

Curriculum Vitae

Samuel E. Lofland, Jr.

Department of Physics and Astronomy
Rowan University

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EDUCATION

Ph.D.: Physics (1995, University of Maryland)

Thesis Title: **Investigations into Macroscopic Quantum Phenomena: Magnetism and Superconductivity**

M.S.: Physics (1994, University of Maryland)

B.S.: Physics with High Honors (1991, University of Maryland)

B.S.: Mathematics (1991, University of Maryland)

AWARDS

2007 1st Annual Rowan University Award for Excellence in Research

1991 Phi Beta Kappa

1990 Sigma Pi Sigma Physics Honor Society

1987-1992 Maryland State Senatorial Scholarship

1991 University of Maryland Outstanding Scholar

1986-1991 Maryland Distinguished Scholar

PROFESSIONAL EXPERIENCE

9/04-present **Professor**

Department of Physics and Astronomy, Rowan University

5/06-present **Visiting Professor**

Department of Materials Engineering, University of Maryland

9/06-present **Senior Collaborator**

COSMIC International Materials Institute

9/01-8/04 **Associate Professor**

Department of Chemistry and Physics, Rowan University

9/98-present **Visiting Professor**

Department of Physics, NSF Materials Research Science & Engineering Center,
University of Maryland

5/00-8/01 **Visiting Assistant Professor**

Department of Materials Engineering, University of Maryland

9/98-8/01 **Assistant Professor**

Department of Chemistry and Physics, Rowan University

7/97-8/98 **Assistant Research Scientist**

Condensed Matter Group, Department of Physics, University of Maryland

8/95-6/97 **Research Associate (Postdoctoral Fellow)**

Condensed Matter Group, Department of Physics, University of Maryland
Department of Physics, University of Maryland

REFEREE

- *Advanced Materials*
- *Applied Physics Letters*
- *Applied Surface Science*
- *Chemistry of Materials*
- *European Physical Journal B*
- *IEEE Sensors Journal*
- *IEEE Transactions on Magnetics*
- *IEEE Transactions on Electronic Devices*
- *Journal of Applied Physics*
- *Journal of Magnetism and Magnetic Materials*
- *Journal of Materials Research*
- *Journal of Physics and Chemistry of Solids*
- *Journal of Physics Condensed Matter*
- *Journal of Physics D: Applied Physics*
- *Materials Research Bulletin*
- *Materials Science and Engineering, B Solid State Materials for Advanced Technology*
- *Nanomedicine: Nanotechnology, Biology, and Medicine*
- *Nanotechnology*
- *New Journal of Physics*
- *Physica C*
- *Physical Review Letters*
- *Physical Review B*
- *Physica Status Solidi*
- *Sensors and Actuators A: Physical*
- *Sensor Letters*
- *Superconducting Science and Technology*
- *Thin Solid Films*
- *Vacuum*

REVIEWER

- *Army Research Office*
- *Civilian Research Defense Fund*
- *Israeli Science Foundation*
- *National Science Foundation*
- *Petroleum Research Fund*

MEMBERSHIP

- American Physical Society (APS)
 - Division of Condensed Matter Physics
 - Topical Group on Magnetism
- Material Research Society
- IEEE Magnetics Society

- o Member, Technical Committee

CONFERENCE ORGANIZATION

- Chair, March 1999 American Physical Society Meeting “High Frequency Effects in Manganites”
- Organizer, MRSEC Annual Review on Magnetic Oxides, 2001-2005
- Chair, March 2005 American Physical Society Meeting “New Experimental Techniques”
- Organizing Committee, IEEE Magnetics Society INSPIRE, NIST, July 2007
- Organizing Committee, 9th International Conference on Ferrites

