

Curriculum Vita

Alan Mickelson
Electrical and Computer Engineering
University of Colorado
Boulder, Colorado 80309-0425
alan.mickelson@colorado.edu

Employment, Education, Honors

Professional Preparation :

Ph.D., Electrical Engineering (subject minor in Physics), June 1978
California Institute of Technology, Pasadena, California 91125
Thesis Title: "Electromagnetic Wave Propagation in Almost Periodic Media"
Thesis Adviser: Dr. Charles H. Papas
M.S., Electrical Engineering, June 1974
California Institute of Technology, Pasadena, California 91125
B.S., Electrical Engineering, June 1973
University of Texas at El Paso, El Paso, Texas 79999

Scholarships and Honors :

Fulbright Specialist Residence at Indian Institute of Technology (IIT) Mandi in May and June of 2020
Fulbright Specialist Roster November 15, 2019 - November 15, 2022
Royal Norwegian Council for Scientific and Industrial Research Postdoctoral Fellowship, 1980-1982
National Academy of Sciences USSR Exchange Program Participant, 1979-1980
Honorable mention for Best Paper Award, 1979, from IEEE Antennas and Propagation Society
California Institute of Technology Fellowship Scholarship, 1973-1978
President, Student IEEE Branch, University of Texas at El Paso, 1972-1973
Weaver Company Tuition Scholarship, 1971-1973
National Science Foundation Undergraduate Research Program Fellowship, 1972
Tau Beta Pi Engineering Honor Society
Eta Kappa Nu Electrical Engineering Honor Society

Work Experience :

Associate Professor, Electrical and Computer Engineering, University of Colorado, 1986-present

Assistant Professor, Electrical and Computer Engineering, University of Colorado, 1984-1986

Staff Scientist, Elektronikklaboriet¹, Norges Tekniske Høgskole², 1982-1983

NTNF³ Research Fellow, Fysikalsk Elektronikk⁴, Norges Tekniske Høgskole⁵, 1980-1981

NAS⁶ Visiting Scientist, Byurakan Astrophysical Observatory, Byurakan, Armenian SSR⁷, 1979-1980

Research Associate, California Institute of Technology, 1978-1979

Staff Scientist Schellinger Research Laboratory, University of Texas, El Paso, 1973

NSF⁸ URP⁹ Fellow, Texas Technological University, Lubbock, Texas, Summer, 1972

Professional Activities :

President, Denver Chapter of IEEE Lasers and Electrooptic Society (LEOS) 1991-1993

Officer, Rocky Mountain Optical Society of America 1988-1992 (President in 1991)

Director at Large, Rocky Mountain Optical Society of America 1992-2003

Officer, Commission D URSI (National Radio Science Union) 1993-2002

Chair, Commission D URSI (National Radio Science Union) 1998-2002

General Chairman, Symposium on Optoelectronic Packaging Science (SOEPS 1992) (Estes Park), International Workshop on Optoelectronic Packaging Science (IWOPS '93) (Santa Barbara), IWOPS '94 (Breckenridge), International Workshop on Ferroelectric Integrated Optics (IWFIO'94) (Breckenridge), Conference on Defect Recognition and Image Processing in Semiconductors (DRIP VI 1995) (Estes Park, CO).

Organizing Committee Member of Integrated Photonics Research (IPR 1992) (New Orleans), IEEE Lasers and Electrooptics (LEOS 1992) (Boston), Conference on Defect Recognition and Image Processing in Semiconductors (DRIP V 1993) (Santander, Spain), LEOS 1993 (San Jose)(subcommittee chair), LEOS 1994 (Boston) (subcommittee chair), National Radio Science Meeting 1994 URSI 1994(Boulder), LEOS 1995 (San Francisco), National Radio Science Meeting 1995 (Boulder), National Radio Science Meeting 1996 (Boulder), DRIP VII 1997 (Templen, Germany), National Radio Science Meeting 1998 (Boulder), National Radio Science Meeting 1999 (Boulder), DRIP VIII 1999 (Narita, Japan), National Radio Science Meeting 2000 (Boulder), DRIP IX 2001 (Rimini, Italy), National Radio Science Meeting 2002 (Boulder), Member Technical Program Committee

¹Electronics Laboratory

²Norwegian Institute of Technology

³Norges Tekniske og Naturvitenskapelige Forskningsråd (Royal Norwegian Council for Scientific and Industrial Research)

⁴Physical Electronics Department

⁵Norwegian Institute of Technology

⁶National Academy of Sciences

⁷Soviet Socialist Republic

⁸National Science Foundation

⁹Undergraduate Research Program

and International Advisory Committee of Photonics 2008 (Delhi, India), Member International Advisory Committee Photonics 2010 (Guwahati, India), Member Technical Program Committee, Asia Pacific Communications (ACP) 2011 (Shanghai, China), Chair of the International Advisory Committee of the International Conference on Microwaves and Photonics (ICMAP) 2013 (Dhanbad, India), Member Technical Program Committee and co-chair Agriculture and Water Track, IEEE Global Humanitarian Technology Conference (GHTC) 2014 (San Jose, CA), Member Technical Program Committee and co-chair Energy Track, IEEE Global Humanitarian Technology Conference (GHTC) 2015 (Seattle, WA), Member International Advisory Committee of the International Conference on Microwaves and Photonics (ICMAP) 2015 (Dhanbad, India), Member International Advisory Committee of the IEEE Workshop on Recent Advances on Advances in Photonics (WRAP) 2015 (Bangalore, India), Member Organizing Committee the US/Morocco Workshop on Sensors and Wireless Networks for Smart Cities 2016 (Rabat, Morocco), Member Advisory Committee, International Optical Society of America (OSA) Network of Students (IONS) Dhanbad, India, September 7 - 10, 2016, Member Technical Program Committee and co-chair Bio-Medical Track, IEEE Global Humanitarian Technology Conference (GHTC) 2016 (Seattle, WA), Member of the Technical Program Committee of the Third International Workshop on Optical/Photonic Interconnects for Computing Systems (OPTICS) co-located with Design, Automation and Test in Europe (DATE'17), March 26 - 31, 2017, Lausanne, Switzerland. Member Technical Program Committee of International Conference of Smart Digital Environment, Rabat, Morocco, June, 2017, Member Technical Program Committee and co-chair Bio-Medical Track, IEEE Global Humanitarian Technology Conference (GHTC) 2017 (San Jose, CA), Member Technical Program Committee of IEEE Smart Cities, Bangkok, December, 2017, Member Advisory Committee for the Third International Conference on Microwave and Photonics (ICMAP2018), Indian Institute of Technology Dhanbad (Indian School of Mines), February 9 - 11, 2018.

Member of the Institute of Electrical and Electronic Engineers; Optical Society of America, Secretary, Commission D of URSI; Society of Photo Instrumental Engineers; and the American Association for the Advancement of Science. Member Technical Program Committee of International Conference of Smart Digital Environment, Rabat, Morocco, September, 2018.

Reviewer (at one time of another) for the National Science Foundation, the Cooperative Grants Program and Armenian-U. S. Bilateral Grants Program of the United States (US) Civilian Research Development Foundation (CRDF), the Associateship Program of the National Research Council and American Society for Engineering Education, Cambridge University Press, Taylor and Francis Publishing, Wiley Interscience of John Wiley and Sons, Antennas and Wireless Propagation Letters, Applied Optics, Applied Physics Letters, Canadian Journal of Physics, Electronics, Electronics Letters, Environmental Progress, IEEE Journal of Quantum Electronics, IEEE Microwave and Guided Wave Letters, IEEE Microwave and Wireless Components Letters, IEEE Microwave Magazine, IEEE Transactions on Communications, IEEE Transactions of Microwave Theory and Technique, IEEE Transactions on Antennas and Propagation, IEEE Transactions on Education, IEEE Transactions on Electromagnetic Compatibility, Journal of Applied Physics, Journal of Lightwave Technology, Journal of Luminescence, Journal

of Modern Optics, Journal of the Optical Society of America A and B, Liquid Crystals (Taylor Francis), Materials, Micro and Nano Letters, Optical Engineering, Optics Express, Optics Letters, Opto-Electronics Review, Photonics Technology Letters, Plos One, Proceedings of the IEE, Society of Photo Instrumental Engineers Optical Engineering and Symposium on Optical Fiber Measurements.

