Jason A. Deibel

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EDUCATION

University of Michigan (Ann Arbor, Michigan)
Rackham School of Graduate Studies
Ph.D., Applied Physics, February (completed) 2004, awarded April 2004
Dissertation Title:
A Study of Nonlinear Optical Polymers for Use in Ultrafast Electro-Optic Sampling Experiments
Advisor and Chair: Dr. John F. Whitaker, Electrical Engineering & Computer Science

Transylvania University (Lexington, Kentucky)
B.A., Physics, Mathematics, History (minor), May 1997
Summa cum laude, Honors in Physics, Sigma Pi Sigma Physics Honorary,
Omicron Delta Kappa National Leadership Honor Society, Commencement Student Speaker

RESEARCH AND PROFESSIONAL EXPERIENCE

Wright State University
Department of Physics
Assistant Professor, Tenure-track, August 1st, 2007 – present
Member, Institute for Development and Commercialization of Advanced Sensor Technology

Princeton Nanotechnology Systems
Monmouth Junction, NJ
Research Consultant, October 2006 – present
- Performed electromagnetic and thermal modeling to advise on photoconductive terahertz antenna design considerations and consulted on novel terahertz spectrometer design and testing.
- Assisted in the preparation of grant and contract proposals.

Rice University
Department of Electrical and Computer Engineering
Postdoctoral Research Associate, February 2004 – June 30th, 2007
Director of Central Intelligence Postdoctoral Fellow, February 2004 –December 2006
Advisor: Associate Professor Daniel M. Mittleman, Terahertz Imaging and Spectroscopy Group
- Designed and performed terahertz emission spectroscopy experiments on novel organic and inorganic photoconductive semiconductors, including dilute magnetic semiconductors and polymers.
- Designed and performed terahertz waveguide characterization experiments.
- Operated and maintained several types of ultrafast laser systems.
- Conducted finite element method simulations of novel photoconductive antenna designs, terahertz wire waveguides, surface plasmon polariton phenomena, and periodic structures including photonic crystals.
- Supervised, assisted, and mentored graduate and undergraduate students with their research projects.
- Served as a substitute lecturer for two undergraduate optics courses (2004-2006).
- Assisted professor with preparation of research grant applications.

RESEARCH AND PROFESSIONAL EXPERIENCE (continued)

University of Leeds, UK
Institute of Microwaves and Photonics, School of Electronic and Electrical Engineering
Visiting Fellow, Royal Society North America Incoming Short Visit Program, August – October 2006
Hosts: Professor Giles Davies and Professor Edmund Linfield

- Performed cold temperature terahertz time-domain spectroscopy measurements on diluted magnetic semiconductors and polymeric semiconductors.
- Performed high magnetic field terahertz transmission spectroscopy measurements on diluted magnetic semiconductors.
- Visited Oxford and Durham Universities and presented seminar talks.

University of Michigan
Center for Ultrafast Optical Science
Graduate Student Research Assistant, August, 1997 – February, 2004
Laboratory of Dr. John F. Whitaker. Ultrafast Technology Group

- Fabricated and characterized electro-optic polymer films.
- Performed time-domain electro-optic sampling measurements.
- Performed fiber-based photoconductive sampling measurements on microwave circuits.
- Operated and maintained a Ti:sapphire laser system and an optical parametric oscillator.

University of Michigan
Department of Physics
Graduate Student Research Assistant, June 2003 –December 2003
Laboratory of Professor Keith Riles

- Designed, constructed, and tested an automated fiber-based frequency scanning interferometer.

