra (Nov. 2013 – June 2014; *now a postdoctoral researcher at National Institute for Scientific Research, Canada*)

Visiting students and researchers: Ms. Natalia Rinaldi, Visiting PhD student, 09-12/2015 (*funded by Spanish government*), University of Oviedo, Spain; Mr. Hongxian Shen* Visiting Ph.D. student, October 1, 2014 – October 30, 2015, Harbin Institute of Technology, China (*funded by Chinese government*); Mr. Ahmed Talaat*, Visiting Ph.D. student, 03-06/2015, University of the Basque Country, Spain (*funded by Spanish government*); Mr. Jonathan Cruz Vargas, Visiting M.S. student, 03-06/2015, Instituto de Investigacion en Materials, Mexico (*funded by Spanish government*); Dr. X.L. Hou*, Visiting Scientist, March 1, 2014 – March 30, 2015, Shanghai University, China (*funded by Chinese government*); Mr. L. Dao*, Visiting Ph.D. student, July 1 – Dec 30, 2014, Hanoi University of Science, Vietnam (*funded by NAFOSTED*); Dr. P. Zhang*, Visiting Ph.D. student, Jan. 20 – Feb. 11, 2013, Chungbuk National University, South Korea; Mr. Y.Y. Yu*, Visiting researcher, October 1 – April. 30, 2013, LG, South Korea; Dr. F. Qin*, Visiting scientist, December 10-28, 2012, University of Bristol, UK; Ms. D.T.M. Hue, Visiting Ph.D. student, July 4 – October 3, 2012, Hanoi University of Science and Technology, Vietnam (*funded by NAFOSTED*); Dr. H.T. Ngo, Visiting scientist, June-August 2011, Hanoi National University, Vietnam; Dr. R. Caballero-Flores, Visiting scientist, July 1 – Sept. 30 2011, Universidad de Sevilla, Spain; and Dr. A. Figueroa, Visiting Ph.D. student, April-July 2010, Universidad de Zaragoza, Spain

REU students:

Ms. M. Lassell (June 1 – August 1, 2016), Ms. D. Honstain* (June 1 – August 1, 2016), Ms. Valery Ortiz Jimenez* (June 1- August 4, 2015), Ms. Evelyn Vila* (June 1- August 4, 2015), Mr. David Torres* (June 1- August 4, 2015), Ms. Izzi Berman* (June 1- August 4, 2014), Mr. Luis Martinez (June 1- August 4, 2014), Mr. Jeff Wingo (June 1 - August 2, 2013); Ms. Rosemary Sheldon (June 1 - August 5, 2011)

Other research advisory activities: Mr. Lam Dao*, Joint Ph.D. student, Hanoi University of Science, Vietnam (2014 - present); Ms. My Duc*, Joint Ph.D. student, Hanoi University of Science, Vietnam (2014 - present); Mr. Hongxian Shen*, Joint Ph.D. student, Harbin Institute of Technology, China (2014 - present); Dr. D.T.M. Hue*, Ph.D. student, Hanoi University of Science and Technology, Vietnam (2012 - 2015); Dr. S. Chandra, Ph.D. thesis, University of South Florida, USA (2009 - 2013); Dr. F. Qin*, Ph.D. thesis, University of Bristol, UK (2007 - 2010); Mr. N.D. Tho*, B.S. thesis, Hanoi National University, Vietnam (2000 – 2001)

(*Unless specified*, co-supervised students and researchers with Prof. Hari Srikanth of Functional Materials Laboratory at USF*)

Student Awards:

- Dr. Kristen Stojak Repa, *The Best Poster Presentation Award*, The 61st Annual Magnetism and Magnetic Materials (MMM) Conference, October 31 - November 4, 2016, New Orleans, Louisiana, USA
- Ms. Megan Glassell - REU student, *an USF-NSF travel award* for presenting her work at the APS March Meeting 2017
- Ms. Evelyn Vila - REU student, *The Best Oral Presentation Award*, the APS March Meeting, March 13-18, 2016