Paid Consultant (at one time or another) for Agilent, AMP, Ball Aerospace, Chorum, Corning, Digital Equipment Corporation, Hewlett-Packard, IBM, Lucent, Lumera, Photonport, Prima Luci, Research Development Laboratory (RDL), Rochester Photonics, and Vescent Photonics.

Contractor with (at one time or another) for Air Force Office of Scientific Research (AFOSR), AMP Inc., Army Research Office (ARO), Corning Inc., Digital Equipment Corporation, IBM Inc., IEEE, Lightwave Logic, Litton Data Systems, Lumera Inc., Martin Marietta, National Institute of Standards and Technology (NIST), National Collegiate Innovators and Inventors Association, National Science Foundation (NSF), Office of Naval Research (ONR) and Venture Well.

Extracurricular Activities : Hiking, swimming, Nordic skiing, tour orienteering, bicycling, music, travel, foreign languages, reading.

Publications

The publications include two sole authored books, an edited book, 10 chapters in books, 87 journal articles, 1 edited conference proceeding, 104 papers in peer reviewed conference proceedings, 104 talks in conferences and symposia and 12 technical reports.

Sole Authored Books (2 total) :

A. R. Mickelson, Guided Wave Optics (Van Nostrand Reinhold, 1993).

A. R. Mickelson, Physical Optics (Van Nostrand Reinhold, 1992).

Books Edited (1 total) :

A. R. Mickelson, N. R. Basavanahally, and Y.-C. Lee, Eds., Optoelectronic Packaging (Wiley Interscience, 1997).

Chapters in Books (10 total) :

A. R. Mickelson, “Fiber Optics: An Overview”, a chapter in the *Encyclopedia of Modern Optics*, second edition, Eds. Robert D. Guenther, Duncan G. Steel and Leopold Bayvel, Elsevier, Oxford, (March 1, 2018). ISBN: 9780128092835.

This article is a revision of an article of the same title that appeared in the *Encyclopedia of Modern Optics* Eds. Robert D. Guenther, Duncan G. Steel and Leopold Bayvel, Elsevier, Oxford (2004).

Alan Mickelson and Daniel Tsvankin, “Information Systems for Real-Time Water Quality Monitoring”, in *Encyclopedia of Sustainable Technology*, Ed. M. A. Abraham, Elsevier (2017), pages 105-114.

- Keyon Janani, Sakshi Singh, Moustafa Mohamed and Alan Mickelson, “Interconnects and Data System Throughput”, Chapter 4 in *Photonics Interconnects for Computing Systems: Understanding and Pushing Design Challenges*, pages 107-136, Eds. G. Nicolescu, S. Le Beux, M. Nikdast and J. Xu, The River Publisher’s Series in Optics and Photonics, River Publishers (2017). ISBN 978-87-93519-80-0.
- J. H. Lee, J. Xue, W. Park and A. Mickelson, “Surface Plasmon Polariton Waveguides in Nonlinear Optical Polymer”, in *Organic Thin Films for Photonics Applications* Eds. Warren Herman, Steven Flom and Stephen Foulger, , American Chemical Society, Washington DC, (2010), pages 51–66. Chapter DOI: 10.1021/bk-2010-1039.ch005.
- A. R. Mickelson, “Active Antennas”, a chapter in the *Wiley Encyclopedia of Electrical and Electronics Engineering*, Ed. John Webster, New York: John Wiley & Sons, Inc., (2007). This article is a revision of an article of the same title that appeared in the *Encyclopedia of RF and Microwave Engineering*, Ed. Kai Chang (New York: John Wiley & Sons, Inc., 2005) that is a revision of an article of the same title that appeared in the *Encyclopedia of Telecommunications*, Ed. John Proakis (New York: John Wiley and Sons, 2002) that is a revision of an article of the same title that appeared in the *Encyclopedia of Electrical and Electronics Engineering*, Ed. John G. Webster, John Wiley & Sons, Inc., New York (1999), Volume 1, pp. 190–209.
- Venkata N. P. Sivashankar, Edward M. McKenna and Alan R. Mickelson, “Photobleached Gratings in Electrooptic Waveguide Polymers” in *Guided Wave Optical Components and Devices* Ed. Bishnu Pal, Elsevier (2005), ISBN 0-12-088481-X.
- A. R. Mickelson, “Guided Wave Optics”, a chapter in the *Encyclopedia of Modern Optics* Eds. Robert D. Guenther, Duncan G. Steel and Leopold Bayvel, Elsevier, Oxford, (2004).
- A. R. Mickelson, “Modeling Of Optically Assisted Phased Array Radars,” Proceedings of the National Academy of Sciences: Large-Scale Structures in Acoustics and Electromagnetics, National Academy Press, (1996), pp 143- 161.
- A. R. Mickelson, “Coherence Effects in Guided Wave Optical Systems,” in Recent Advances in Electromagnetic Theory, Eds. H. N. Kritikos and D.L. Jaggard, Springer-Verlag, (1990), pp. 299-318.
- A. R. Mickelson, “Backscattering in Optical Fibers,” in *Optical Waveguide Sciences*, Eds. H. Hung-chia and A. W. Snyder, Martinus Nijhoff Publishers, (1983).

Journal Publications (87 total) :

1. Suzanna Brown and Alan Mickelson, Why Some Well-planned and Community-based ICTD Interventions Fail, *Information Technologies and International Development* 15, 49-61, (2019)
2. Vishnu Priye, Nishit Malviya and Alan Mickelson, Analytical Predictions for Nonlinear Processes in Silicon Slot Waveguides, *Journal of Computational Electronics* 12-03-2018, Issue 2/2018.
3. Suzana Brown and Alan Mickelson, A Decision Framework for Choosing Telecommunication Technologies in Limited-Resource Settings, *Future Internet* 10,8 (2018) 14 pages. doi:10.3390/fi10010008.

4. Alan Mickelson and Daniel Tsvankin, Water Quality Monitoring for Coupled Systems, *Environmental Progress & Sustainable Energy*, article ID12789 (2017), DOI: 10.1002/ep.12789.
5. Suzana Brown and Alan Mickelson, Smart Phones as a Viable Data Collection Tool in Low-Resource Settings: Case Study of Rwandan Community Health Workers, *Neuroscience and Biomedical Engineering* 4(2), 132 - 139 (2016).
6. Maithem Salih, Keyon Janani, Xi Chen, Eric Jacobson, Sarita Gautam and Alan Mickelson, Losses of Slot Mode Devices, *Journal of Lightwave Technology* 34(16), 3901 - 3907 (2016)
7. Ziqian Dong, Fang Li, Babak Beheshti, Alan Mickelson, Marta Panera and Nada Anid, Autonomous real-time water quality sensing as an alternative to conventional monitoring to improve the detection of food, energy, and water indicators, *Journal of Environmental Studies and Sciences* 6(1), 200 - 207 (March, 2016).
8. Moustafa Mohamed, Zheng Li, Xi Chen, Li Shang and Alan R. Mickelson, Reliability-Aware Design Flow for Silicon Photonics On-Chip Interconnect, *IEEE Transactions on Very Large Scale Integration* 22(8), 1763-1776 (August, 2014).
9. Xi Chen, Zheng Li, Moustafa Mohamed, Li Shang and Alan R. Mickelson, Parameter Extraction from Fabricated Silicon Photonic Devices, *Applied Optics* 53(7), 1396-1405 (March 1, 2014).
10. Xi Chen, Moustafa Mohamed, Zheng Li, Li Shang and Alan R. Mickelson, Process Variation in Silicon Photonic Devices, *Applied Optics* 52(31), 7638-7647 (November 2013).
11. Zheng Li, Moustafa Mohamed, Xi Chen, Eric Dudley, Ke Meng, Li Shang, Alan Mickelson, Russel Joseph, Manish Vachharajani, Brian Schwartz and Yihe Sun, Reliability Modeling and Management of Nanophotonic On-chip Networks, *IEEE transactions on Very Large Scale Integration (VLSI) Systems* 20(1), 98-111 (January, 2012).
12. Hongyu Zhou, Xi Chen, David Espinoza, Alan Mickelson and Dejan Filipović, Nanoscale Optical Dielectric Rod Antenna for On-chip Interconnecting Networks, *IEEE Transactions on Microwave Theory and Techniques* 59(10), 2624 - 2632 (October, 2011).
13. Zheng Li, Moustafa Mohamed, Xi Chen, Hongyu Zhou, Li Shang, Alan Mickelson and Manish Vachharajani, Iris: A Hybrid Nanophotonic Network Design for High Performance and Low-Power On-chip Communication, *ACM Journal of Emerging Technologies in Computing Systems* 7(2) Article 8 (June 2011), 22 pages.
14. David Espinoza, Xi Chen, Moustafa Mohamed, Hongyu Zhou, Eric Dudley, Wounjhang Park, Dejan Filipovic, Alan Mickelson, "Nanometric Polymer Coatings for Silicon Insulator Circuits", *SPIE Select Proceedings from PHOTONICS 2010 Conference (SPIE11)*, Proc. SPIE 8173, 81730H (2010).
15. Hongyu Zhou, Zheng Li, Li Shang, Alan Mickelson and Dejan S. Filipović, "On-Chip Wireless Optical Broadcast Interconnection Network", *Journal of Lightwave Technology* 28 (24), 3569-3577 (December, 2010).
16. Zheng Li, Moustafa Mohamed, Hongyu Zhou, Li Shang, Alan Mickelson, Dejan Filipović, Manish Vachharajani, Xi Chen, Won Park and Yihe Sun, "Global On-Chip Coordination at Light speed", *IEEE Design & Test of Computers* 27 (4), 54-67 (July/Aug, 2010).