Transylvania University
Senior Year Research Project, January 1997- May 1997
Laboratory of Dr. Rick Rolfes and Dr. Jamie Day

University of Michigan
Center for Ultrafast Optical Science
NSF Research Experience for Undergraduates Participant, June 1997 - August 1997
Laboratory of Dr. John F. Whitaker

TEACHING AND MENTORSHIP ACTIVITIES

- Assistant Professor, Physics 260, *Introduction to Modern Physics*, Lecture, Laboratory, and Writing Component, Wright State University (Fall 2007).
- Assistant Professor, Physics 242R, *General Physics Recitation,* Wright State University (Fall 2007).
- Substitute Lecturer for Graduate level course, *Laser Spectroscopy*, Department of Electrical and Computer Engineering, Rice University (Fall 2005 and Fall 2006).
- Substitute Lecturer for Undergraduate level course, *Waves and Photonics*, Department of Electrical and Computer Engineering, Rice University (Fall 2004, Spring 2006, and Spring 2007).
- Mentor for NSF Research Experience for Undergraduates, Rice Quantum Institute (Summer 2004 and Summer 2005).
- Mentor for a high school senior participating in a research project at Rice University through the Texas Education Agency's Gifted and Talented Performance Standards Program (Fall 2004 and Spring 2005).
- Mentor, 1st Year Graduate Student Mentor Program, University of Michigan Applied Physics Ph.D. Program (Fall 2002).
- Mentor for NSF Research Experience for Undergraduates, The Center for Ultrafast Optical Science at the University of Michigan (Summer 2000, Summer 2001, and Summer 2002).
- Mentor for Undergraduate Research Opportunities Program at the University of Michigan (Fall 2000 – Fall 2003).

PROFESSIONAL SOCIETIES & SERVICE

- Member, Optical Society of America
- Member, IEEE Lasers and Electro-Optics Society
- Member, American Physical Society
- Member, Applied Computational Electromagnetics Society
- Member, Program Committee, Comsol Users Conference 2007
- Reviewer, *Optics Express, Electronics Letters, Applied Physics Letters, Proceedings of the IEEE IEEE Sensors Journal, IOP Journal of Physics D: Applied Physics, Measurement Science and Technology*
- Grant reviewer, *US Civilian Research and Development Foundation*

PUBLICATIONS

1. J.A. Deibel, M. Escarra*, N. Berndsen*, K. Wang, and D.M. Mittleman, "Finite element method simulations of guided wave phenomena at terahertz frequencies," submitted as an **invited** article to the *Proceedings of the IEEE* (2007).

2. J.A. Deibel, M. Escarra*, N. Berndsen*, K. Wang, and D.M. Mittleman, "The excitation and emission of terahertz surface plasmon polaritons on metal wire waveguides," submitted as an **invited** article to the *Proceedings of the French Academy of Science* (2007).

3. W.L. Chan, J.A. Deibel, and D.M. Mittleman, "Imaging with Terahertz Radiation," *Reports on Progress in Physics*, **70**, pp. 1325-1379 (2007) [Also appearing in the August 2007 issue of the *Virtual Journal of Terahertz Science and Technology*].

4. H. Zhan, J.A. Deibel, J. Laib, H. Munekata, J. Kono, and D.M. Mittleman, "Temperature dependence of terahertz emission from InMnAs," *Applied Physics Letters*, **90**, p. 012103 (2007) [Also appearing in the January 2007 issue of the *Virtual Journal of Terahertz Science and Technology* and the Feb. 2007 issue of the *Virtual Journal of Ultrafast Science*].

5. J.A. Deibel, D.M. Mittleman, N. Berndsen*, K. Wang, N.C.J. van der Valk, and P.C.M. Planken, "Frequency-dependent radiation patterns emitted by THz plasmons on finite length cylindrical metal wires," *Optics Express,* **14**, No. 19, pp. 8772-8778 (September 2006) [Also appearing in the September 2006 issue of the *Virtual Journal of Terahertz Science and Technology*].

6. J. Pearce, K. Doyle*, Z. Jian, J.A. Deibel, and D.M. Mittleman, "Non-stationary time-domain statistics of multiply scattered broadband terahertz pulses," *Journal of the Optical Society of America B,* Vol **23**, No. 8, pp 1506-1510 (August 2006) [Also appearing in the August 2006 issue of the *Virtual Journal of Terahertz Science and Technology*, the September 2006 issue of the *Virtual Journal of Ultrafast Science,* and the September 2006 issue of the *Virtual Journal for Biomedical Optics*].