- Ms. I. Deborah, *Best Oral Presentation Award*, the 2016 APS Conference for Undergraduate Women in Physics
- Mr. V. Kalappattil, *2016 IEEE Magnetics Society Summer School Travel Award*, Tohoku University, Japan, July 10-16, 2016
- REU students (Valery Ortiz Jimenez, David Torres, and Evelyn Vila) won *NSF-USF Travel Awards* to attend and present their research at the American Physical Society Meeting, Baltimore, MD, March 14-18, 2016
- Mrs. K. Stojak, *NASA Florida Space Grant Consortium (FSGC) Award*, 2015
- Mr. B. Casas, *GMAG-APS Student Travel Award*, American Physical Society Meeting, San Antonio, TX, March 2-6, 2015
- Mr. J. Devkota, *Best Poster Award*, The 8th Energy Materials Nanotechnology (EMN) Fall Meeting, Orlando, Florida, USA, November 22-25, 2014
- Dr. J. Alonso, *Best Poster Award*, The 59th Annual Magnetism and Magnetic Materials (MMM) Conference, November 3-7, 2014, Hawaii, USA
- Mrs. K. Stojak, *Travel Award*, The 59th Conference on Magnetism and Magnetic Materials (MMM), Honolulu, Hawaii, USA, November 3 - 7, 2014
- Ms. I. Berman, *USF-REU Travel Award to the APS March Meeting*, San Antonio, Texas, March 2 – 6, 2015
- Mr. J. Devkota, *IEEE Magnetics Society Summer School Travel Award*, Rio de Janeiro, Brazil, August 10-16, 2014; *USF Physics Tharp Research Award*, 2014; *GMAG-APS Student Travel Award*, American Physical Society Meeting, Baltimore, Maryland, March 18-22, 2013
- Mr. J. Wingo, *The PhD fellowship in Physics from University of California - Irvine, 2014; Best Oral Presentation Award and APS 2014 Student Travel Award*, USF Physics, August 12, 2013
- Ms. K. Stojak, *Best Poster Presentation Award*, NanoFlorida conference, USF, Sept. 2012
- Mr. A. Ruiz, *The 2014 NSF Graduate Research Fellowship; The Presidential Doctoral Fellowships in Applied Physics* at University of California – Berkeley, Yale University, and Penn State University. Featured in [USF news](#) and [Tampa Bay TV news](#); *Best Poster Presentation Award*, NanoFlorida conference, USF, Sept. 2012; *Full support to attend Summer School in Magnetism and Magnetic Materials*, National High Magnetic Field Laboratory, Tallahassee, FL (Jul. 2012).
- Mr. N. Bingham, *Travel Grant Award*, 2nd Annual IEEE Magnetics Society Summer School (Sept 20-25, 2009), Nanjing, China; *Travel Grant Award*, 1st Centennial of Superconductivity: Trends on Nanoscale Superconductivity and Magnetism International Workshop (June 28-July 1st, 2011), California, Colombia, USA
- Ms. P. Lampen, *NSF Travel Grant Award*, the 2011 IEEE Magnetics Society Summer School (May 22-28), New Orleans, LA, USA
- Mr. N. Laurita, Offered the full PhD Fellowships in Applied Physics at *Johns Hopkins University* and *Carnegie Mellon University*, 2011

Teaching Experience:

- “*Advances in Pure and Applied Physics*” for graduates at USF (2008 – present)
- “*Lectures on Materials Physics*” for undergraduates at USF (Spring, 2011; Fall 2013)
- “*Lectures on Advanced Materials Physics*” for graduates at USF (Spring, 2014)
- “*Directed Research and Dissertation Courses*” for graduates at USF (2012-present)

Collaborators (past 5 years, alphabetical order):

Prof. Sang-Wook Cheong (Rutgers University), Prof. Huynh-Dang Chinh (Hanoi University of Technology, Vietnam), Prof. Victorino Franco (University of Seville, Spain), Prof. Aleksadr S.