17. Richard Franzl, Deniz Gurkan, Driss Benhaddou and Alan Mickelson, "E-Learning Laboratories for Optical Circuits: Separation of Imperfections in Technology and Teaching Methodologies," *The International Journal of Modern Engineering*, 8(2), 11-18 (Spring/Summer, 2008).
18. D. Gurkan, A. Mickelson and D. Benhaddou, "Remote Laboratories for Optical Circuits," *IEEE Transactions on Education* 51(1), 54-60 (February, 2008).
19. Edward M. McKenna, Andy S. Lin, Alan R. Mickelson, Raluca Dinu and Dan Jin, "Comparison of r_{33} values for AJ404 Films Prepared with Parallel Plate and Corona Poling," *JOSA B* 24(11), 2888-2892 (November, 2007).
20. Edward McKenna and Alan Mickelson, "Slow Light Structures in Dye-Doped Polymers", *Applied Optics* 46, 20, 4407-4412 (July, 2007).
21. Prarie Neeley Robinson and Alan R. Mickelson, "Early Diagnosis of Oral Cavity Cancers", *Otolaryngologic Clinics of North America* 39, 2, 295-306 (April, 2006).
22. Ed McKenna, Juizhi Xue, Regis Fan, Lou Bintz, Raluca Dinu and Alan Mickelson, "Wavelength Dependence of Irreversible Photobleaching of Dye-Doped Polymer Waveguide Materials", *Applied Optics* 44 (15), 3063-3068 (May, 2005).
23. Ed McKenna, Juizhi Xue, Angelo Verdoni, Mike Yetzbacher, Regis Fan, and Alan Mickelson, "Kinetic Model of Irreversible Photobleaching of Dye-Doped Polymer Waveguide Materials", *Journ. Optical Soc. Am. B* 21, 7, 1294-1301 (July, 2004).
24. D. Tomić and A. R. Mickelson, "Photobleaching for Optical Waveguide Formation in a Guest-Host Polyimide," *Applied Optics* 38, 3893 - 3903 (June, 1999).
25. K. Y. Chen, P. D. Biernacki, A. Lahrichi, and A. Mickelson, "Analysis of an Experimental Technique for Determining Van der Pol Parameters of a Transistor Oscillator," *IEEE Transactions on Microwave Theory and Techniques* MTT-46:7, 914-922 (July, 1998).
26. S. Lin, W. Feng, J. C. Powelson, R. J. Feuerstein, L. J. Bintz, D. Tomić, and A. R. Mickelson, "Scattering-Induced Crosstalk in Active Directional Couplers," *IEEE Journal of Lightwave Technology* 14:9, 2012-2025 (September 1996). See also *Guided Wave Optics Laboratory (GWOL) Report #71* (February, 1996).
27. K. Y. Chen, P. D. Biernacki, S. Buchheit, and A. R. Mickelson, "Noninvasive Experimental Determination of Charge and Voltage Distributions on an Active Surface," *IEEE Journal of Microwave Theory and Techniques* MTT-44: 7, 1000-1009 (July 1996). See also *Guided Wave Optics Laboratory (GWOL) Report #59* (April, 1994).
28. R. J. Feuerstein, W. Feng, J. C. Powelson, S. Lin, L. Bintz, and A. R. Mickelson, "Equivalence of Voltage Bias and Geometric Waveguide Design in Directional Couplers," *Applied Physics Letters* 68:20, 2775-2777 (May 13, 1996). See also *Guided Wave Optics Laboratory (GWOL) Report #69* (January 1996).
29. S. Lin, R. J. Feuerstein, and A. R. Mickelson, "A Study of Neodymium-Chelate-Doped Optical Polymer Waveguides," *Journal of Applied Physics* 79:6, 2868-2874 (March 15, 1996). See also *Guided Wave Optics (GWOL) Report #70* (August, 1995).
30. P. D. Biernacki, H. Lee, and A. R. Mickelson, "Evaluation of Defect-Related Diffusion in Semiconductors by Electrooptical Sampling," *Special Issue on Applied Diagnostics of Semiconductors of the IEEE Journal of Selected Topics in Quantum Electronics* QE-1: 4, 1037-1046 (December, 1995). See also *Guided Wave Optics Laboratory (GWOL) Report #65*, February, 1995).

31. W. Feng, S. Lin, R. B. Hooker, and A. R. Mickelson, "Study of UV-Bleached Channel-Waveguide Performance in Nonlinear Optical Polymer Films," *Applied Optics* 34:30, 6885-6891 (October 20, 1995). See also Guided Wave Optics Laboratory (GWOL) Report #63 (October, 1994).
32. J. Ma, S. Lin, W. Feng, R. J. Feuerstein, B. Hooker, and A. R. Mickelson, "Modeling Photobleached Optical Polymer Waveguides," *Applied Optics* 34:24, 5352-5360 (August 20, 1995).
33. S. L. Kwiatkowski and A. R. Mickelson, "Nearly Cut-off Modes Caused by Diffusion in Lithium Niobate," *Journal of Applied Physics* 76:10, 5877-5885 (November 15, 1994). See also Guided Wave Optics Laboratory (GWOL) Report #57 (March, 1994).
34. A. R. Mickelson, "Polymers Make the OEIC Connection," *IEEE Circuits and Devices* 10:6, 8-13 (November 1994).
35. J. C. Chon and A. R. Mickelson, "Fabrication and Characterization of a Third-Order Nonlinear Organic-Polymer Composite Glass Waveguide: A Self-Phase Modulator," *Applied Optics* 33:30, 6935-6941 (October 20, 1994).
36. P. S. Weitzman, J. M. Dunn, and A. R. Mickelson, "Approximate Calculation of Transmission Line Parameters and Field Distributions of Coplanar Electrodes in the Presence of a Buffer Layer", *Electromagnetics* 14, 119-135 (March, 1994).
37. J. C. Chon, W. Feng, and A. R. Mickelson, "Photorefractive Damage Thresholds in Ti:LiNbO₃ Channel Waveguides," *Applied Optics* 32:36, 7572-7580 (December 20, 1993).
38. I. Januar and A. R. Mickelson, "Characteristics of S-Shaped Waveguide Structures by the Annealed Proton Exchange Process in LiNbO₃," *IEEE Journal of Lightwave Technology* LT-11, 2044-2051 (December, 1993).
39. M. J. Yadlowsky and A. R. Mickelson, "Distributed Loss and Mode Coupling and Their Effect on Time-Dependent Propagation in Multimode Fibers," *Applied Optics* 32:33, 6664-6677 (November 20, 1993).
40. S. Yang, M. J. Yadlowsky, D. R. Hjelme, and A. R. Mickelson, "Interlaboratory Comparison of Mode Transition Matrices," *Applied Optics* 32:30, 5997-6005 (October 20, 1993).
41. M. R. Surette, D. R. Hjelme, and A. R. Mickelson, "An Optically Driven Phased Array Antenna Utilizing Heterodyne Techniques," *IEEE Journal of Lightwave Technology* JLT-11: 9, 1500-1509 (September, 1993).
42. V. Radišić, D. Hjelme, A. Horrigan, Z. Popović, and A. Mickelson, "Experimentally Verifiable Modeling of Coplanar Waveguide Discontinuities," *Special Issue on Modeling and Design of Coplanar Monolithic Microwave and Millimeter-Wave Integrated Circuits*, *IEEE Transactions on Microwave Theory and Techniques* MTT-41, 1524-1533 (September, 1993).
43. D. R. Hjelme, M. J. Yadlowsky, and A. R. Mickelson, "Two-Dimensional Mapping of Microwave Potential on MMICs Using Electrooptic Sampling," *IEEE Transactions on Microwave Theory and Techniques* MTT-41: 6/7, 1149-1158 (June/July, 1993).
44. M. R. Surette, D. R. Hjelme, R. Ellingsen, and A. R. Mickelson, "Effects of Noise on Transients of Injection Locked Semiconductor Lasers," *IEEE Journal of Quantum Electronics* QE-29: 4, 1046-1063 (April, 1993).