EXTERNAL FUNDING

- “Magnetic Properties of Invar under Stress,” Thomson Consumer Electronics, 02/01-05/02, \$5100
- “A Comparison of the Stress Effects of Invar and Steel,” Thomson Consumer Electronics, 06/01-09/01, \$5000
- “Magnetic Properties of Steel under Stress,” Thomson Consumer Electronics, 11/01-02/02, \$5300
- “Acquisition of a Thermal Properties Measurement System,” NSF, 07/01-06/02, \$46,500
- “Development of a Ferromagnetic Resonance Microscope for Materials Research and Education,” NSF, 07/01-06/03, \$23,000
- “Enhancing the Educational Opportunities for Undergraduates in Commercial Applications of Materials”, New Jersey Commission on Higher Education, 07/01-06/04, \$1,486,200
- “An Investigation of the Structural and Magnetic Properties of Hexaborides,” Materials Research Society Undergraduate Materials Research Initiative, 11/01-03/02, \$1,000
- “Magnetic Properties of Crystals of $\text{La}_5\text{Mo}_{4-x}\text{T}_y\text{O}_{16-z}$,” Materials Research Society Undergraduate Materials Research Initiative, 11/01-03/02, \$1,000
- “Second Harmonic Generation in Nonlinear Optical Materials,” Society of Physics Students Undergraduate Research Award, 01/02-12/02, \$1,974
- “Acquisition of a Scanning Probe Microscope,” National Science Foundation, 09/02-12/03, \$153,335.
- “Spectroscopy of Nonlinear Materials,” Society of Physics Students Undergraduate Research Award, 01/03-12/03, \$1,995.
- “Focused Research Group, MAX Phases: Unique Opportunities at the Nanoscale” 09/05-08/09, \$800,000.
- NASA-SPS LEND Program, 06/08-09/09, \$10,000

EDUCATIONAL SERVICE

Consultant, EPIC, University of Oregon System 2007
Member, Configuration Committee, Springfield School System, Delaware County, PA 2006
Member, Curriculum Committee, Springfield School System, Delaware County, PA 2000
Member, South Jersey Science Consortium, 2002-2003

UNIVERSITY SERVICE

Advisor, Society of Physics Students 1999-
Sabbatical Leave 1999-2001
Pre-Professional Committee 2000-

Chair, Department Curriculum Committee 2004-
College Curriculum Committee 2004-
Honors Committee 2004-
Chair, Department Promotion Committee 2005-
Search Committee, Vice President for Advancement 2006
Search Committee, Associate Provost for Research 2007

REFEREED PUBLICATIONS

1. M. A. Manheimer, S. E. Lofland, A. M. Gould, S. M. Bhagat, B. Halsey, S. M. Green, and S. Tyagi, "Enhanced microwave absorption near T_c in micron-size powders of cuprate superconductors," *Physica C* **183**, 324 (1991).
2. S. Lofland, M. X. Huang, and S. M. Bhagat, "AC losses in sintered high-temperature superconductors," *Physica C* **203**, 271 (1992).