Kamzin (Ioffe Physico-Technical Institute, Russian Academy of Sciences), Prof. Tho Nguyen (The University of Georgia, USA), Dr. Vladimir Larin (Microfiber Technology Industry, Moldova), Dr. Anh-Tuan Le (Hanoi University of Science and Technology, Vietnam), Prof. Chris Leighton (University of Minnesota), Prof. David Mandrus (University of Tennessee), Prof. Michael McHenry (Carnegie-Mellon University), Prof. Subhra Mohapatra (University of South Florida), Prof. Pritish Mukherjee (University of South Florida), Prof. George Nolas (University of South Florida), Dr. The-Long Phan (Chungbuk National University, South Korea), Prof. Hua-Xin Peng (Bristol University, England), Dr. Faxiang Qin (National Institute for Materials Science, Japan), Prof. Nguyen Xuan Phuc (Institute of Materials Science, Vietnam), Prof. Nguyen Thu Huong (Hanoi National University), Prof. Michael Shatruk (Florida State University), Prof. Hariharan Srikanth (University of South Florida), Prof. Jayan Thomas (University of Central Florida), Prof. Manuel Vazquez (Institute of Materials Science, Spain), Prof. Sarath Witanachchi (USF), Prof. Seong-Cho Yu (Chungbuk National University, South Korea), and Prof. Arkaday Zhukov (Spain).

Host of Researchers' Visits and Organizer of Physics Colloquium/Special Physics Seminars:

- Prof. Ngoc Diep Lai, Quantum and Molecular Photonics Laboratory (LPQM) and Physics Department, Ecole Normale Supérieure de Cachan, February 5-9, 2017
- Prof. Sang-Wook Cheong, Department of Physics and Astronomy Rutgers, The State University of New Jersey, January 26-28, 2017
- Prof. Turgut Meydan, Wolfson Centre for Magnetism, Cardiff University, UK, October 27-29, 2016
- Prof. Arup Kumar Raychaudhuri, S.N.Bose National Centre for Basic Sciences, Kolkata, India, June 2 - 4, 2016
- Dr. Davide Peddis, Institute of Structure of Matter, Rome, Italy, June 8 - 12, 2016
- Prof. Lionel Vayssieres, International Research Center for Renewable Energy, School of Energy & Power Engineering, Xi'an Jiaotong University, Xi'an 710049, PR China, April 21, 2016
- Prof. Katayun Barmak, Department of Applied Physics and Applied Mathematics, Columbia University, April 7-8, 2016
- Dr. Xavier Moya, Department of Materials Science & Metallurgy, University of Cambridge, United Kingdom, January 14-20, 2016.
- Prof. Aleksandr S. Kamzin, Ioffe Physico-Technical Institute of the Russian Academy of Sciences, July 29- July 2, 2015
- Dr. José Luis Sánchez Llamazares, Instituto Potosino de Investigación Científica y Tecnológica, Mexico (May 1-10, 2015)
- Dr. Do Hung Manh, Institute of Materials Science, Vietnam (April 25-28, 2015)
- Prof. Tran Dai Lam, Graduate University of Science and Technology, Institute of Materials Science, Vietnam (April 25-28, 2015)
- Prof. Bethanie J. Hills Stadler, University of Minnesota, USA (February 26-27, 2015)
- Prof. Pedro Gorria, University of Oviedo, Spain (November 26 – 27, 2014)
- Prof. Dong-Hyun Kim, Chungbuk National University, South Korea (November 26 – 27, 2014)
- Dr. Ioanna Giouroudi, Vienna University of Technology, Austria (November 26 – 27, 2014)
- Prof. Tho Nguyen, The University of Georgia, USA (November 26 – 27, 2014)
- Prof. David Mandrus, The University of Tennessee, USA (September 11 – 13, 2014)
- Prof. Manuel Vázquez, Institute of Materials Science of Madrid, CSIC, Spain (November 8 – 12, 2013)
- Prof. Oscar Iglesias, Dpt. Física Fonamental, University of Barcelona, Spain (July 8 – August 7, 2013)