7. J.A. Deibel, K. Wang, M. Escarra*, and D.M. Mittleman, "Enhanced coupling of terahertz radiation to cylindrical wire waveguides," *Optics Express*, Vol **14**, No. 1, pp. 279-290 (January 2006) [Also appearing in the January 2006 issue of the *Virtual Journal of Terahertz Science and Technology*].

8. J.A. Deibel, M. Escarra*, and D.M. Mittleman, "Photoconductive terahertz antenna with radial symmetry," *Electronics Letters*, Vol. **41**, 9 (2005).

9. H.J. Yang, J.A. Deibel, S. Nyberg*, and K. Riles, "High-precision absolute distance and vibration measurement with frequency scanned interferometry," *Applied Optics,* Vol. **44**, No. 19, pp. 3937-3944 (July 2005).

10. J.A. Deibel and J.F. Whitaker, "Numerical simulation of electric-field component isolation in polymer electro-optic sampling sensors," in preparation.

**denotes undergraduate student*

CONFERENCE PROCEEDINGS

1. J. Deibel, J. Kono, D. Mittleman, W. Fan, P. C. Upadhya, A. Sengupta, J. Cunningham, E. H. Linfield, G. Davies, and H. Munekata, " Temperature Dependent and Magnetic Field Dependent Terahertz Spectroscopy of $In_{1-x}Mn_xAs$," in *Conference on Lasers and Electro-Optics/Quantum Electronics and Laser Science Conference and Photonic Applications Systems Technologies*, OSA Technical Digest Series (CD) (Optical Society of America, 2007), paper JFB4.

2. J. A. Deibel, N. Berndsen*, K. Wang, D. Mittleman, N. C. J. van der Valk, and P. C. M. Planken, " Frequency-Dependent Radiation Patterns Emitted by THz Plasmons on Cylindrical Metal Wires," in *Conference on Lasers and Electro-Optics/Quantum Electronics and Laser Science Conference and Photonic Applications Systems Technologies*, OSA Technical Digest Series (CD) (Optical Society of America, 2007), paper CTuJJ1.

3. M. Mbonye, V. Astley, W. L. Chan, J. Deibel, and D. Mittleman, " A Terahertz Dual Wire Waveguide," in *Conference on Lasers and Electro-Optics/Quantum Electronics and Laser Science Conference and Photonic Applications Systems Technologies*, OSA Technical Digest Series (CD) (Optical Society of America, 2007), paper CThLL1.

4. H. Zhan, M. Hvasta*, V. Astley, J. A. Deibel, D. M. Mittleman, and Y. S. Lim, " Terahertz Apertureless Near-Field Aicroscopy of a Vanadium Dioxide Thin Film," in *Conference on Lasers and Electro-Optics/Quantum Electronics and Laser Science Conference and Photonic Applications Systems Technologies*, OSA Technical Digest Series (CD) (Optical Society of America, 2007), paper CTuJJ6.

5. J. P. Laib, H. Zhan, J. A. Deibel, D. M. Mittleman, J. Worne, and D. Natelson, " Photoconductive Properties of Regioregular Poly(3-hexylthiophene)," in *Conference on Lasers and Electro-Optics/Quantum Electronics and Laser Science Conference and Photonic Applications Systems Technologies*, OSA Technical Digest Series (CD) (Optical Society of America, 2007), paper CWH4.

6. J. A. Deibel, N. Berndsen*, K. Wang, D. Mittleman, N. C. van der Valk, and P. C. Planken, " Frequency-Dependent Radiation Patterns Emitted by THz Plasmons on Cylindrical Metal Wires," in *Optical Terahertz Science and Technology*, OSA Technical Digest Series (CD) (Optical Society of America, 2007), paper WC4.