3. S. E. Lofland, S. M. Bhagat, K. Ghosh, S. Ramakrishnan, and G. Chandra, "Magnetic ordering in RTi_2Ga_4 ($R = Er, Ho, Dy$)," *J. Magn. Magn. Mater.* **129**, L120 (1994).
4. S. Lofland, S. M. Bhagat, P. L. Paulose, and V. Nagarajan, "Magnetic phases in $a-Fe_xRu_yB_{100-x-y}$ ribbons," *Solid State Commun.* **89**, 497 (1994).
5. S. E. Lofland, S. M. Bhagat, M. Rajeswari, and T. Venkatesan, "Angular dependence of magnetoabsorption of c -axis oriented YBCO thin films," *Solid State Commun.* **92**, 319 (1994).
6. S. E. Lofland, S. M. Bhagat, M. Rajeswari, T. Venkatesan, D. Kanjilal, L. Senapati, and G. K. Mehta, "Microwave observation of vortex locked-in state of $YBa_2Cu_3O_7$ thin films with columnar defects," *Phys. Rev. B* **51**, 8489 (1995).
7. S. E. Lofland, M. X. Huang, S. M. Bhagat, M. Rajeswari, T. Venkatesan, D. Kanjilal, L. Senapati, and G. K. Mehta, "Microwave absorption of $YBa_2Cu_3O_7$ thin films with columnar defects," *IEEE Trans. Appl. Supercond.* **5**, 1428 (1995).
8. S. E. Lofland, S. B. Ogale, M. Rajeswari, D. D. Chogule, R. Liu, S. M. Bhagat, and T. Venkatesan, "Microwave surface resistance in Fe-doped YBCO films," *IEEE Trans. Appl. Supercond.* **5**, 1741 (1995).
9. J.S. Ramachandran, S. E. Lofland, S. M. Bhagat, S. Tyagi, and M. A. Manheimer, "Virgin response of low-field microwave absorption in granular HTSC - frequency and temperature dependence," *Solid State Commun.* **93**, 671 (1995).
10. S. E. Lofland, B. Ratnam, S. M. Bhagat, I. Takeuchi, Z. Trajanovic, P. Warburton, and T. Venkatesan, "Anomalous microwave absorption in a -axis-oriented films of $YBa_2Cu_3O_7$," *Solid State Commun.* **94**, 471 (1995).
11. S. E. Lofland, S. M. Bhagat, H. L. Ju, G. C. Xiong, T. Venkatesan, and R. L. Greene, "Ferromagnetic resonance and homogeneity in GMR $La_{2/3}Ba_{1/3}MnO_3$," *Phys. Rev. B* **52**, 15058 (1995).
12. M. Dominguez, S. M. Bhagat, S. E. Lofland, J. S. Ramachandran, G. C. Xiong, T. Venkatesan, and R. L. Greene, "Giant magnetoresistance at microwave frequencies," *Europhys. Lett.* **32**, 349 (1995).
13. G. C. Xiong, S. M. Bhagat, Q. Li, S. E. Lofland, H. L. Ju, R. L. Greene, and T. Venkatesan, "Giant magnetomemory effect of epitaxial $Nd_{0.7}Sr_{0.3}MnO_3$ films," *Appl. Phys. Lett.* **67**, 3031 (1995).
14. M. Dominguez, S. E. Lofland, S. M. Bhagat, A. K. Raychaudhuri, H. L. Ju, T. Venkatesan, and R. L. Greene, "Are 'single phase' manganites homogeneous? A magnetic resonance study," *Solid State Commun.* **97**, 193 (1996).

