

Michael Eric Gehm

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EDUCATION

Ph.D.	Physics	Duke University (2003)
A.M.	Physics	Duke University (1998)
B.S.	Mech. Eng.	Washington University, St. Louis (1992)

PROFESSIONAL EXPERIENCE

2009–	Assistant Professor	U. Arizona, College of Optical Sciences
2007–	Assistant Professor	U. Arizona, ECE
2006	Assistant Research Professor	Duke University, ECE
2005–2007	Consultant	Centice Corp.
2004–2006	Postdoctoral Research Associate	Duke University, ECE
2003	Postdoctoral Research Associate	Duke University, Physics
1995–2003	Research/Teaching Assistant	Duke University, Physics
1992–1995	Engineer	SPARTA, Inc.

HONORS AND AWARDS

- 2010 University of Arizona “At the Leading Edge” Award
- Fritz London Fellow

PROFESSIONAL AFFILIATIONS

- Optical Society of America (OSA)
- American Physical Society (APS)
- Institute of Electrical and Electronic Engineers (IEEE)

PROFESSIONAL SERVICE

- Editorial Board Member, *Applied Optics* (2007–)
- Program Chair, *2011 Computational Optical Sensing and Imaging Conference*
- Program Committee Member, *2009 Computational Optical Sensing and Imaging Conference*
- Reviewer for:
 - *Journal of the Optical Society A*
 - *Applied Optics*
 - *Physical Review Letters*
 - *Physical Review A*
 - *Army Research Office*
 - *National Science Foundation*

SPONSORED RESEARCH

The Multiscale Optical Sensor Array Imaging Camera (MOSAIC)

PIs: Michael Gehm

Role: Principal Investigator

Sponsor: DARPA (via Duke Univ.)

Dates 5/27/10 – 5/26/2013

Responsibility: 100%

Total Award Amount: \$2,566,096

Gradient-index GHz/THz components via polymer-jetting rapid prototyping

PIs: Michael Gehm

Role: Principal Investigator

Sponsor: DARPA

Dates 6/22/2010 – 6/21/2013

Responsibility: 100%

Total Award Amount: \$994,624

Gradient-index GHz/THz components via polymer-jetting rapid prototyping

PIs: Michael Gehm, Hao Xin

Role: Principal Investigator

Sponsor: National Science Foundation

Dates 9/1/2009 – 8/31/2012

Responsibility: 50%

Total Award Amount: \$328,908

Combinatorial group testing for change detection in persistent, pervasive surveillance

PIs: Michael Gehm

Role: Principal Investigator

Sponsor: MITRE Corporation

Dates: 11/1/2008 – 9/30/2010

Responsibility: 100%

Total Award Amount: \$101,534

PATENT ACTIVITY

6. *Coded mass spectroscopy methods, devices, systems and computer program products*, US Patent #7,399,957 (2008), International patent pending.
5. *Coding and modulation for hyperspectral imaging*, US Patent #7,336,353 (2008), International patent pending.
4. *Static two-dimensional aperture coding for multimodal multiplex spectroscopy*, US Patents #7,301,625 (2007) and #7,505,130 (2009), International patent pending.
3. *Optical spectroscopy with overlapping images*, US Patent #7,283,232 (2007), International patent pending.
2. *Optical Spectroscopy Utilizing Planar Spectral Filters*, US and International patents pending.
1. *Spatially-registered wavelength coding*, US and International patents pending.

PUBLICATIONS

PEER-REVIEWED PUBLICATIONS

26. Z. Wu, A. Young, M.E. Gehm, and H. Xin, "Investigation of Several Terahertz (THz) Electromagnetic Band Gap Structures," *Microw. Opt. Technol. Lett.*, **52**, 678-686 (2010).
25. J. Kinast and M.E. Gehm, "Adaptive dynamic range matching for spectroscopic measurements," *Appl. Opt.*, **48**, 1891-1897 (2009).
24. Z. Wu, J. Kinast, M.E. Gehm, and H. Xin, "Rapid and inexpensive fabrication of Terahertz electromagnetic bandgap structures," *Opt. Express*, **16**, 16442-16451 (2008).
23. M.E. Gehm, M.S. Kim, C. Fernandez, and D.J. Brady, "High-throughput, multiplexed pushbroom hyperspectral microscopy," *Opt. Express*, **16**, 11032-11043 (2008).
22. M.E. Gehm, R. John, D.J. Brady, R.M. Willett, and T.J. Schulz, "Single-shot compressive spectral imaging with a dual-disperser architecture," *Opt. Express*, **15**, 14013-14027 (2007).