7. H. Zhan, J. A. Deibel, J. Laib, C. Sun, J. Kono, D. Mittleman, and H. Munekata, " Temperature Dependence of Terahertz Emission from InMnAs," in *Optical Terahertz Science and Technology*, OSA Technical Digest Series (CD) (Optical Society of America, 2007), paper WA5.

8. H. Zhan, M. Hvasta*, V. Astley, J. A. Deibel, D. Mittleman, F. Hao, P. Nordlander, and Y. Lim, " Plasmon-Enhanced Terahertz Near-Field Spectroscopy," in *Optical Terahertz Science and Technology*, OSA Technical Digest Series (CD) (Optical Society of America, 2007), paper ME3.

9. J.A. Deibel, K. Wang, M. Escarra*, and D.M. Mittleman, "Mode matching of terahertz radiation to cylindrical wire waveguides using radially symmetric photoconductive antennas," *IEEE Antennas and Propagation Society International Symposium Digest* (IEEE, Piscataway NJ 2006), presentation 354.6 (**invited**).

10. Z. Jian, J.A. Deibel, and D.M. Mittleman, "Broadband group velocity anomaly in transmission through a photonic crystal slab," in *Conference on Lasers and Electro-Optics,* OSA Technical Digest (Optical Society of America, Washington DC, 2006) presentation CMS7.

11. J.A. Deibel, H. Zhan, J.P. Laib, C. Sun, J. Kono, D.M. Mittleman, and H. Munekata, "Terahertz emission spectroscopy of p-$In_{1-x}Mn_xAs$," in *Quantum Electronics and Laser Science Conference,* OSA Technical Digest (Optical Society of America, Washington DC, 2006), presentation QTuH4.

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CONFERENCE PROCEEDINGS (continued)

12. J.A. Deibel, K. Wang, M. Escarra*, and D.M. Mittleman, "Mode matching of terahertz radiation to cylindrical wire waveguides," in *Conference on Lasers and Electro-Optics,* OSA Technical Digest (Optical Society of America, Washington DC, 2006), presentation CMS3.

13. J.A. Deibel, K. Wang, M. Escarra*, and D.M. Mittleman, "FEM characterization of terahertz wave propagation on metal wire waveguides," *FEMLAB Conference 2005,* Boston, MA, pp. 245-250, October 2005.

14. J.A. Deibel, M. Escarra*, and D.M. Mittleman, "Photoconductive terahertz antenna with radial symmetry," in *Conference on Lasers and Electro-Optics*, OSA Technical Digest (Optical Society of America, Washington DC, 2005), presentation JWB23.

15. J.A. Deibel, M. Escarra*, and D.M. Mittleman, "Photoconductive terahertz antenna with radial symmetry," in *Optical Terahertz Science and Technology Topical Meeting on CD-ROM* (Optical Society of America, Washington DC, 2005), presentation MB3.

16. J.A. Deibel, K. Wang, and D.M. Mittleman, "FEM simulation of sub-THz propagation on metal wires," post-deadline presentation in *Optical Terahertz Science and Technology Topical Meeting on CD-ROM* (Optical Society of America, Washington DC, 2005), presentation MD5.

17. J.A. Deibel and J.F. Whitaker, "A fiber-mounted polymer electro-optic-sampling field sensor," IEEE *LEOS Annual Meeting Conference Proceedings*, Piscataway, NJ: IEEE, pp. 786-787, Oct. 2003.

18. J.A. Deibel, J.F. Whitaker, and D.C. Martin, "Pockels effect in solution-evaporation-electrically-poled poly(gamma-benzyl-L-glutamate)," in *Organic Thin Films for Photonics Applications*, James P. Armistead, James R.Heflin, Alex K-Y. Jen, and Robert A. Norwood, eds. (OSA, Washington D.C.2001) ,TOPS Vol. 64, pp. 138-144.

