

Todd G. Ulmer Publications and Conference Presentations

A. S. Fletcher, **T. G. Ulmer**, S. L. Bernstein, D. M. Boroson, D. O. Caplan, S. A. Hamilton, S. Michael, B. S. Robinson, and N. W. Spellmeyer, "A capacity-based approach to receiver sensitivity for atmospheric lasercom systems," presented at the 2011 OSA Topical meeting on *Applications of Lasers for Sensing and Free Space Communications*, Toronto, Canada, July 11-13, 2011, paper LTuD4.

S. A. Hamilton, R. S. Bondurant, D. M. Boroson, J. W. Burnside, D. O. Caplan, E. A. Dauler, A. S. Fletcher, S. Michael, R. J. Murphy, B. S. Robinson, J. J. Scozzafava, N. W. Spellmeyer, **T. G. Ulmer**, and F. G. Walther, "Long-haul atmospheric laser communication systems," presented at the 2011 Optical Fiber Communication Conference, Los Angeles, CA, March 6-10, 2011, paper OWX2.

T. G. Ulmer, S. R. Henion, F. G. Walther, and P. A. Schulz, "Differential phase-shift keying in spatial diversity transmitters for fade mitigation," *IEEE J. Sel. Topics Quantum Electron.*, vol. 16., no. 5, pp. 1091-1098, Sept./Oct. 2010.

T. G. Ulmer, S. R. Henion, F. G. Walther, and P. A. Schulz, "Differential phase-shift keying in multi-wavelength spatial diversity links," (invited) presented at the 2010 OSA Topical meeting on *Applications of Lasers for Sensing and Free Space Communications*, San Diego, CA, January 31-February 4, 2010, paper LSMA4.

T. M. Yarnall, **T. G. Ulmer**, N. W. Spellmeyer, and D. O. Caplan, "Single-polarization cladding-pumped optical amplifier without polarization-maintaining gain fiber," *IEEE Photon. Technol. Lett.*, vol. 21, no. 18, pp. 1326-1328, Sept. 15, 2009.

T. G. Ulmer, S. R. Henion, and F. G. Walther, "Power penalty from amplified spontaneous emission in spatial diversity links," 2009 Conference on Lasers and Electro-Optics, Baltimore, MD, May 31 - June 5, 2009, paper CMO3.

T. G. Ulmer, S. Henion, and F. G. Walther, "Power penalty from amplified spontaneous emission in spatial diversity links for fade mitigation," *IEEE Photon. Technol. Lett.*, vol. 21, no. 3, pp. 170-172, Feb. 1, 2009.

T. G. Ulmer, V. Loriaux, R. J. Murphy, P. A. Schulz, and J. M. Roth, "Optical standards for free-space lasercom systems," prepared for the *MIT Lincoln Laboratory Journal*, 2008.

T. G. Ulmer, A. C. Raudenbush, and V. Loriaux, "Stable, tunable calibration source for large-beam optical systems," *Appl. Opt.*, vol. 46, no. 5, pp. 669-675, Feb. 10, 2007.

M. M. Lee, J. M. Roth, **T. G. Ulmer**, and C. V. Cryan, "The fiber fuse phenomenon in polarization-maintaining fibers at 1.55 μm ," 2006 Conference on Lasers and Electro-Optics, Long Beach, CA, May 21-26, 2006, paper JWB66.

T. G. Ulmer, "Lasercom Terminal Design," presented at the Lincoln Laboratory Communications and Information Technology Workshop, Lexington, MA, March 8-9, 2005.

J. M. Roth, **T. G. Ulmer**, N. W. Spellmeyer, S. Constantine, and M. E. Grein, "Wavelength-tunable 40-GHz picosecond harmonically mode-locked fiber laser source," *IEEE Photon. Technol. Lett.*, vol. 16, no. 9, pp. 2009-2011, Sept. 2004.

T. G. Ulmer, "Distortion in angle-modulated links induced by ripple in fiber-Bragg-grating reflectance and delay characteristics," *J. Lightwave Technol.*, vol. 21, no. 12, pp. 3226-3236, Dec. 2003.

J. M. Roth, **T. G. Ulmer**, N. W. Spellmeyer, S. Constantine, and T. G. B. Mason, "40-GHz, picosecond modelocked fiber laser using an integrated semiconductor optical amplifier and electroabsorption modulator," 2003 Conference on Lasers and Electro-Optics, Baltimore, MD, June 1-6, 2003, paper CDW6.

T. G. Ulmer, M. Hanna, B. R. Washburn, S. E. Ralph, and A. J. SpringThorpe, "Microcavity-enhanced surface-emitted second-harmonic generation for ultrafast all-optical signal processing," *IEEE J. Quantum Electron.*, vol. 38, no. 1, pp. 19-30, Jan. 2002.

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T. G. Ulmer, B. R. Washburn, C. M. Verber, S. E. Ralph, and A. J. SpringThorpe, "Resonant-cavity-enhanced surface-emitted second-harmonic generation optimized for short pulses," 2001 Ultrafast Electronics and Optoelectronics Conference, Lake Tahoe, Nevada, Jan. 10-12, 2001, OSA TOPS vol. 49, pp. 49-53.

T. G. Ulmer, M. C. Gross, J. T. Simmons, P. W. Juodawlkis, B. R. Washburn, W. S. Astar, A. J. SpringThorpe, R. P. Kenan, C. M. Verber, and S. E. Ralph, "160-Gb/s Optically time-division multiplexed link with all-optical demultiplexing," *J. Lightwave Technol.*, vol. 18, no. 12, pp. 1964-1977, Dec. 2000.

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T. G. Ulmer, B. R. Washburn, R. P. Kenan, C. M. Verber, S. E. Ralph, and A. J. SpringThorpe, "Resonant-cavity-enhanced surface-emitted second-harmonic generation in the sub-ps regime," 2000 Conference on Lasers and Electro-Optics, San Francisco, CA, May 7-12, 2000, paper CWP7, pp. 362-363.

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J. T. Simmons, B. R. Washburn, **T. G. Ulmer**, W. S. Astar, S. E. Ralph, R. P. Kenan, and C. M. Verber, "Femtosecond pulse performance of an integrated optical tapped delay line," 1999 Annual Meeting of the Optical Society of America, Santa Clara, CA, Sept. 26-30, 1999.

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