21. A. Wagadarikar, M.E. Gehm, and D.J. Brady, "Performance comparison of aperture codes for multimodal, multiplex spectroscopy," *Appl. Opt.*, **46**, 4932-4942 (2007).
20. C. Fernandez, B.D. Guenther, M.E. Gehm, D.J. Brady, and M.E. Sullivan, "Longwave infrared (LWIR) coded aperture dispersive spectrometer," *Opt. Express*, **15**, 5742-5753, (2007).
19. S.D. Feller, H. Chen, D.J. Brady, M.E. Gehm, C. Hsieh, O. Momtahan, and A. Adibi, "Multiple-order, coded-aperture spectrometer," *Opt. Express*, **15**, 5625-5630, (2007).
18. E.C. Cull, M.E. Gehm, D.J. Brady, C.R. Hsieh, O. Momtahan, and A. Adibi, "Dispersion multiplexing with broadband filtering for inexpensive, high performance miniature spectrometers," *Appl. Opt.*, **46**, 365-374 (2007).
17. S.T. McCain, M.E. Gehm, Y.Wang, N.P. Pitsianis, and D.J. Brady, "Coded-aperture Raman spectroscopy for quantitative measurements of ethanol in a tissue phantom," *Appl. Spec.*, **60**, 663-671 (2006).
16. M.E. Gehm, S.T. McCain, N.P. Pitsianis, D.J. Brady, P. Potluri, and M.E. Sullivan, "Static 2D aperture coding for multimodal multiplex spectroscopy," *Appl. Opt.*, **45**, 2965-2974 (2006).
15. P. Potluri, M.E. Gehm, M.E. Sullivan, and D.J. Brady, "Measurement-efficient optical wavemeters," *Opt. Express* **12**, 6219-6229 (2004).
14. J. Kinast, S.L. Hemmer, M.E. Gehm, A. Turlapov, and J.E. Thomas, "Evidence for superfluidity in a resonantly interacting Fermi gas," *Phys. Rev. Lett.* **92**, 150402 (2004).
 - Named one of the top physics stories of 2004 by the American Institute of Physics.
13. J. E. Thomas, S. L. Hemmer, J. Kinast, A. Turlapov, M. E. Gehm, and K. M. O'Hara, "Dynamics of a highly-degenerate, strongly-interacting Fermi gas of atoms," *J. Low Temp. Phys.* **104** (2003).
12. M.E. Gehm, S.L. Hemmer, K.M. O'Hara, and J.E. Thomas, "Unitarity-limited elastic collision rate in a harmonically-trapped Fermi gas", *Phys. Rev. A* **68**, 011603(R) (2003).
11. M.E. Gehm, S.L. Hemmer, S.R. Granade, K.M. O'Hara, and J.E. Thomas, "Mechanical stability of a strongly-interacting degenerate Fermi gas of atoms," *Phys. Rev. A* **68**, 011401(R) (2003).
10. K.M. O'Hara, S.L. Hemmer, M.E. Gehm, S.R. Granade, and J.E. Thomas, "Observation of a strongly interacting degenerate Fermi gas of atoms," *Science*, 13 December, **298**, 2179 (2002).
 - Highlighted throughout the national and international science press. Selected articles include:
 - *Scientific American*, October, 2003, "The next big chill: Physicists close in on a new state of matter."
 - *Science*, **301**, 750 (2003) "Ultracold atoms spark a hot race."
 - *Science*, **298**, 2144 (2002) "The quest for superfluidity in Fermi gases."
9. K.M. O'Hara, S.L. Hemmer, S.R. Granade, M.E. Gehm, J.E. Thomas, V. Venturi, E. Tiesinga, and C.J. Williams, "Measurement of the zero crossing in a Feshbach resonance of fermionic Li," *Phys. Rev. A*, **66**, 041401(R) (2002).
8. S.R. Granade, M.E. Gehm, K.M. O'Hara, and J.E. Thomas, "All-optical production of a degenerate Fermi gas," *Phys. Rev. Lett.* **88**, 120405 (2002).
 - Highlighted in *Physics Today*, May 2002.
7. K.M. O'Hara, M.E. Gehm, S.R. Granade, and J.E. Thomas, "Scaling laws for evaporative cooling in time-dependent optical traps," *Phys. Rev. A* **64**, 051403(R)(2001).
6. K.M. O'Hara, S.R. Granade, M.E. Gehm, and J.E. Thomas, "Loading dynamics of CO₂ laser traps," *Phys. Rev. A* **63**, 043403 (2001).
5. K.M. O'Hara, M.E. Gehm, S.R. Granade, S. Bali, and J.E. Thomas, "Stable, strongly attractive, two-state mixture of lithium fermions in an optical trap," *Phys. Rev. Lett.* **85**, 2092 (2000).
 - Highlighted throughout the national science press. Selected articles include:
 - *Scientific American*, November, 1999, "Quantum claustrophobia."
 - *Physics Today*, October 1999.