CONFERENCE PRESENTATIONS (Presented by J.A. Deibel)

1. J.A. Deibel, J. Kono, D.M. Mittleman, W.H. Fan, P.C. Upadhya, A. Sengupta, J. Cunningham, E.H. Linfield, A.G. Davies, and H. Munekata, "Temperature dependent and magnetic field dependent terahertz spectroscopy of $In_{1-x}Mn_xAs$," presented as an oral presentation at the 2007 OSA/IEEE/APS Quantum Electronics and Laser Science Conference (QELS), May 2007, Baltimore, MD.

2. J.A. Deibel, N. Berndsen*, K. Wang, D.M. Mittleman, N.C.J. van der Valk, and P.C.M. Planken, "Frequency-dependent radiation patterns emitted by THz plasmons on cylindrical metal wires," presented as an oral presentation at the 2007 OSA/IEEE/APS Conference on Lasers and Electro-Optics (CLEO), May 2007, Baltimore, MD.

3. J.A. Deibel, N. Berndsen*, K. Wang, D.M. Mittleman, N.C.J. van der Valk, and P.C.M. Planken, "Frequency-dependent radiation patterns emitted by THz plasmons on cylindrical metal wires," presented as an oral presentation at the 2007 OSA Optical Terahertz Science and Technology Topical Meeting, March 2007, Orlando, FL.

4. J.A. Deibel, "Simulating the generation and guided propagation of terahertz radiation using COMSOL Multiphysics," presented as a **keynote** address at the 2006 COMSOL Multiphysics Conference, October 2006, Boston, MA.

5. J.A. Deibel, K. Wang, M. Escarra*, and D.M. Mittleman, "Mode matching of terahertz radiation to cylindrical wire waveguides using radially symmetric photoconductive antennas," presented as an **invited** talk at the special session on Terahertz Technology and Applications at the 2006 IEEE Antennas and Propagation Society International Symposium, June 2006, Albuquerque, NM.

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CONFERENCE PRESENTATIONS (Presented by J.A. Deibel) (continued)

6. J.A. Deibel, K. Wang, M. Escarra*, and D.M. Mittleman, "Mode-matching of terahertz radiation to cylindrical wire waveguides," presented as an oral presentation at the 2006 OSA/IEEE/APS Conference on Lasers and Electro-Optics (CLEO), May 2006, Long Beach, CA.

7. J.A. Deibel, K. Wang, H. Zhan, M. Escarra*, and D.M. Mittleman, "Generating, guiding, and detecting terahertz radiation," presented as an **invited** talk at the 2005 IEEE LEOS Terahertz Systems Workshop, October 2005, Lexington, MA.

8. J.A. Deibel, K. Wang, M. Escarra*, and D.M. Mittleman, "FEM characterization of terahertz wave propagation on metal wire waveguides," presented at the FEMLAB Conference 2005, October 2005, Boston, MA.

9. J.A. Deibel, M. Escarra*, and D.M. Mittleman, "Photoconductive terahertz antenna with radial symmetry," presented at the poster session at the 2005 OSA/IEEE Conference on Lasers and Electro-Optics (CLEO), May 2005, Baltimore, MD.
10. J.A. Deibel, K. Wang, M. Escarra*, and D.M. Mittleman, "Advances in terahertz imaging," presented at the 2005 Director of Central Intelligence Postdoctoral Research Fellowship Colloquium, April 2005, McLean, VA.

11. J.A. Deibel, K. Wang, and D.M. Mittleman, "FEM simulations of sub-THz wave propagation on metal wires," presented at the post deadline session at the 2005 OSA Optical Terahertz Science and Technology Topical Meeting, March 2005, Orlando, FL.

12. J.A. Deibel, M. Escarra*, and D.M. Mittleman, "Photoconductive terahertz antenna with radial symmetry," presented at the 2005 OSA Optical Terahertz Science and Technology Topical Meeting, March 2005, Orlando, FL.

13. J.A. Deibel and D.M. Mittleman, "Terahertz emission spectroscopy/current research activities in the terahertz research group at Rice University," presented as an **invited** paper at the SPIE Optics East 2005 Meeting, October 2004, Philadelphia, PA.