15. S. E. Lofland, S. M. Bhagat, C. Kwon, M. C. Robson, R. P. Sharma, R. Ramesh, and T. Venkatesan, "Standing spin wave resonances in manganite films," *Phys. Lett.* **209**, 246 (1995).
16. S. E. Lofland, S. M. Bhagat, H. L. Ju, G. C. Xiong, T. Venkatesan, R. L. Greene, and S. D. Tyagi, "FMR and intrinsic properties of $\text{La}_{0.67}\text{Ba}_{0.33}\text{MnO}_z$," *J. Appl. Phys.* **79**, 5169 (1996).
17. S. D. Tyagi, S. E. Lofland, M. Dominguez, S. M. Bhagat, C. Kwon, M. C. Robson, R. Ramesh, and T. Venkatesan, "Low-field microwave magnetoabsorption in manganites," *Appl. Phys. Lett.* **68**, 2893 (1996).
18. S. E. Lofland, M. Dominguez, S. D. Tyagi, S. M. Bhagat, M. C. Robson, C. Kwon, Z. Trajanovic, I. Takeuchi, R. Ramesh, and T. Venkatesan, "Surface resistance of thin perovskite films - high-temperature superconductors and giant magnetoresistance manganites," *Thin Solid Films* **228**, 256 (1996).
19. M. C. Robson, C. Kwon, K. C. Kim, R. P. Sharma, T. Venkatesan, R. Ramesh, S. E. Lofland, M. Dominguez, S. D. Tyagi, and S. M. Bhagat, "Characterization of epitaxial $\text{La}_{0.67}\text{Ba}_{0.33}\text{MnO}_z$ structures using ferromagnetic resonance," *J. Appl. Phys.* **80**, 2334 (1996).
20. S. E. Lofland, S. D. Tyagi, S. M. Bhagat, M. Rajeswari, T. Venkatesan, D. Kanjilal, and G. K. Mehta, "Microwave magnetoabsorption in *c*-axis-oriented $\text{YBa}_2\text{Cu}_3\text{O}_7$ films with columnar defects," *Physica C* **267**, 79 (1996).
21. C. Kwon, K.C. Kim, M. C. Robson, J. Y. Gu, S. E. Lofland, S. M. Bhagat, Z. Trajanovic, M. Rajeswari, T. Venkatesan, R. Ramesh, A. R. Kratz, and R. D. Gomez, "Stress-induced effects in epitaxial $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ films," *J. Magn. Magn. Mater.* **172**, 229 (1997).
22. Z. Trajanovic, C. Kwon, M. C. Robson, K. C. Kim, M. Rajeswari, T. Venkatesan, R. Ramesh, S. E. Lofland, S. M. Bhagat, and D. Fork, "Growth of colossal magnetoresistance materials on silicon," *Appl. Phys. Lett.* **69**, 1005 (1996).
23. S. E. Lofland, S. M. Bhagat, S. D. Tyagi, Y. M. Mukovskii, S. G. Karabashev, and A. M. Balbashov, "Giant microwave magneto-impedance in a single crystal of $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$: the effect of ferromagnetic antiresonance," *J. Appl. Phys.* **80**, 3592 (1996).
24. S. E. Lofland, V. Ray, P. Kim, S. M. Bhagat, M. A. Manheimer, and S. D. Tyagi, "Magnetic phase transitions in $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$: microwave absorption studies," *Phys. Rev. B* **55**, 2759 (1997).
25. S. M. Bhagat, S. E. Lofland, P. H. Kim, D. C. Schmadel, C. Kwon, R. Ramesh, and S. D. Tyagi, "Ferromagnetic antiresonance in $\text{La}_{0.67}\text{Ba}_{0.33}\text{MnO}_3$ traced out by temperature variation," *J. Appl. Phys.* **81**, 5171 (1997).
26. S. E. Lofland, S. M. Bhagat, C. Kwon, S. D. Tyagi, Y. M. Mukovskii, S. G. Karabashev, and A. M. Balbashov, "Ferromagnetic resonance in a crystal of $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$," *J. Appl. Phys.* **81**, 5737 (1997).
27. C. Kwon, S. E. Lofland, S. M. Bhagat, M. Rajeswari, T. Venkatesan, R. Ramesh, A. R. Kratz, and R. D. Gomez, "Stress-induced surface magnetization of $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ thin films," *IEEE Trans. Magn.* **33**, 3964 (1997).
28. A. Goyal, M. Rajeswari, R. Shreekala, S. E. Lofland, S. M. Bhagat, T. Boettcher, C. Kwon, R. Ramesh, and T. Venkatesan, "Material characteristics of perovskite manganite oxide thin films for bolometric applications," *Appl. Phys. Lett.* **71**, 2535 (1997).
29. S. E. Lofland, S. M. Bhagat, S. D. Tyagi, S. G. Karabashev, D. A. Shulyatev, A. A. Arsenov, Y. Mukovskii, "Electron spin resonance measurements in $\text{La}_{1-x}\text{Sr}_x\text{MnO}_3$," *Phys. Lett. A* **233**, 476 (1997).