4. T.A. Savard, S.R. Granade, K.M. O'Hara, M.E. Gehm, and J.E. Thomas, "Raman-induced magnetic resonance imaging of atoms in a magneto-optical trap," *Phys. Rev. A* **60**, 4788 (1999).
3. S. Bali, K.M. O'Hara, M.E. Gehm, S.R. Granade, and J.E. Thomas, "Quantum-diffractive background gas collisions in atom trap heating and loss," *Phys. Rev. A* **60**, R29 (1999).
2. K.M. O'Hara, S.R. Granade, M.E. Gehm, T.A. Savard, S. Bali, C. Freed, and J.E. Thomas, "Ultrastable CO₂ laser trapping of lithium fermions," *Phys. Rev. Lett.* **82**, 4204 (1999).
1. M.E. Gehm, K.M. O'Hara, T.A. Savard, and J.E. Thomas, "Dynamics of noise-induced heating in atom traps," *Phys. Rev. A* **58**, 3914 (1998).

GENERAL AUDIENCE PUBLICATIONS

1. J.E. Thomas and M.E. Gehm, "Optically trapped Fermi gases", *American Scientist*, pp. 238-245, May-June 2004.

PUBLISHED CONFERENCE PROCEEDINGS AND BOOKS

21. Miller, B.W.; Moore, J.W.; Gehm, M.E.; Furenlid, L.R.; Barrett, H.H.; , "Novel applications of rapid prototyping in gamma-ray and X-ray imaging," 2009 IEEE Nuclear Science Symposium Conference Record (NSS/MIC), 3322-3326 (2009).
20. Ziran Wu; Wei-Ren Ng; Gehm, M.; Hao Xin; , "All-dielectric low-loss terahertz waveguide fabricated by rapid prototyping," 2009 Infrared, Millimeter, and Terahertz Waves (IRMMW-THz) 1-2(, 21-25 Sept. (2009).
19. M.E. Gehm and M.D. Stenner, "Compressive measurement for target tracking in persistent, pervasive surveillance applications," *Proc. SPIE*, **7468**, (Proceedings of 2009 SPIE Optics and Photonics).
18. M.E. Gehm, Z. Wu, and H. Xin, "Rapid prototyping for fabrication of GHz-THz bandgap structures," *Proc. SPIE*, **7311**, (Proceedings of 2009 SPIE Defense, Security, and Sensing Symposium).
17. D.V. Dinakarababu and M.E. Gehm, "Adaptive spectroscopy for rapid chemical identification," *Proc. SPIE*, **7319**, (Proceedings of 2009 SPIE Defense, Security, and Sensing Symposium).
16. M.E. Gehm and J. Kinast, "Adaptive spectroscopy: Towards adaptive spectral imaging," *Proc. SPIE*, **6978**, (Proceedings of 2008 SPIE Defense and Security Symposium).
15. R.M. Willett, M.E. Gehm, and D.J. Brady, "Multiscale reconstruction for computational spectral imaging," *Proc. SPIE*, **6498**, (Proceedings of 2007 SPIE Electronic Imaging Conference).
14. D.J. Brady, M.E. Gehm, N.P. Pitsianis, and X. Sun, "Compressive sampling strategies for integrated microspectrometers," *Proc. SPIE*, **6232**, (Proceedings of 2006 SPIE Defense and Security Symposium).
13. D.J. Brady and M.E. Gehm, "Compressive imaging spectrometers using coded apertures," *Proc. SPIE*, **6246**, (Proceedings of 2006 SPIE Defense and Security Symposium).
12. M.E. Gehm and D.J. Brady, "High-throughput Hyperspectral Microscopy," *Proc. SPIE*, **6090**, (Proceedings of 2006 Photonics West—BIOS).
11. S.T. McCain, M.E. Gehm, Y. Wang, N.P. Pitsianis, and D.J. Brady, "Multimodal multiplex Raman spectroscopy optimized for in vivo chemometrics", *Proc. SPIE*, **6093**, (Proceedings of 2006 Photonics West—BIOS).
10. E.C. Cull, M.E. Gehm, B.D. Guenther, and D.J. Brady, "Standoff Raman spectroscopy system for remote chemical detection," *Proc. SPIE*, **5994**, (Proceedings of 2005 Photonics East).
9. S.T. McCain, M.E. Gehm, Y. Wang, N.P. Pitsianis, M.E. Sullivan, and D.J.Brady, "Multimodal, multiplex, Raman spectroscopy of alcohol in diffuse, fluorescent media," *Proc. SPIE*, **5864**, (Proceedings of 2005 European Conference on Biomedical Optics).
8. E.C. Cull, M.E. Gehm, S.T. McCain, B.D. Guenther, and D.J. Brady, "Multimodal optical spectrometers for remote chemical detection," *Proc. SPIE*, **5778**, pp. 376-382 (Proceedings of the 2005 SPIE Defense and Security Symposium).