45. I. Januar and A. R. Mickelson, "Dual Wavelength ($\lambda = 1300 - 1650$ nm) Directional Coupler Multiplexer-Demultiplexer by the Annealed-Proton-Exchange Process in LiNbO₃," *Optics Letters* 18:6, 417-419 (March 15, 1993).
46. W. Charczenko, I. P. Januar, and A. R. Mickelson, "Modelling of Proton-Exchanged and Annealed Channel Waveguides and Directional Couplers," *Journal of Applied Physics* 73, 3139-3148 (1993).
47. S. Yang and A. R. Mickelson, "Coupling Mechanisms and Transfer Functions of Optical Fiber Devices" *Applied Optics* 31:36, 7587-7596 (December 20, 1992).
48. D. R. Hjelme and A. R. Mickelson, "Voltage Calibration of the Direct Electrooptic Sampling Technique," *IEEE Transactions on Microwave Theory and Techniques* MTT-40, 1941-1950 (October, 1992).
49. P. J. Matthews, A. R. Mickelson, and S. W. Novak, "Properties of Proton Exchange Waveguides in Lithium Tantalate," *Journal of Applied Physics* 72:7, 2562-2574 (October 1, 1992).
50. I. Januar, R. J. Feuerstein, A. R. Mickelson, and J. R. Sauer, "Wavelength Sensitivity in Directional Couplers," *Journal of Lightwave Technology* LT-10:9, 1202-1209 (September, 1992).
51. M. J. Yadlowsky, D. R. Hjelme, and A. R. Mickelson, "Power Coupling and Time-Dependent Radiative Transfer in Guided-Wave Systems," *Journal of the Optical Society of America* A9: 8, 1306-1312 (August, 1992).
52. D. R. Hjelme and A. R. Mickelson, "Theory of Timing Jitter in Actively Mode-Locked Lasers," *IEEE Journal of Quantum Electronics* QE-28: 6 1594-1606 (June, 1992).
53. P. J. Matthews and A. R. Mickelson, "Instabilities in Annealed Proton Exchange Waveguides in Lithium Tantalate," *Journal of Applied Physics* 71:11, 5310-5317 (June 1, 1992).
54. P. J. Matthews and A. R. Mickelson, "Analysis of an Integrated Optical Coherent Receiver with Optical State of Polarization Control," *Fiber and Integrated Optics* 10, 137-165 (December, 1991).
55. M. J. Yadlowsky and A. R. Mickelson, "Time-Dependent Radiative Transfer in Inhomogeneous and Dispersive Media: Application to Multimode Fibers," *Journal of the Optical Society of America* A8: 6, 967-975 (June, 1991).
56. D. R. Hjelme, A. R. Mickelson, and R. G. Beausoleil, "Semiconductor Laser Stabilization by External Optical Feedback," *IEEE Journal of Quantum Electronics* QE-27: 3, 352-372 (March, 1991).
57. W. Charczenko, P. S. Weitzman, H. Klotz, M. Surette, J. M. Dunn, and A. R. Mickelson, "Characterization and Simulation of Proton Exchanged Integrated Optical Modulators with Various Dielectric Buffer Layers," *Journal of Lightwave Technology* LT-9, 92-100 (January, 1991).
58. S. Yang, D. R. Hjelme, I. P. Januar, I. P. Vayshenker, and A. R. Mickelson, "A Transfer Function Approach to the Experimental Determination of Mode Transfer Matrices," *Applied Optics* 29, 3166-3175 (July 20, 1990).
59. S. T. Vohra, A. R. Mickelson, and S. E. Asher, "Diffusion Characteristics and Waveguiding Properties of Proton Exchanged and Annealed LiNbO₃ Channel Waveguides," *Journal of Applied Physics* 66, 5161-5174 (December, 1989).

60. S. Yang, I. P. Vayshenker, D. R. Hjelme, and A. R. Mickelson, "Transfer Function Analysis of Measured Transfer Matrices," *Applied Optics* 28:15, 3148-3175 (August 1, 1989).
61. D. R. Hjelme and A. R. Mickelson, "Gain Nonlinearities due to Carrier Density Dependent Dispersion in Semiconductor Lasers," *IEEE Journal of Quantum Electronics* QE-25, 1625-1631 (July, 1989).
62. W. Charczenko and A. R. Mickelson, "Symmetric and Asymmetric Perturbations of the Index of Refraction in Three-Waveguide Optical Planar Couplers," *Journal of the Optical Society of America* 6, 202-212 (February, 1989).
63. A. J. Weierholt, S. Neegard, and A. R. Mickelson, "Eigenmode Analysis of Optical Switches in LiNbO₃: Theory and Experiments," *IEEE Journal of Quantum Electronics* QE-24: 12, 2477-2490 (December 1988). See also ELAB report STF44 A88070 (May, 1988).
64. S. T. Vohra and A. R. Mickelson, "The Effects of Finite Melt Volume on Proton Exchanged Lithium Niobate," *Journal of Lightwave Technology* LT-6, 1848-1853 (December, 1988).
65. A. J. Weierholt, A. R. Mickelson, and S. Neegard, "Eigenmode Analysis of Symmetric Parallel Waveguide Couplers," *IEEE Journal of Quantum Electronics* QE-23: 10, 1689-1700 (October, 1987). See also ELAB report STF44 A86114 (August, 1986).
66. D. R. Hjelme and A. R. Mickelson, "On the Theory of External Cavity Operated Single-Mode Semiconductor Lasers," *IEEE Journal of Quantum Electronics* QE-23: 6, 1000-1004 (June, 1987).
67. A. R. Mickelson, O. Klevhus, and M. Eriksrud, "Backscatter Readout from Serial Microbending Sensors," *Journal of Lightwave Technology* LT-2: 5, 700-709 (October, 1984).
68. A. R. Mickelson, M. Eriksrud, S. Aamlid, and N. Ryen, "Role of the Fusion Splice in the Concatenation Problem," *Journal of Lightwave Technology* LT-2: 2, 126-138 (April, 1984). See also ELAB report STF44 A83172 (September, 1983).
69. M. Eriksrud, A. R. Mickelson, and S. Lauritzen, "Backscattering Signatures from Optical Fibers with Differential Mode Attenuation," *Journal of Lightwave Technology* LT-2: 2, 139-145 (April, 1984). See also ELAB report STF44 A83167 (August, 1983).
70. D. R. Hjelme and A. R. Mickelson, "Microbending and Modal Noise," *Applied Optics* 22, 3874-3879 (December, 1983).
71. M. Eriksrud, A. R. Mickelson, and N. Ryen, "Length Dependence of Optical Fibre Bandwidth," *Electronic Letters* 19:23, 994-996 (November 10, 1983). See also ELAB report STF44 A83185 (November, 1983).
72. A. R. Mickelson and A. Weierholt, "Modal Noise-Limited Signal-to-Noise Ratios in Multimode Optical Fibers," *Applied Optics* 22:19, 3084-3089 (October 1, 1983). See also ELAB report STF44 82211 (October 1982).
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- A. R. Mickelson, Ed., Defect Recognition and Image Processing in Semiconductors 1995, Institute of Physics Conference Series #149 (IOP Publishing, 1996).