30. S. E. Lofland, P. Kim, P. Dahirroc, S. M. Bhagat, S. D. Tyagi, C. Kwon, R. Shreekala, R. Ramesh, and T. Venkatesan, "Microwave surface resistance of colossal magnetoresistance manganites," *J. Phys.: Cond. Matt.* **9**, 6697 (1997).
31. S. E. Lofland, S. M. Bhagat, K. Ghosh, R. L. Greene, S. G. Karabashev, D. A. Shulyatev, A. A. Arsenov, and Y. Mukovskii, "The magnetic transition and electronic transport in colossal magnetoresistance perovskites," *Phys. Rev. B* **56**, 13705 (1997).
32. S. E. Lofland, S. M. Bhagat, V. V. Srinivasu, R. Ramesh, B. M. Simion, and G. Thomas, "Spin reorientation transition due to thickness ratio variation in $\text{EuBi}_2\text{Fe}_5\text{O}_{12}/\text{Y}_3\text{Fe}_5\text{O}_{12}$ multilayer films - ferrimagnetic resonance studies," *J. Appl. Phys.* **83**, 3520 (1998).
33. S. E. Lofland, V. Ray, P. H. Kim, S. M. Bhagat, K. Ghosh, R. L. Greene, S. G. Karabashev, D. A. Shulyatev, A. A. Arsenov, and Y. Mukovskii, "Temperature-tuned natural ferromagnetic resonance in $\text{La}_{0.9}\text{Sr}_{0.1}\text{MnO}_3$," *J. Phys.: Cond. Matt.* **9**, L633 (1997).
34. V. V. Srinivasu, S. E. Lofland, S. M. Bhagat, "Room temperature colossal microwave magnetoimpedance in micron-size powders of $\text{La}_{0.7}\text{Ba}_{0.3}\text{MnO}_3$ and $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ - a novel magnetic tape," *J. Appl. Phys.* **83**, 2866 (1998).
35. S. R. Shinde, S. E. Lofland, S. B. Ogale, S. M. Bhagat, R. P. Sharma, T. Venkatesan, and R. Ramesh, "Effect of lattice mismatch strains on the structural and magnetic properties of barium ferrite films," *Appl. Phys. Lett.* **72**, 3443 (1998).
36. K. Ghosh, R. L. Greene, S. E. Lofland, S. M. Bhagat, S. G. Karabashev, D. A. Shulyatev, A. A. Arsenov, and Y. Mukovskii, "Anomalous magnetic behavior in single crystal $\text{La}_{0.9}\text{Sr}_{0.1}\text{MnO}_3$," *Phys. Rev. B* **58**, 8206 (1998).
37. S. R. Shinde, S. E. Lofland, C. S. Ganpule, S. B. Ogale, S. M. Bhagat, T. Venkatesan, and R. Ramesh, "Realization of epitaxial barium ferrite films of high crystalline quality with small resonance losses," *J. Appl. Phys.* **85**, 7549 (1999).
38. M. Rajeswari, R. Shreekala, A. Goyal, S. E. Lofland, S. M. Bhagat, K. Ghosh, R. P. Sharma, R. L. Greene, R. Ramesh, T. Venkatesan, and T. Boettcher, "Correlation between magnetic homogeneity, oxygen content, and electrical and magnetic properties of perovskite manganite thin films," *Appl. Phys. Lett.* **73**, 2672 (1998).
39. V.V. Srinivasu, S. E. Lofland, S. M. Bhagat, K. Ghosh, and S. D. Tyagi, "Temperature and field dependence of microwave losses in manganite powders," *J. Appl. Phys.* **86**, 1067 (1999).
40. S. R. Shinde, C. S. Ganpule, R. Ramesh, S. E. Lofland, S. M. Bhagat, S. B. Ogale, and T. Venkatesan, "Improvement in ferromagnetic resonance properties of epitaxial barium ferrite thin films by using aluminum-doped strontium ferrite buffer layer," *Appl. Phys. Lett.* **74**, 594 (1999).
41. Q. Q. Shu, S. M. Bhagat, S. E. Lofland, and I. O. Troyanchuk, "Finite-size effects in microwave loss in colossal magnetoresistance oxides," *Solid State Commun.* **109**, 73 (1999).
42. S.E. Lofland, S.M. Bhagat, M. Dominguez, J.M. Garcia-Beneytez, F. Guerrero, and M. Vázquez, "Low-field microwave magnetoimpedance in amorphous microwires," *J. Appl. Phys.* **85**, 4442 (1999).
43. R. Shreekala, M. Rajeswari, R. C. Srivastava, K. Ghosh, A. Goyal, V. V. Srinivasu, S. E. Lofland, S. M. Bhagat, M. Downes, R. L. Greene, R. Ramesh, and T. Venkatesan, "Ferromagnetism at room temperature in $\text{La}_{0.8}\text{Ca}_{0.2}\text{MnO}_3$ thin films," *Appl. Phys. Lett.* **74**, 1886 (1999).
44. R. Shreekala, M. Rajeswari, S.P. Pai, S. E. Lofland, V. Smolyaninova, K. Ghosh, S. B. Ogale, S. M. Bhagat, M. J. Downes, R. P. Sharma, S. B. Ogale, R. L. Greene, R. Ramesh,