7. K. M. O'Hara, M. E. Gehm, S. R. Granade, M.-S. Chang, and J. E. Thomas, "Coherence in an optically trapped Fermi gas," in *Coherence and Quantum Optics VIII*, N. P. Bigelow, J. H. Eberly, C. R. Stroud, and I. A. Walmsley, editors, (Kluwer Academic/Plenum Publishers, New York, 2003), pp. 587.
6. J. E. Thomas, S. L. Hemmer, J. M. Kinast, A. V. Turlapov, M. E. Gehm and K. M. O'Hara, "Dynamics of a highly-degenerate, strongly interacting Fermi gas," *Proceedings of the 16th International Conference on Laser Spectroscopy* (2003).
5. M.E. Gehm, *Preparation of an Optically-Trapped Degenerate Fermi Gas of ^6Li : Finding the Route to Degeneracy*, Ph.D. dissertation, Duke University (2003).
Available at: <http://www.phy.duke.edu/research/photon/qoptics/theses/pdf/Gehm.pdf>
4. J. E. Thomas, S. R. Granade, M. E. Gehm, M.-S. Chang, and K. M. O'Hara, "Optical trapping of a two-component Fermi gas," in *Proceedings of the XV International Conference on Laser Spectroscopy*, S. Chu, V. Vuletic, A. J. Kerman, and C. Chin, editors (World Scientific, New Jersey, 2002), pp. 46-54.
3. S. R. Granade, M. E. Gehm, K. M. O'Hara, and J. E. Thomas, "Preparation of a degenerate, two-component Fermi gas by evaporation in a single beam optical trap," in OSA Trends in Optics and Photonics (TOPS) Vol. 74, *Quantum Electronics and Laser Science Conference (QELS 2002)*, OSA Technical Digest, Postconference Edition (Optical Society of America, Washington, DC, 2002), pp. 169-170.
2. M. E. Gehm, S. R. Granade, M.-S. Chang, K. M. O'Hara, and J. E. Thomas, "Optically trapped Fermi gas," in OSA Trends in Optics and Photonics (TOPS) Vol. 57, *Quantum Electronics and Laser Science Conference (QELS 2001)*, Technical Digest, Postconference Edition (Optical Society of America, Washington, DC, 2001), pp. 253-254.
1. K. M. O'Hara, S. R. Granade, M. E. Gehm, M.-S. Chang, and J. E. Thomas, "Modeling the evaporative cooling of fermionic atoms in an optical trap," in OSA Trends in Optics and Photonics (TOPS) Vol. 57, *Quantum Electronics and Laser Science Conference (QELS 2001)*, Technical Digest, Postconference Edition (Optical Society of America, Washington, DC, 2001), pp. 253.