Papers in Peer Reviewed Conference Proceedings (104 total) :

1. Jiashu Yang, Janelle Isenhardt, Shultz Augustus Hartgrove, Rajan Kapur and Alan Mickelson, "Assessment of Solar Aided Agriculture in Rwanda", Global Humanitarian Technology Conference, 2020 IEEE, Seattle (October 29 - November 1, 2020.)
2. Shultz Augustus Hartgrove and Alan Mickelson, "University of Colorado at Boulder WiLDNet Testbed", Global Humanitarian Technology Conference, 2020 IEEE, Seattle (October 29 - November 1, 2020.)
3. Ruben Vargas, Bennett Miller, Gabriel Anhalzer, Mohammed Al Hasani, Heinz Boehmer Fiehn, Jiashu Yang, Soham Tamhane and Alan Mickelson, "Smart Agriculture in Uganda", Global Humanitarian Technology Conference, 2019 IEEE, Seattle (October 18 - 21, 2019.)
4. Janelle Isenhardt, Erika Ervin, Jaishu Yang, Jacob Moss and Alan Mickelson, "Assessing a Refugee Camp in Mayukwayukwa Zambia", Global Humanitarian Technology Conference, 2019 IEEE, Seattle (October 18 - 21, 2019.)
5. Ruben Vargas, Bennett Miller, Gabriel Anhalzer, Karthik Kulkarni and Alan Mickelson, "Evaluating Progress of a Social Progress of a Social Venture in Wakiso District Uganda", Global Humanitarian Technology Conference, 2019 IEEE, Seattle (October 18 - 21, 2019.)
6. Bennett Miller, Heinz Boehm Fiehn, Arturo Freydidg Avila. Kaitlin Mazotti, Richard Wallace Kenyon. Lewis Schiebel and Alan Mickelson, "Smart Agriculture Based on Deep Learning", International Conference on Smart Digital Environment (ICSDE18), Rabat, Morocco (October 18 - 21, 2018).
7. Arturo Freydidg Avila, Richard Wallace Kenyon and Alan Mickelson, "Green Energy Distribution in Southwestern Haiti", Global Humanitarian Technology Conference (GHTC), 2018 IEEE, San Jose (October 18 - 21, 2018).
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9. Alan Mickelson, "Silicon Photonics for Microwave Photonics, Invited Talk at International Conference on Microwaves and Photonics, ICMAP -18, Dhanbad, India (February 9th - 11th, 2018).
10. Alan Mickelson, "Silicon Photonics in Data Communication", Keynote Address at Recent Advances in Engineering, Technology and Computer Science, (RAETCS - 18), Allahabad, India (February 6 - 8, 2018).
11. Heinz Boehmer, Mark Hinkle, Richard Wallace Kenyon and Alan Mickelson, "Management of Distributed Electrical Storage in Wide Area Communication Systems", The Fifteenth IEEE International Conference on Smart City, IEEE SmartCity 2017, Bangkok, Thailand (December 18 - 20 (2017)).

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13. Wallace Kenyon, Bennett Miller, Alan Mickelson and Dan Wessner “Communication Networking for Education in the Western Highlands of Papua New Guinea”, Global Humanitarian Technology Conference (GHTC), 2017 IEEE, San Jose (October 19 - 22, 2017).
14. Arturo Freydg Avila, Rick Wallace Kenyon and Alan Mickelson “Green Energy Distribution in Haiti”, Global Humanitarian Technology Conference (GHTC), 2017 IEEE, San Jose (October 19 - 22, 2017).
15. Alan Mickelson, “Water Quality Sensors for Smart Cities”, International Conference on Smart Digital Environment (ICSDE2017) Rabat, Morocco, July 21 - 23, 2017 (Invited)
16. Alan Mickelson and Martin Murillo, “The Balsapuerto Network: A Case Study in Jungle Internet”, Global Humanitarian Technology Conference (GHTC), 2016 IEEE, Seattle (October 13 - 16, 2016).
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22. Alan Mickelson, “Silicon Photonic Slot Guides for Nonlinear Optics” International Conference on Microwaves and Photonics, ICMAP 2013, 13-15 December, 2013, Dhanbad, India (Invited).
23. Vishnu Priye and Alan Mickelson, “Multiple Scales Analysis of Low Index Subwavelength Slot Waveguide Electrooptic Modulator”, International Conference on Microwaves and Photonics, ICMAP 2013, 13-15 December, 2013, Dhanbad, India.
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31. Alan Mickelson, "Silicon Nanophotonic Broadcast Interconnections", Photonics 10, Guwahati, India (December 11 - 15, 2010). Invited.
32. David Espinoza, Xi Chen, Hongyu Zhou, Dejan Filipović and Alan Mickelson, "Nanophotonic Antennas Propagation through a Polymer Medium", Photonics 10, Guwahati, India (December 11 - 15, 2010).
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63. A. R. Mickelson, "Electronic and Optoelectronic Polymers," Invited Talk at the American Society of Mechanical Engineers (ASME) Interpack '95 Maui (March 1995).
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67. A. R. Mickelson, "Modeling of Optically 'Assisted' Phased Array Radar," The Board of Mathematical Sciences of the National Research Council Symposium On Large Scale Structures in Acoustics and Electromagnetics, Washington, DC (September 26-27, 1994).
68. A. R. Mickelson, "Electro-Optic Polymers for Circuit Interconnect Structures," ISHM Advanced Technology Workshop on Optoelectronics, Aspen (April 15-17, 1994).
69. S. L. Kwiatkowski, D. R. Hjelme, K. H. Wagner and A. R. Mickelson, "Polarization Coupling in Y-Cut Titanium In-Diffused Lithium Niobate Planar Waveguides," IEEE Lasers and Electro-Optics Society, San Jose (November 15-18, 1993).
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77. K. Y. Chen, A. R. Mickelson and Z. B. Popović, "A Physical Model for Grid Oscillators," National Radio Science Meeting, URSI, Chicago (July 1992).

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83. Walter Charczenko, Marc Surette, Richard Fox, Sandeep Vohra, Alan Mickelson and Sally Asher, "Comparison of Numerical Simulations to Experimental Measurements of Proton Exchanged and Annealed Channel Waveguides and Directional Couplers in LiNbO₃," Integrated Photonics Research Conference, Monterey, California (April 1991).
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85. R. T. Weverka, K. Wagner, A. R. Mickelson and R. Roth, "Lossless Acousto-optic Permutation Switch," OSA Annual Meeting, Boston, MA (Nov. 1990).
86. M. Surette and A. R. Mickelson, "Coherent Guided Wave Implementations for Photonic Control of Phased Array Radar," OSA Annual Meeting, Boston, Mass., (Nov. 1990).
87. W. Charczenko, P. S. Weitzman, J. M. Dunn and A. R. Mickelson, "Characterization and Simulation of Proton Exchanged Integrated Optical Modulators with Various Dielectric Buffer Layers," OSA Annual Meeting, Boston, Mass., (November 1990).
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89. M. Yadlowsky and A. R. Mickelson, "A Single Launch Technique to Determine Loss and Dispersion in Multimode Fiber Systems," Symposium on Optical Fiber Measurements, Boulder, CO (Sept. 1990).
90. S. Yang and A. R. Mickelson, "The MTF for Coupling Components," Symposium on Optical Fiber Measurements, Boulder, CO (Sept. 1990).
91. W. Charczenko, D. R. Hjelme and A. R. Mickelson, "Comparison of Time and Frequency Domain Measurement Methods for High Speed Optical Modulators," Symposium on Optical Fiber Measurements, Boulder, CO (Sept. 1990).
92. D. R. Hjelme, A. R. Mickelson, R. G. Beausoleil, J. A. McGarvey, and R. L. Haggman, "Semiconductor Laser Stabilization by External Optical Feedback," Proceedings of Conference on Lasers and Electro-Optics (CLEO), Baltimore (April 1989).
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Conference and Symposia Talks (104 total) :