14. J.A. Deibel and D.M. Mittleman, "Advances in terahertz imaging," presented at the 2004 Director of Central Intelligence Postdoctoral Research Fellowship Colloquium, April 2004, McLean, VA.

15. J.A. Deibel and J.F. Whitaker, "A fiber-mounted polymer electro-optic-sampling field sensor," presented at the 2003 IEEE LEOS Annual Meeting, Oct. 2003, Tucson, AZ.

16. J.A. Deibel, J.F. Whitaker, and D.C. Martin, "Pockels effect in solution-evaporated, electrically-poled poly(gamma-benzyl-L-glutamate)," presented at the Organic Thin Films for Photonic Applications Symposium as part of the 2001 Annual Meeting of the Optical Society of America, Long Beach, CA, October. 2001.

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INVITED TALKS & PRESENTATIONS

1. "Terahertz science and technology –collaborative research between Rice University and the University of Leeds," presented at a luncheon seminar at the British Consulate-General in Houston, Texas on December 18th, 2006.

2. "Terahertz spectroscopy of InMnAs," presented at the Condensed Matter Seminar in the Department of Physics at Case Western Reserve University on November 13th, 2006.

3. "Terahertz spectroscopy of InMnAs," presented at the Department of Physics at Durham University on October 4th, 2006.

4. "Terahertz wire waveguides," presented at the Research Council of the United Kingdom Terahertz Basic Technology Meeting at the University of Leeds on September 11th, 2006.

5. "Terahertz wire waveguides," presented at the Department of Physics at the University of Oxford on September 8th, 2006.

6. "Terahertz wire waveguides," presented at the Department of Electrical and Computer Engineering seminar at the University of Delaware on February 22nd, 2006.

7. "Generating, guiding, and detecting terahertz radiation," presented at the Department of Physics and Astronomy seminar at Trinity University on January 31st, 2006.

CONFERENCE PRESENTATIONS (Presented by collaborators)

1. H. Zhan, M. Hvasta*, V. Astley, J.A. Deibel, D.M. Mittleman, and Y. Lim, "Terahertz apertureless near-field microscopy of a vanadium dioxide thin film," presented as an oral presentation at the 2007 OSA/IEEE/APS Conference on Lasers and Electro-Optics (CLEO), May 2007, Baltimore, MD.

2. J.P. Laib, H. Zhan, J.A. Deibel, D.M Mittleman, J. Worne, and D. Natelson, "Photoconductive properties of regioregular poly(3-hexylthiophene)," presented as an oral presentation at the 2007 OSA/IEEE/APS Conference on Lasers and Electro-Optics (CLEO), May 2007, Baltimore, MD.

3. M.K. Mbonye, V. Astley, W.L. Chan, J.A. Deibel, and D.M. Mittleman, "Propagation of terahertz radiation along a double wire waveguide," presented as an oral presentation at the 2007 OSA/IEEE/APS Conference on Lasers and Electro-Optics (CLEO), May 2007, Baltimore, MD.

4. D. M. Mittleman, H. Zhan, J. Deibel, J. Laib, C. Sun, and H. Munekata, "Temperature-dependence of terahertz emission from dilute magnetic semiconductors," presented at the 2007 Spring Meeting of the Materials Research Society, April 2007, San Francisco, CA.

5. H. Zhan, J.A. Deibel, J.P. Laib, C. Sun, J. Kono, D.M. Mittleman, and H. Munekata, "Temperature dependence of terahertz emission from InMnAs," presented at the 2007 OSA Optical Terahertz Science and Technology Topical Meeting, March 2007, Orlando, FL.

6. J.A. Deibel, H. Zhan, J.P. Laib, C. Sun, J. Kono, D.M. Mittleman, and H. Munekata, "Terahertz emission spectroscopy of p-$In_{1-x}Mn_xAs$," presented at the 2006 OSA/IEEE/APS Quantum Electronics and Laser Science Conference (QELS), May 2006, Long Beach, CA.