PRESENTATIONS

* indicates invited talk

† indicates presented by me

51. *† "Computational sensing: Performance gains and fabrication challenges," *Sandia National Labs*, Albuquerque NM, Sept. 2010.
50. *† "Computational sensing and ISR," *2010 Defense Sciences Research Council Agile ISR Workshop*, Washington DC, June 2010.
49. "Static architecture for compressive motion detection in persistent, pervasive surveillance applications," *2010 OSA topical meeting on Imaging Systems Applications*, Tucson, AZ, June 2010.
48. "Adaptive feature-specific spectroscopy," *2009 OSA topical meeting on Computational Optical Sensing and Imaging*, San Jose, CA, Oct. 2009.
47. "Fabrication of GHz/THz volumetric optics via rapid prototyping," *2009 Annual Meeting of the Optical Society of America*, San Jose, CA, Oct. 2009.
46. † "Compressive measurement for target tracking in persistent, pervasive surveillance applications," *2009 SPIE Optics and Photonics*, San Diego, CA, August 2009.
45. † "Rapid prototyping for fabrication of GHz-THz bandgap structures," *2009 SPIE Defense and Security Symposium*, Orlando, FL, April 2009.
44. † "Adaptive spectroscopy for rapid chemical identification," *2009 SPIE Defense and Security Symposium*, Orlando, FL, April 2009.
43. * † "Adaptive spectroscopy: Towards adaptive spectral imaging," *2008 SPIE Defense and Security Symposium*, Orlando, FL, April 2008.
42. * † "Adaptive spectroscopy," *Ricoh Innovations*, Sept. 2007.

41. † “Adaptive spectroscopy,” *2007 Annual Meeting of the Optical Society of America*, San Jose, CA, Sept. 2007.
40. † “A snap-shot dual-disperser imager for compressive hyperspectral imaging,” *2007 Annual Meeting of the Optical Society of America*, San Jose, CA, Sept. 2007.
39. “Quantitative dynamic range management techniques for spectroscopic detection and estimation,” *2007 OSA topical meeting on Computational Optical Sensing and Imaging*, Vancouver, Canada, June 2007.
38. “Hyperspectral imager based on coded-aperture spectroscopy,” *2007 OSA topical meeting on Computational Optical Sensing and Imaging*, Vancouver, Canada, June 2007.
37. † “A coded-aperture hyperspectral imager,” *2006 Optics in the Southeast*, Charlotte, NC, September, 2006.
36. * † “Structured measurement: a non-traditional design approach for advanced sensor systems,” *University of Arizona Department of Electrical and Computer Engineering*, Tucson, AZ, June, 2006.
35. * “Compressive sampling strategies for integrated microspectrometers,” *2006 SPIE Defense and Security Symposium*, Orlando, FL, April 2006.
34. * † “Compressive imaging spectrometers using coded apertures,” *2006 SPIE Defense and Security Symposium*, Orlando, FL, April 2006.
33. * † “Structured measurement: a design approach for advanced sensor systems,” *Washington University Department of Electrical and Systems Engineering*, St. Louis, MO, March, 2006.
32. † “High-throughput hyperspectral microscopy,” *2006 SPIE Photonics West—BIOS*, San Jose, CA, January, 2006.
31. “Multimodal multiplex Raman spectroscopy optimized for in vivo chemometrics”, *2006 SPIE Photonics West—BIOS*, San Jose, CA, January, 2006.
30. “Standoff Raman spectroscopy system for remote chemical detection,” *2005 SPIE Photonics East*, Boston, MA, October, 2005.
29. † “High-throughput tomographic hyperspectral imaging without a missing-cone,” *Integration of Sensing and Processing Workshop*, Institute for Mathematics and its Applications, Minneapolis, MN, December 2005.
28. † “Multimodal multiplex spectrometer design for chemometrics of diffuse sources,” *Frontiers of Imaging Workshop*, Institute for Mathematics and its Applications, Minneapolis, MN, November 2005.
27. “Multi-wavelength excitation Raman spectroscopy for optical diagnostics of diffuse, fluorescent media,” *Optics in the Southeast*, Atlanta, GA, October 2005.
26. † “Tomographic hyperspectral imaging without a missing-cone,” *2005 Annual Meeting of the Optical Society of America*, Tucson, AZ, October 2005.
25. “Multimodal remote Raman spectroscopy of diffuse sources,” *Photonics East*, Boston, MA, October 2005.
24. “Coded-aperture, multi-wavelength Raman spectroscopy for ethanol detection in biological samples,” *Joint Conference on Information Sciences, Third Symposium on Photonics, Networking and Computing*, Salt Lake City, UT, July 2005.
23. “Multimodal, multiplex, Raman spectroscopy of alcohol in diffuse, fluorescent media”, *2005 European Conference on Biomedical Optics*, Munich, Germany, June 2005.
22. † “Multimodal, multiplex Raman spectrometer for weak, incoherent sources”, *2005 OSA topical meeting on Computational Optical Sensing and Imaging*, Charlotte, NC, June 2005.
21. “Dispersion multiplexing with broadband filtering for miniature spectrometers,” *2005 OSA topical meeting on Computational Optical Sensing and Imaging*, Charlotte, NC, June 2005.
20. “Multimodal optical spectrometers for remote chemical detection,” *2005 SPIE Defense and Security Symposium*, Orlando, FL, May 2005.
19. * † “Compressive Optical MONTAGE Photography Initiative (COMP-I)”, *2004 DARPA MTO Photonics Symposium*, San Francisco, CA, December 2004.