1. Alan Mickelson, "ITCD in IEEE Smart Village", in "Connect the Unconnected by Broadband Technologies" Panel Discussion at IEEE International Microwave Symposium (IMS2020), San Diego (August 6, 2020).
2. Alan Mickelson, "Social Return on Investment Pilot", Joint Meeting of IEEE Humanitarian Activities Committee and IEEE Smart Village, Colocated at IEEE Power Electronics Society General Meeting, Atlanta (August 4th, 2019).
3. Alan Mickelson, "Silicon Photonic Modulation for High Performance Computing (HPC)", Workshop on Silicon Photonics for High Performance Computing, Fort Collins, Colorado, May 16 - 17, 2018.
4. Alan Mickelson, "Crosstalk in Petabyte/s Interconnection", Fourth International Workshop on Optical/Photonic Interconnects for Computing Systems held in Conjunction with Design, Automation & Test in Europe (DATE'18) Conference, Dresden, Germany, March 23, 2018 (Invited).
5. Alan Mickelson, "Silicon Photonics and Data Communication", Invited talk at Indian Institute of Technology, Mandi India (February 15th 2018).
6. Alan Mickelson, "Optics and Disaggregation", Invited Lecture at the Universidad Mayor de San Andrés (UMSA), August , 2017 (Invited).
7. Alan Mickelson, "Sustainable Development", Invited Talk for the Chancellor of the University of Technology of Papua New Guinea, Lae, Papua New Guinea (May 9, 2017).
8. Alan Mickelson, "Optics and Disaggregation", Invited Lecture at the Hong Kong University of Science and Technology (HKUST), April 25, 2017 (Invited).
9. Alan Mickelson, "Sustainable Development", Invited Talk at the Stony Brook Campus of the State University of New York in Incheon, Korea (April 19, 2017).
10. Alan Mickelson, "Optics and Disaggregation", Third International Workshop on Optical/Photonic Interconnects for Computing Systems held in Conjunction with Design, Automation & Test in Europe (DATE'17) Conference, Lausanne, Switzerland, March 31, 2017 (Invited).
11. Alan Mickelson, "Experiences at IIT Mandi to Relate on the Fifth Founder's Day of IIT Mandi", Keynote Address at Founder's Day, IIT Mandi, February 24th, 2017.
12. Alan Mickelson, "Interconnects and Data System Throughput", Second International Workshop on Optical/Photonic Interconnects for Computing Systems held in Conjunction with Design, Automation & Test in Europe (DATE'16) Conference, Dresden, Germany, March 18, 2016 (Invited).
13. Alan Mickelson, "Sustainable Development", Invited Lecture at IIT Mandi, Mandi, India (February 23, 2017).
14. Alan Mickelson, "Wireless Sensor Networks for the Coupled Food, Energy and Water (FEW) Systems of Smart Cities", US/Morocco Workshop on Sensors and Wireless Networks for Smart Cities, Rabat, Morocco, January 5 - 7, 2016 (Invited)
15. Alan Mickelson, "Autonomous Water Sensors for FEW Systems", Few Workshop: Food, Energy and Water Nexus in Sustainable Cities, Peking Universities Global Center, as a part of the Sustainable Megacities: Food, Energy and Water (FEW) and the Built Environment, Beijing, China, October 20-21 2015 (Invited)

16. Alan Mickelson, "Delay Tolerant Monitoring of Water Quality", Workshop: *Clean Quality Matters: Challenges and Research Perspectives Workshop*, Peking University's Global Center, Beijing, China, April 18, 2014 (Invited).
17. Alan Mickelson, Research Experiments on the Napo River 2009 - 2014, Carnegie Mellon University Rwanda, March 26, 2014.
18. Alan Mickelson, "Combating Process Variation in Silicon Photonics", Workshop on Recent Advances in Photonics, WRAP 2013, December 17-18, 2013, IIT Delhi, Delhi India (Invited).
19. Joanna Gordon, Nathan Canney, Daria Kotys-Schartz, Mike Hannigan, Alan Mickelson and Yoleine Gateau, "Hands-on Learning in a Haitian Sustainable Energy Course: Improved Attitudes", Fifth Annual Symposium on Stem Education, Boulder, Colorado, September 23, 2013.
20. Keyon Janani, Eric J. Jacobsen, Xi Chen, Moustafa Mohammed and Alan Mickelson, "Characterization of Polymer Coating in Nano-Scale Slot Waveguide", Material Research Day Poster Session, Boulder, Colorado, May 2, 2013.
21. Alan Mickelson, "Active Plasmonic Metamaterials", Triservice 6.1 Metamaterials Review, Virginia Beach VA (May 24-26, 2010).
22. Alan Mickelson, "Active Plasmonic Metamaterials", ONR 2010 Electromagnetic Signatures D&I Review, Applied Physics Laboratory University of Washington (April 14, 2010).
23. Alan Mickelson, "Green Engineering for a Global Society", Think Green Student Symposium, Nanjing University of Posts and Telecommunications (NUPT), Nanjing, China (April 9, 2010).
24. Alan Mickelson, "Green IT: A Perspective from One Who Works in Target Communities", Think Green: Energy, Education and Environmental Initiatives Forum 2010, Nanjing, China (April 7 - 9, 2010).
25. Alan Mickelson, "Silicon Nanophotonics", Optics Faculty, Tsinghua University, (April 6, 2010).
26. Alan Mickelson, "Active Plasmonic Devices", Optics Faculty, Tsinghua University, (April 6, 2010).
27. H. Zhou, A. Mickelson and D. Filipović, "Electromagnetic Modeling of Optical Antennas", 2009 IEEE International Symposium on Antennas and Propagation and the 2009 USNC/URSI National Radio Science Meeting, Charleston, South Carolina on 1-5 June 2009, paper 122-3.
28. Jin H. Lee, Jiuzhi Xue, Qi Wu, Won Park and Alan Mickelson, "Polymer-Based Active Plasmonic Devices", Fall 2008 American Chemical Society National Meeting and Exposition, Philadelphia (August 20, 2008).
29. Jin Lee, Qi Wu, Jiuzhi Xue, Won Park and Alan Mickelson, "Active Plasmonics", 2008 IEEE International Symposium on Antennas and Propagation and the 2008 USNC/URSI National Radio Science Meeting, *Memorial Session for Professor Charles Herach Pappas*, San Diego (July 8, 2008).

30. Jin H. Lee, Jiuzhe Xue, Won Park and Alan Mickelson, "Active Polymer-Based Surface Plasmon-Polariton Waveguides," Tenth International Conference on Organic Nonlinear Optics (ICONO10), Santa Fe (May 18, 2008- May 23, 2008).
31. A. R. Mickelson, Traveling Wave Detectors in MORPH Materials, at the Principal Investigator Meeting of Super Molecular Photonics II (MORPH II) meeting of DARPA MTO in Austin, TX (March 19, 2008).
32. Edward McKenna, Andy Lin and Alan Mickelson, "Characterization of Guested PMMA-DR1 (Binaries) as Transceiver Materials," Molecular Photonics Conference, Friday Harbor, WA (August 28-31, 2007).
33. A. R. Mickelson, Traveling Wave Detectors in MORPH Materials, at the Principal Investigator Meeting of Super Molecular Photonics II (MORPH II) meeting of DARPA MTO in Arlington, VA (June 19, 2007).
34. A. R. Mickelson, Traveling Wave Detectors in MORPH Materials, at the Principal Investigator Meeting of Super Molecular Photonics II (MORPH II) meeting of DARPA MTO in Chicago, Illinois (March 27, 2007).
35. A. R. Mickelson, Traveling Wave Detectors in MORPH Materials, at the Principal Investigator Meeting of Super Molecular Photonics II (MORPH II) meeting of DARPA MTO in Boston, MA (November 30, 2006).
36. A. R. Mickelson, Traveling Wave Detectors in MORPH Materials, at the Kick-Off Meeting of Super Molecular Photonics II (MORPH II) meeting of DARPA MTO in Seattle, Washington August 15, 2006.
37. Alan Mickelson, Andy Lin, Edward McKenna, Masoud Asadi-Zeyadabi, Ideen Taeb, Stan Swirhun and Arlen Meyers: "Optical Detection of Superficial Cancers," Fifth International International Conference on Laryngeal Cancer, Philadelphia, PA, March 2-3, 2006.
38. A. R. Mickelson, Enhancing Polymer Nonlinearity for Millimeter Wave Applications, at Super Molecular Photonics (MORPH) meeting of DARPA MTO in Arlington, VA December 12, 2005.
39. A. R. Mickelson, Multi-Spectral Techniques for the Early Detection of Cancer, Optical Detection of Cancer Conference, University of Colorado Denver and Health Sciences Center, October 6, 2006.
40. A. R. Mickelson, "Slow Light in Waveguides : A Brief Tutorial," Seminar on Recent Advances in Optics and Photonics at the Physics Department, Indian Institute of Technology, Delhi, December 21-22, 2004.
41. A. R. Mickelson, "Quantum Communications," Proceedings of the Miniseries on Electromagnetics, Pasadena (March 1998).
42. R. B. Hooker, R. Fan, D. Goodwill, N. Morozova, D. Tomić, A. Mickelson, and Y.-C. Lee, "Fiber Coupling Module Using Tapered Polymer Waveguides," Proceedings of the Society of Photographic and Instrumentation Engineers, San Jose (February 1997).
43. K. K. Wong, N. A. Sanford, B. Steiner, A. R. Mickelson, A. Roshko, C. Geosling, and L. Bintz, "Manufacturing Technology for Navigation Grade IFOGs-MIOC Task," Proc Joint Services Data Exchange Workshop, Orlando (November 1996).