7. Z. Jian, J.A. Deibel, and D.M. Mittleman, "Broadband group velocity anomaly in transmission through a photonic crystal slab," presented at the 2006 OSA/IEEE/APS Conference on Lasers and Electro-Optics (CLEO), May 2006, Long Beach, CA.

8. M. Escarra*, J.A. Deibel, K. Wang, and D.M. Mittleman, "Development of antennas for radially polarized terahertz radiation," presented at the Joint Fall Meeting of the Texas Section of the American Physical Society, October 2005, Houston, TX.

**denotes undergraduate student*

CONFERENCE PRESENTATIONS (Presented by collaborators) (continued)

9. K. Wang, J.A. Deibel, and D.M. Mittleman, "Time-domain analysis of terahertz propagation on metal wire waveguides," presented at the 2005 OSA Optical Terahertz Science and Technology Topical Meeting, March 2005, Orlando, FL.

10. H.J. Yang, J.A. Deibel, S. Nyberg*, and K. Riles, "High-precision absolute distance measurement by using frequency scanned interferometry," presented at the American Linear Collider Physics Group 2004 Winter Workshop at SLAC, Stanford University, January 7-10, 2004.

11. H.J. Yang, J.A. Deibel, S. Nyberg*, T. Blass, and K. Riles, "Frequency scanned interferometer demonstration system," presented at the American Linear Collider Workshop, Cornell University, Ithaca, New York, July 13-16, 2003.

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HONORS, AWARDS, AND PUBLICITY

- Terahertz waveguide research highlighted in the December 2006 issue of *Laser Focus World* in "Terahertz Optics: Wire waveguide simulation matches experiment," by John Wallace.
- Invitation to give a keynote presentation at the 2006 COMSOL Multiphysics Conference in Boston, MA, entitled "Simulation of the generation and guided propagation of terahertz radiation using COMSOL Multiphysics."
- "Designing and simulating THz wire waveguides using FEM modeling," by Jason Deibel and Daniel Mittleman appearing in the August 2006 issue of *RF Design* magazine.
- *Royal Society North America Incoming Short Visit Award (~$8000).* This fellowship, sponsored by the UK Foreign and Commonwealth Office and the UK Department of Trade and Industry's Office of Science and Technology and administered by the Royal Society of the UK, provided grant money to conduct research on novel organic and inorganic semiconductor materials at terahertz frequencies with Professors Giles Davies and Edmund Linfield at the University of Leeds for two months in the early fall of 2006. Part of this award was used to visit and present research results at seminars and colloquia at other academic and research institutes in the UK.
- Simulation and experimental research results recognized by COMSOL, a software company specializing in multiphysics modeling, as a "Success Story" in "COMSOL Multiphysics Helps Explore the Last Frontier in the Electromagnetics Spectrum," by Paul Schreier. This article can be found at http://www.comsol.com/stories/terahertz and was published in COMSOL's electronic newsletter, *COMSOL e-News*, December 2005 and in their print magazine, *COMSOL NEWS* in January 2006.
- Intelligence Community Postdoctoral Fellowship, February 2004 – December 2006.
  (Formerly known as the Director of Central Intelligence Postdoctoral Fellowship)
- University of Michigan Applied Physics Fellowship, September 1997 – August 1999.
- *Summa cum laude*, Honors in physics, Student Commencement Speaker,
  Transylvania University, May 1997.

RESEARCH AND TECHNICAL SKILLS

- Proficient in Matlab and LabView.
- Proficient in Finite-Element-Method (FEM) programming using COMSOL Multiphysics.
- Experience with a variety of laser systems including Argon-Ion, Titanium Sapphire (Ultrafast), Diode-pumped, optical parametric oscillators, and semiconductor laser systems.
- Polymer Thin Film Preparation and Characterization .
- Ultrafast Optoelectronic Measurement techniques including Terahertz Spectroscopy & Electro-Optic Sampling.
- Experience with Fiber-Optic Techniques.
- Frequency Scanned Interferometry.

References

Dr. Daniel Mittleman
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