18. † “Static, multimodal, multiplex spectrometer design for weak, incoherent sources,” *2004 Annual Meeting of the Optical Society of America*, Rochester, NY, October 2004.
17. “Multimodal, multiplex Raman spectrometry for detection of ethanol in blood and tissue,” *2004 Annual Meeting of the Optical Society of America*, Rochester, NY, October 2004.
16. † “Stability of a strongly-attractive, two-component Fermi gas,” *2003 Annual Meeting of the Division of Atomic, Molecular, and Optical Physics of the American Physical Society*, Boulder, CO, May 2003.
15. “Observation of hydrodynamic expansion in a strongly-interacting Fermi gas: Signature of superfluidity?,” *2003 Annual Meeting of the Division of Atomic, Molecular, and Optical Physics of the American Physical Society*, Boulder, CO, May 2003.
14. “Measuring universal mean-field interactions in a strongly-interacting Fermi gas,” *2003 Annual Meeting of the Division of Atomic, Molecular, and Optical Physics of the American Physical Society*, Boulder, CO, May 2003.
13. * † “Universal dynamics of a strongly-interacting Fermi gas,” *2003 NASA/JPL Workshop on Fundamental Physics in Space*, Oxnard, CA, May 2003.
12. * † “All-optical production of a degenerate Fermi gas,” *2002 Annual Meeting of the Division of Atomic, Molecular, and Optical Physics of the American Physical Society*, Williamsburg, VA, May 2002.
11. “Preparation of a degenerate, two-component Fermi gas by evaporation in a single beam optical trap,” *2002 Quantum Electronics and Laser Symposium*, Long Beach, CA, May 2002.
10. “Optical trapping of a two-component Fermi gas,” *15th International Conference on Laser Spectroscopy*, Snowbird, UT, June 2001.
9. † “Optically trapped Fermi gas,” *2001 Quantum Electronics and Laser Symposium*, Baltimore, MD, May 2001.
8. “Evaporative cooling of fermionic atoms in an optical trap,” *2001 Quantum Electronics and Laser Symposium*, Baltimore, MD, May 2001.
7. “Coherence in an optically trapped Fermi gas,” *Eighth Rochester Conference on Coherence and Quantum Optics*, Rochester, NY, June 2001.
6. “Evaporative cooling of Lithium fermions in an ultrastable optical trap,” *2000 Annual Meeting of the Division of Atomic, Molecular, and Optical Physics of the American Physical Society*, Storrs, CT, June 2000.
5. “Spatial loading dynamics of CO₂ laser traps,” *2000 Annual Meeting of the Division of Atomic, Molecular, and Optical Physics of the American Physical Society*, Storrs, CT, June 2000.
4. “Evaporative cooling of Lithium fermions in a stable optical trap,” *1999 Meeting of the Southeastern Section of the American Physical Society*, Chapel Hill, NC, November 1999.
3. † “Noise-induced population loss in atom traps,” *Centennial Meeting of the American Physical Society*, Atlanta, GA, March 1999.
2. “Ultrastable CO₂ laser trapping of Lithium fermions,” *Centennial Meeting of the American Physical Society*, Atlanta, GA, March 1999.
1. “Raman-induced magnetic resonance imaging of atoms in a MOT,” *1998 Annual Meeting of the Division of Atomic, Molecular, and Optical Physics of the American Physical Society*, Santa Fe, NM, May 1998.