44. D. J. Goodwill, R. S. Fan, D. Tomić, N. D. Morozova, R. B. Hooker, A. R. Mickelson, and Y.-C. Lee, "Laser-Array to Single-Mode-Fiber Coupling Module with Increased Tolerance Budget Using Polymer Waveguide Tapers," SPIE Proceedings 2844, "Photonics and Radio Frequency," B. M. Hendrickson, Ed. (August 1996).
45. A. R. Mickelson, "Rare Earth Integrated Optics," National Radio Science Meeting, URSI, Boulder (January 3-6, 1995).
46. A. R. Mickelson, "Rare Earth Doped Polymers," National Radio Science Meeting, URSI, Boulder (January 3-6, 1995).
47. J. Ma and A. R. Mickelson, "Optical Interconnects in VLSI Systems Using Polymer Waveguides and Switches," National Radio Science Meeting, URSI, Boulder (January 3-6, 1995).
48. R. Narayan and A. R. Mickelson, "Channel Waveguide Studies in Mg-Doped LiNbO₃," National Radio Science Meeting, URSI, Boulder (January 3-6, 1995).
49. P. Biernacki, H. Lee and A. R. Mickelson, "Optical Sampling for Determination of Material Characteristics," National Radio Science Meeting, URSI, Boulder (January 3-6, 1995).
50. S. Lin and A. R. Mickelson, "Nd-Chelate-Doped Polymer Waveguides for Optical Amplifiers," National Radio Science Meeting, URSI, Boulder (January 3-6, 1995).
51. D. Tomić, S. Lin, W. Feng, and A. R. Mickelson, "What Limits Passive Directional Coupler Crosstalk," National Radio Science Meeting, URSI, Boulder (January 3-6, 1995).
52. W. Feng, R. B. Hooker and A. R. Mickelson, "Polymeric Electrooptic Devices," National Radio Science Meeting, URSI, Boulder (January 3-6, 1995).
53. S. Kwiatkowski and A. R. Mickelson, "Unexpected Characteristics of Lithium Niobate Waveguides," International Workshop on Ferroelectric Integrated Optics, Breckenridge, CO (August 17-19, 1994).
54. R. Narayan and A. R. Mickelson, "Characterization of Mg-doped Lithium Niobate," International Workshop on Ferroelectric Integrated Optics, Breckenridge, CO (August 17-19, 1994).
55. D. Tomić and A. R. Mickelson, "What Limits Passive Directional Coupler Crosstalk," International Workshop on Ferroelectric Integrated Optics, Breckenridge, CO (August 17-19, 1994).
56. J. Ma, and A. R. Mickelson, "Optical Interconnects in Electronic Processing Systems Using Polymer Waveguides and Switches," International Workshop on Optoelectronic Packaging, Breckenridge, CO (August 15-17, 1994).
57. S. Lin, W. Feng, R. B. Hooker and A. R. Mickelson, "Polymeric Optical Devices for Optical Interconnects and Telecommunications," International Workshop on Optoelectronic Packaging, Breckenridge, CO (August 15-17, 1994).
58. S. Lin, W. Feng, R. B. Hooker and A. R. Mickelson, "UV Bleaching of Polymers and Polymeric Directional Couplers for Optical Interconnects" SPIE Conference Proceedings 2285, paper 56, San Diego (July 24-29, 1994).
59. A. R. Mickelson, "Heterodyne Phased Array," Workshop on Optically Controlled Phased Array Antenna Systems for Military Communications-on-the-Move, CECOM, Fort Monmouth, NJ (July 6, 1994).

60. K. Y. Chen, S. Buchheit, and A. R. Mickelson, "Evanescent Current Modes in Active Antenna," National Radio Science Meeting, URSI, Boulder (January 5-8, 1994).
61. K. Y. Chen and A. R. Mickelson, "Transistor Oscillators as Van Der Pol Oscillators," National Radio Science Meeting, URSI, Boulder (January 5-8, 1994).
62. S. J. Buchheit and A. R. Mickelson, "Electromagnetic Modeling of Active Circuits," International National Radio Science Meeting, URSI, Boulder (January 5-8, 1994).
63. S. M. Genco and A. R. Mickelson, "Optically Induced Effects in Microwave Mesfets: Experiments and Analysis," National Radio Science Meeting, URSI, Boulder (January 5-8, 1994).
64. M. Popović, S. L. Kwiatkowski, and A. R. Mickelson, "Characterization of X-Cut LiNbO₃ Planar Waveguides," National Radio Science Meeting, URSI, Boulder (January 5-8, 1994).
65. S. L. Kwiatkowski and A. R. Mickelson, "Effects of the Prism Waveguide Coupling Strength on Effective Index Measurement Accuracy," National Radio Science Meeting, URSI, Boulder (January 5-8, 1994).
66. P. Biernacki and A. R. Mickelson, "Optical Sampling for Determination of Material Characteristics," National Radio Science Meeting, URSI, Boulder (January 5-8, 1994).
67. W. Feng, S. Lin, H. B. Hooker, and A. R. Mickelson, "Propagation Loss of Polymeric Thin Film Optical Waveguides," National Radio Science Meeting, URSI, Boulder (January 5-8, 1994).
68. W. Feng, S. Lin, H. B. Hooker, and A. R. Mickelson, "Characterization of Polymeric Optical Channel Waveguides and Their Applications in High Speed Electro-Optic Devices," National Radio Science Meeting, URSI, Boulder (January 5-8, 1994).
69. J. Ma, S. Lin, W. Feng, and A. R. Mickelson, "Modeling Photobleached Optical Polymer Waveguides," National Radio Science Meeting, URSI, Boulder (January 5-8, 1994).
70. S. Lin, J. Ma, W. Feng, H. B. Hooker, and A. R. Mickelson, "UV Bleaching of NLO Polymers for Formation of Channel Waveguide," National Radio Science Meeting, URSI, Boulder (January 5-8, 1994).
71. L. E. Rohlev and A. R. Mickelson, "Microwave Characterization of Nonlinear Optical Polymers," National Radio Science Meeting, URSI, Boulder (January 5-8, 1994).
72. R. Narayan and A. R. Mickelson, "Analysis of Traveling Wave Electrodes in Integrated Optical Devices," National Radio Science Meeting, URSI, Boulder (January 5-8, 1994).
73. K. Y. Chen, P. Biernacki, Z. B. Popović, and A. R. Mickelson, "Current and Field Distribution Across a 25-HEMT Grid Oscillator," National Radio Science Meeting, URSI, Boulder (January 1993).
74. D. R. Hjelme, V. Radišić, Z. B. Popović, and A. R. Mickelson, "Experimentally Verifiable Modeling of Parasitics in Coplanar Waveguide," National Radio Science Meeting, URSI, Boulder (January 1993).
75. S. L. Kwiatkowski, D. R. Hjelme, and A. R. Mickelson, "Optical Waveguide Lenses for Integrated Optical Components," National Radio Science Meeting, URSI, Boulder (January 1993).