- and T. Venkatesan, "Improved properties of $\text{La}_{2/3}\text{Ca}_{1/3}\text{MnO}_3$ thin films by addition of Ag," *Appl. Phys. Lett.* **74**, 2857 (1999).
45. S.M. Bhagat, S.E. Lofland, and J.M. Mitchell, "Magnetic resonance in the layered manganite $\text{La}_{1.2}\text{Sr}_{1.8}\text{Mn}_2\text{O}_7$," *Phys. Lett. A* **259**, 326 (1999).
 46. S.E. Lofland, Q. Q. Shu, S. M. Bhagat, M. C. Robson, and R. Ramesh, "Magnetic imaging of perovskite thin films by ferromagnetic resonance microscopy - $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$," *Appl. Phys. Lett.* **75**, 1947 (1999).
 47. S.I. Patil, S. E. Lofland, Q. Q. Shu, and S. M. Bhagat, "Half-point fields for microwave losses in manganite powders," *J. Appl. Phys.* **87**, 2652 (2000).
 48. S.I. Patil, S.E. Lofland, S. B. Ogale, Q. Q. Shu, S. M. Bhagat, V. N. Smolyaninova, R. Decca, H. D. Drew, R. L. Greene, W. H. McCarroll and I. O. Troyanchuk, "Indications of charge ordering and other unexpected effects in $\text{La}_{1-x}\text{Sr}_x\text{MnO}_3$ near $x = 0.5$," *Phys. Rev. B* **62**, (2000).
 49. S.I. Patil, S.M. Bhagat, S. B. Ogale, Q.Q. Shu, S. E. Lofland, and I.O. Troyanchuk, "Investigation of $\text{La}_{1-x}\text{Sr}_x\text{MnO}_3$ near $x = 0.5$," *J. Appl. Phys.* **87**, 5028 (2000).
 50. R. Shreekala, M. Rajeswari, R. C. Srivastava, K. Ghosh, A. Goyal, V. V. Srinivasu, S. E. Lofland, S. M. Bhagat, M. Downes, R. L. Greene, R. Ramesh, and T. Venkatesan, "Response to 'Comment on 'Ferromagnetism at room temperature in $\text{La}_{0.8}\text{Ca}_{0.2}\text{MnO}_3$ thin films'" *Appl. Phys. Lett.* **76**, 1209 (2000).
 51. M.C. Robson, C. Kwon, S.E. Lofland, S.B. Ogale, S.M. Bhagat, M. Rajeswari, T. Venkatesan, R. Ramesh, "Room temperature magnetoresistance at low magnetic fields in $\text{La}_{0.7}\text{Ba}_{0.3}\text{MnO}_3$," *J. Electroceram.* **4**, 167 (2000).
 52. Sangeeta Kale, S.E. Lofland, S. M. Bhagat, Litty Sebastian, K. Ramesha, J. Gopalakrishnan, S.B. Ogale, Y.H. Li, J. Garrison, "Giant magnetoimpedance near a metal-insulator transition - a study of Fe in V_2O_3 matrix," *Appl. Phys. Lett.* **77**, 2725 (2000).
 53. Sangeeta Kale, S.M. Bhagat, S.E. Lofland, T. Scabarozzi, S.B. Ogale, A. Orozco, T. Venkatesan, B. Hannoyer, B. Mercy and W. Prellier, "Film thickness and temperature dependence of the magnetic properties of pulsed laser deposited Fe_3O_4 films on different substrates," *Phys. Rev. B* **64**, 205413 (2001).
 54. L.V. Saraf, A.V. Cresce, S. R. Shinde, S.E. Lofland, S.M. Bhagat, and R. Ramesh, "Observation of nearly intrinsic ferromagnetic resonance linewidth in $\text{BaFe}_{12}\text{O}_{19}$ films deposited by PLD," *IEEE Trans. Magn.* **37**, 2377 (2001).
 55. S.E. Lofland, T. Scabarozzi, S. Kale, S. M. Bhagat, S. B. Ogale, T. Venkatesan, R. L. Greene, J. Gopalakrishnan, and K. Ramesha, "Ferromagnetic resonance and magnetization studies on ferrimagnetic double perovskites $A_2\text{FeReO}_6$ ($A = \text{Ca}, \text{Sr}, \text{Ba}$)," *IEEE Trans. Magn.* **37**, 2153 (2001).
 56. L.V. Saraf, S.E. Lofland, Arthur V. Cresce, S.M. Bhagat and R. Ramesh, "Structural and ferromagnetic resonance characteristics of $\text{BaFe}_{12}\text{O}_{19}$ films with minimal linewidths," *Appl. Phys. Lett.* **79**, 385 (2001).
 57. Vladimir Chechersky, Amar Nath, Samuel E. Lofland, S. Newlander, L. Cerquoni, Y. Mukovskii, A. A. Arsenov, G. Karabshev, D. A. Shulyatev, and Richard L. Greene, "Magnetic behavior of a $\text{La}_{0.9}\text{Ca}_{0.1}\text{MnO}_3$ crystal," *Phys. Rev. B* **63**, 4401 (2001).
 58. S.E. Lofland, K.V. Ramanujachary, and W.H. McCarroll, "Magnetic inhomogeneity in La-deficient manganate crystals," *J. Magn. Magn. Mater.* **228**, 22 (2002).
 59. S.E. Lofland, T. Scabarozzi, Y. Moritomo, and Sh. Xu, "Magnetism of the double perovskite $\text{Sr}_2\text{FeMoO}_6$," *J. Magn. Magn. Mater.* **260**, 181 (2003).