- Prof. Huynh Dang Chinh, Department of Chemistry, Hanoi University of Science and Technology, Vietnam (June 12, 2013)
- Dr. Binh Duong, NanoScience Technology Center, University of Central Florida, USA (June 4, 2013)
- Dr. Faxiang Qin, Advanced Composites Centre for Innovation and Science, University of Bristol, United Kingdom (December 10-28)
- Prof. Nguyen TK Thanh, Department of Physics & Astronomy, University College London, Gower Street, London, WC1E 6BT, United Kingdom (March 21-24, 2012)
- Prof. Arkady Zhukov, IKERBASQUE, Basque Foundation for Science, 48011 Bilbao, Spain (May 16-18, 2012)
- Prof. Nguyen Xuan Phuc, Institute of Materials Science, Vietnam Academy of Science and Technology, 18 Hoang Quoc Viet, Hanoi, Vietnam (September 19-21, 2012)
- Prof. Seong-Cho Yu, Department of Physics, Chungbuk National University, South Korea (October 7-10, 2012)

Funded Research Grants:

- Department of Energy (DOE) Research Grant "*Complex magnetism and emergent phenomena in correlated electron oxide materials*," United States: \$445,000 (2016-2019)
(Dr. Phan as Co-PI, University of South Florida)
- Department of Defense (DOD) Research Grant "*Roles of defects and anisotropies on the spin caloric properties of complex oxides*" United States: \$379,000 (2015-2018)
(Dr. Phan as Co-PI, University of South Florida)
- Florida Space Grant Consortium "*Confinement effects and magnetic interactions in one-dimensional magnetic nanostructures*" United States: \$4,950 (2015-2016)
(Dr. Phan as PI, Kristen Stojak as Awardee, University of South Florida)
- Department of Energy (DOE) Research Grant "*Ground state magnetism and cooperative phenomena in correlated electron oxide materials*" United States: \$420,000 (2013-2016)
(Dr. Phan as Co-PI, University of South Florida)
- CAS Research Grant "*Upgrading a novel impedance-based probe technique for investigating dynamic magnetic and AC magnetotransport properties in new spintronic materials*" United States: \$1,500 (2013-2014)
(Dr. Phan as PI, University of South Florida)
- USF Faculty International Travel Grant, 2012, United States: \$2,500.00
(Dr. Phan as PI, University of South Florida)
- New Researcher Grant – USF Research Foundation "*Nanostructured multiple phase materials for energy-efficient refrigeration*" United States: \$18,730.65 (2011-2012)
(Dr. Phan as PI, University of South Florida)
- Department of Energy (DOE) Research Grant "*Magnetic frustration and cooperative phenomena in correlated electron oxide materials*" United States: \$405,000 (2010-2013)
(with Dr. Phan as Co-PI, University of South Florida)
- National Foundation for Science and Technology Development (NAFOSTED) Grant "*Synthesis and characterization of functional magnetic nanoparticles for biomedical applications*" Vietnam: \$31,200 (2012-2014)
(Jointly with Dr. N.T. Huong as PI, Hanoi National University, Vietnam)
- Korea Research Grant "*Advanced magnetocaloric materials for magnetic refrigeration applications*" Korea: \$100,000 (2011-2014)

(Jointly with Dr. S.C. Yu as PI, Chungbuk National University, South Korea)

- Engineering and Physical Sciences Research Council (EPSRC) Grant "*Magnetic microwire as an alternative to optical fibres for self-monitoring composites*", United Kingdom: \$160,000 (2008 – 2009)

(Jointly with Dr. H.X. Peng as PI, University of Bristol)