76. L. E. Primas, V. Jevremović, A. R. Mickelson, and Z. Popović, "Microwave Characterization of Polymeric Materials for Electro-Optic Devices," National Radio Science Meeting, URSI, Boulder (January 1993).
77. S. Lin, W. Feng, H. B. Hooker, Z. B. Popović, and A. R. Mickelson, "Polymeric Materials Processing and Optical Properties of High Speed Modulators," National Radio Science Meeting, URSI, Boulder (January 1993).
78. S. M. Genco, J. Buetow, Z. Popović, and A. Mickelson, "Enhanced SNR and Stability of Microwave MESFET Oscillators via Optically Injected Signals," National Radio Science Meeting, URSI, Boulder (January 1993).
79. M. R. Surette, D. R. Hjelme and A. R. Mickelson, "An Optically Driven Phased Array Antenna Utilizing Heterodyne Techniques," National Radio Science Meeting, URSI, Boulder (January 1992).
80. D. R. Hjelme, M. J. Yadlowsky and A. R. Mickelson, "De-embedding Substrate Variations from Electrooptic Sampling Measurements Made on Microwave/Millimeter-Wave Circuits," National Radio Science Meeting, URSI, Boulder (January 1992).
81. D. R. Hjelme, V. Radišić, A. R. Mickelson and Z. B. Popović, "Extraction of Electrical Parameters from Optical Sampling Measurements," National Radio Science Meeting, URSI, Boulder (January 1992).
82. L. E. Primas and A. R. Mickelson, "Characterization of Coplanar Waveguides with Various Dielectric Layers," National Radio Science Meeting, URSI, Boulder (January 1992).
83. M. J. Yadlowsky, D. R. Hjelme and A. R. Mickelson, "Power Coupling and Time Dependent Radiative Transfer in Guided Wave Systems," National Radio Science Meeting, URSI, Boulder (January 1992).
84. S. Yang and A. R. Mickelson, "Coupling Mechanisms and Transfer Functions for Optical Fiber Devices," National Radio Science Meeting, URSI, Boulder (January 1992).
85. R. J. Feuerstein, I. P. Januar, A. R. Mickelson and J. Sauer, "Proton Exchanged LiNbO₃ Integrated Optic Chip for Multi-Gbps Packet Switching Network," SPIE OE Fibers, Boston (September 1991).
86. R. J. Feurestein, I. Januar, A. Mickelson and J. A. Sauer, "Wavelength Dependence of Proton Exchanged LiNbO₃ Integrated Optic Directional Couplers from 1.5 - 1.65 μm Integrated Optical Circuits," SPIE Vol. 1583, 196-201 (1991).
87. S. Bundy, T. Mader, Z. Popović, R. Ellingsen, D. Hjelme, M. Surette, M. Yadlowsky and A. Mickelson, "Quasi-Optical MESFET VCO's," SPIE OE/Aerospace Sensing, Orlando, Florida (April 1991).
88. W. Charczenko, M. Surette, P. Matthews, and A. R. Mickelson, "Integrated Optical Butler Beam-forming Matrix for Phased Array Processing," Proceedings of SPIE, Los Angeles (January 1990).
89. P. Weitzman, J. M. Dunn, and A. R. Mickelson, "Calculation of Transmission Line Parameters and Electric Field Distribution of Coplanar Electrodes on Layered Dielectric Substrates," National Radio Science Meeting, URSI, Boulder, CO (January 1990).

90. A. R. Mickelson, I. P. Januar, P. Rusu, and J. R. Cary, "Observations of Quantum Separatrix Crossing in Optical Waveguides," National Radio Science Meeting, URSI, Boulder, CO (January 1990).
91. D. R. Hjelme, A. R. Mickelson, C. Howard, and J. M. Dunn, "Measurements of Parasitic Coupling in Microstrip Circuits Using Electro-optic Sampling," National Radio Science Meeting, URSI, Boulder, CO (January 1990).
92. P. J. Matthews, M. R. Surette, and A. R. Mickelson, "Optically Implemented Butler Matrices for Microwave Processing," National Radio Science Meeting, URSI, Boulder, CO (January 1990).
93. W. Charczenko, H. R. Klotz, and A. R. Mickelson, "Microwave Integrated Optical Transducer for Optical Readout of Patch Antennas," National Radio Science Meeting, URSI, Boulder, CO (January 1990).
94. A. R. Mickelson, "Why Uniformly Accelerated Charges Don't Radiate," National Radio Science Meeting, URSI, Boulder, CO (January 1990).
95. W. Charczenko, H. Klotz, P. Matthews, and A. R. Mickelson, "Integrated Optics for Micro-wave and Millimeter Wave Detection and Signal Processing," Proceedings of the SPIE, Boston (September 1989).
96. D. R. Hjelme, A. R. Mickelson, R. G. Beausoleil, J. A. McGarvey, and R. L. Hagman, "Semiconductor Laser Stabilization by External Optical Feedback," SPIE Conference Proceedings #1043, Laser Diode Technology and Applications (January 1989).
97. S. T. Vohra and A. R. Mickelson, "Optical Directional Couplers in Proton Exchanged LiNbO₃," National Radio Science Meeting, URSI, Boulder, Colorado (January 1989).
98. R. Fox, W. Charczenko, and A. R. Mickelson, "A Numerical Method for Determining Index Profiles from Near-Field Intensities of Optical Guided Wave Devices," National Radio Science Meeting, URSI, Boulder, Colorado (January 1989).
99. W. Charczenko, S. T. Vohra, and A. R. Mickelson, "Computer Analysis of Surface Mode Interaction in LiNbO₃ Integrated Optic Devices," National Radio Science Meeting, URSI, Boulder, Colorado (January 1989).
100. D. C. Chang and A. R. Mickelson, "Optically Controlled mmw Phased Arrays," Proceedings of SPIE Conference 789, Orlando, Florida (May 1987).
101. D. R. Hjelme and A. R. Mickelson, "Degradation of Received Signal Quality in Multimode Optical Fibers Excited by Coherent Sources," Norwegian Electrooptics Meeting, Vinstra, Norway (March 1983).
102. A. R. Mickelson and D. L. Jaggard, "Electromagnetic Wave Propagation in Almost Periodic Media," National Radio Science Meeting, URSI, Boulder, Colorado (November 1978).
103. D. L. Jaggard and A. R. Mickelson, "The Reflection of Electromagnetic Waves from Almost Periodic Structures," National Radio Science Meeting, URSI, Boulder, Colorado (November 1978).
104. D. L. Jaggard, A. R. Mickelson, and C. H. Papas, "Chirality in Electromagnetics," National Radio Science Meeting, Boulder, URSI, Colorado (November 1978).

Technical Reports (12 total) :

1. S. Kwiatkowski and A. R. Mickelson, "Perturbations on Effective Index of Refraction from Prism Coupling," Guided Wave Optics Laboratory (GWOL) Report #66 (February 1995).
2. S. L. Kwiatkowski, A. R. Mickelson, and D. R. Hjelme, "On-Axis Polarization Coupling in y-Cut Titanium In-Diffused Lithium Niobate Slab Waveguides," Guided Wave Optics Laboratory (GWOL) Report #64 (November 1994).
3. K. Y. Chen and A. R. Mickelson, "Analytic and Experimental Analysis of a Transistor Oscillator Under Large Signal Oscillation," Guided Wave Optics Laboratory Report #55 (March 1994).
4. A. R. Mickelson, "Some Comments on Nonlinear Guided Wave Optics," Guided Wave Optics Laboratory Report #54 (September 1993).
5. A. R. Mickelson, "MBE Electro-optics: ELAB's Options," ELAB Report STF44 A88058 (February 1988).
6. A. R. Mickelson, "A Commentary on the Application of Molecular Beam Epitaxy," ELAB Report STF44 A86110 (October 1986).
7. A. R. Mickelson and A. J. Weierholt, "Modeling of Bistable Optical Devices and Circuits," ELAB Report STF44 F85124 (August 1985).
8. A. R. Mickelson, "Information Processing with Optical Fiber/Optical Bistable Device Circuits," ELAB Report STF44 F84208 (October 1984).
9. A. R. Mickelson, D. R. Hjelme and N. Flaarønning, "Optiske Høyhastighets Systemer," ELAB Report STF44 A84127 (February 1984).
10. B. E. Helvik, N. Holte, S. J. Knapskog, A. R. Mickelson, A. Olaussen, and O. A. Seljelid, "Tjenesteintegert Regionalt Fiberoptisk Nett (RISFON) en Forstudie," ELAB Report STF44 A83194 (July 1984).
11. M. Eriksrud, A. R. Mickelson, S. Lauritzen, and N. Ryen, "Eksitasjonsbetingelsenes Innvirkning på Dempningen i Gradert-Indeks Fibre: En Eksperimentell Undersøkelse," ELAB Report STF44 A82188 (July 1982).
12. A. R. Mickelson, "Some Theoretical Remarks on Flare Stars," Caltech Antenna Laboratory Report #101 (May 1980).