60. S.E. Lofland, S.D. Tyagi, K.V. Ramanujachary and M. Botsford, "High-frequency properties of superconductors: A comparison between MgB_2 and high-temperature superconductors," *Physica C* **370**, 27 (2002).
61. K. V. Ramanujachary, S. E. Lofland, W. H. McCarroll, T. J. Emge, M. Greenblatt, and M. Croft, "Substitutional effects of $3d$ transition metals on the magnetic and structural properties of quasi-two-dimensional $\text{La}_5\text{Mo}_4\text{O}_{16}$," *J. Solid State Chem.* **164**, 60 (2002).
62. S.M. Bhagat, H. Garcia-Miquel, and S.E. Lofland, "Ferromagnetic resonance and antiresonance in glass-coated amorphous microwires," *J. Magn. Magn. Mater.* **249**, 274 (2002).
63. S.E. Lofland, S.M. Bhagat, H. Garcia Miquel, and M. Vazquez, "Microwave magnetoabsorption in glass-coated amorphous microwires with radii close to skin depth," *J. Appl. Phys.* **92**, 2058 (2002).
64. M. Dominguez, J.M. Garcia-Beneytez, M. Vazquez, S.E. Lofland and S.M. Bhagat, "Microwave response of amorphous microwires: magnetoimpedance and ferromagnetic resonance," *J. Magn. Magn. Mater.* **249**, 117 (2002).
65. P. Finkel, J.D. Hettinger, S.E. Lofland, M.W. Barsoum and T. El-Raghy, "Magnetotransport properties of the ternary carbide Ti_3SiC_2 : Hall effect, magnetoresistance and magnetic susceptibility," *Phys. Rev. B* **65**, 035113 (2002).
66. V.N. Smolyaninova, A Biswas, P. Fournier, S.E. Lofland, X. Zhang, G.-M. Zhao and R.L. Greene, "Influence of isotope exchange on the ground state of manganites," *Phys. Rev. B* **65**, 104419 (2002).
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2. March Meeting of the American Physical Society, "Ferromagnetic Resonance in Colossal Magnetoresistance Manganites," Kansas City, Missouri, March 1997.
3. Workshop on Magnetoresistive Oxides, "Microwave Studies of CMR Materials," Telluride Summer Research Center, Telluride, Colorado, July 1998.
4. "Unusual properties of the double exchange ferromagnet $La_{1-x}Sr_xMnO_3$ near $x = 0.5$," University of Cadiz, May 2000.
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6. "Synthesis, structure and electronic properties of anionically modified anatase," Asian Conference on Solid State Ionics, December 2001.
7. "Stress Dependent Magnetization of Fe-Ni Alloys," Thomson Consumer Electronics, May 2002.
8. "Dispelling a Myth: Successful Research with Undergraduates," San Diego State University, May 2002.
9. "Looking for Magnetism in New Places," San Diego State University, May 2002.
10. "Diluted Magnetic Semiconductors: Have We Solved the Problem or Have We Even Started," Drexel University, February 2003.
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 181. Robert J. Booth and S.E. Lofland, “Simulation of microwave magnetoabsorption of metallic microwires,” Society of Physics Students Zone Conference, Juniata College, November 2007.
 182. Robert J. Booth, Kandalam V. Ramanujachary, and Samuel E. Lofland, “An Investigation Of Mn-Ni Double Perovskites,” AAPT, January 2008.
 183. Elizabeth Dowdell, Som Tyagi, and Samuel Lofland, “Using Microwaves To Determine Properties Of Skin,” AAPT, January 2008.
 184. Patrick E. Hann, T. Scabarozzi, S. E. Lofland, J. D. Hettinger, and Michel Barsoum, “Synthesis of V_2AlC for Fundamental Electronic Transport Measurements,” AAPT, January 2008.
 185. Ernst Knoesel, Patrick Hann, Maria Garzon, Erik Pfeiffer, and Samuel Lofland, “Delayed Luminescence and Biophotons from Biological Materials,” American Physical Society, March 2008.
 186. A. Zambano, H. Oguchi, I. Takeuchi, S. Lofland, J. Liu, D. Josell, L. Bendersky, Y. Liu, and Z. Wang, “Influence of interfacial non-magnetic materials on soft-hard bilayer interaction,” American Physical Society, March 2008.
 187. Patrick Hann, Maria Garzon, Erik Pfeiffer, Samuel Lofland, and Ernst Knoesel, “Bio-Photonic Detection of Various Cellular Cultures,” American Physical Society, March 2008.
 188. Juan Roche, Jeffrey Hettinger, Samuel Lofland, and Ted Scabarozzi, “Synthesis and Characterization of CrAlC Thin Films,” American Physical Society, March 2008.

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190. R. J. Booth, K. V. Ramanujachary, J. G. Gopalakrishnan, and S. E. Lofland, "An Investigation Of Mn-Ni Double Perovskites," NCUR, April 2008.
191. Elizabeth Dowdell, Som Tyagi, and Samuel Lofland, "Using Microwaves To Determine Properties Of Skin," NCUR, April 2008.
192. Dave W. Bauer, Sherman M. Benjamin, And Samuel E. Lofland, "Investigation Of Microwave Properties Of Tissue With A Coaxial Near-Field Resonator," Rowan STEM Conference, April 2008.
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194. Erik W. Pfeiffer, Patrick E. Hann, Jeffrey Hettinger, Theodore Scabarozi, Samuel E. Lofland, and Carl Lunk, "Synthesis Of Max Phase Thin Films And Results Unique To Vanadium-Germanium-Carbon Systems," Rowan STEM Conference, April 2008.
195. Shane M. Thompson, Ernst Knoesel, Ichiro Takeuchi, S. Fujino, and Samuel E. Lofland, "Imaging Of BiFeO₃-SmFeO₃ Thin Films By Second Harmonic Generation," Rowan STEM Conference, April 2008.
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197. Erin A. Gordon, David Klassen, Samuel E. Lofland, and Charles C. Hays, "Soap Bubbles In Reduced Gravity," Rowan STEM Conference, April 2008.
198. Patrick E. Hann, Travis Flemming, Theodore Scabarozi, Jeffrey Hettinger, and Samuel E. Lofland, "Synthesis And Characterization Of V-Al-C Systems," Rowan STEM Conference, April 2008.
199. Juan C. Roche, Christina Gennaoui, Theodore Scabarozi, Samuel E. Lofland, and Jeffrey Hettinger, "Synthesis And Characterization Of Cr₂AlC Thin Films," Rowan STEM Conference, April 2008.
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202. D. Hunter, R. Takahashi, R. Suchoski, J. Hattrick-Simpers, S.E. Lofland, L. Bendersky, M. Wuttig, and I. Takeuchi, "Combinatorial Investigation of Magnetostrictive Materials," Maryland NanoDay, April 2008.

COURSES TAUGHT

Honors Physics I
 Honors Physics II
 Interdisciplinary Materials Science
 Physics I with Calculus
 Physics II with Calculus
 Statistical Physics