

# **ANNUAL REPORT**

## **Department of Electrical and Computer Engineering**

**June 1, 2012**

**Submitted by:**

**Fabrice Labeau, ing.  
Interim Chair**

## II-C ECE SCHOLARLY WORKS FOR THE PERIOD JANUARY 1<sup>ST</sup>, 2011 TO DECEMBER 31<sup>ST</sup>, 2011

(URL of publications : <http://www.mcgill.ca/ece/about/publications>)

For jointly authored papers, the bibliographic details appear only once; under the list of publications for co-authors, a reference to the first appearance of the publication is added.

### II-C.1 ARTICLES IN REFEREED PUBLICATIONS:

#### ARBEL, TAL:

- [1] K. Murphy, D. De Nigris, D. L. Collins, T. Arbel, et. al., "Evaluation of Registration Methods on Thoracic CT: The EMPIRE10 Challenge", IEEE Transactions on Medical Imaging, Vol. 30, Issue 11, pp. 1901-1920, Nov. 2011.
- [2] M. Shah, Y. Xiao, N. Subbanna, S. Francis, D. L. Arnold, D. L. Collins, and T. Arbel, "Evaluating Intensity Normalization on MRIs of Human Brain with Multiple Sclerosis", Medical Image Analysis, Volume 15, Issue 2, pp. 267-282, April 2011.
- [3] C. Laporte and T. Arbel, "Learning to estimate out-of-plane motion in ultrasound imagery of real tissue", Medical Image Analysis, Volume 15, Issue 2, pp. 202-213, April 2011.

#### BAJCSY, JAN:

- [4] A. Garba and J. Bajcsy, "Optical Code Division Network Transmission with M-ary Chip Symbols," IEEE/OSA Journal of Optical Communications and Networking, vol. 3, issue 5, pp. 435-446, April 2011.

#### BOUFFARD, FRANCOIS:

- [5] Molina-Garcia, A., Bouffard, F. & Kirschen, D. S. (2011). Decentralized demand-side contribution to primary frequency control. IEEE Trans. Power Syst. 26(1). 411-419.

#### BOULET, BENOIT:

- [6] H. Azarnoush, S. Vergnole, B. Boulet, and G. Lamouche, "Real-time Control of Angioplasty Balloon Inflation Based on Feedback from Intravascular Optical Coherence Tomography: Preliminary Study on an Artery Phantom," IEEE Transactions on Biomedical Engineering, 10.1109/TBME.2011.2172685
- [7] V. Raissi Dehkordi and B. Boulet, Robust Controller Order Reduction, International Journal of Control, Vol. 84, No. 5, May 2011, pp. 985-997.

#### CAINES, PETER E.:

- [8] M. Nourian, R. P. Malhame', M.Y. Huang, P. E. Caines, "Mean Field (NCE) Formulation of Estimation Based Leader-Follower Collective Dynamics". Frank Lewis Festschrift edition of the International Journal of Robotics and Automation, Special Issue on New Advances in Nonlinear and Optimal Controls of Robotic and Autonomous Systems, Vol. 26, No. 1, 2011, pp. 120-129.
- [9] F. Taringoo, P. E. Caines, "Gradient geodesic and Newton geodesic HMP algorithms for the optimization of hybrid systems" (D. Q. Mayne Festschrift edition), Annual Reviews in Control, Volume 35, Issue 2, December 2011, pp.187-198

#### CHAMPAGNE, BENOIT:

- [10] G. Smecher (M.Eng.) and B. Champagne, "Optimum crossing-point estimation of a sampled random signal with a periodic carrier," Signal Processing, vol. 91, pp. 1951-1962, Aug. 2011.

- [11] E. Plourde (Ph.D.) and B. Champagne, "Multidimensional STSA estimators for speech enhancement with correlated spectral components," *IEEE Trans. on Signal Processing*, vol. 59, pp. 3013-3024, July 2011.
- [12] K. Hossain (M.Eng.) and B. Champagne, "Wideband spectrum sensing for cognitive radios with correlated subband occupancy," *IEEE Signal Processing Letters*, vol. 18, pp. 35-38, Jan. 2011.

---

**CHEN, LAWRENCE R.:**

- [13] M. Morsey-Osman, Q. Zhuge, L. R. Chen, and D. V. Plant, "Feedforward carrier recovery via pilot-aided transmission for single-carrier systems with arbitrary M-QAM constellations," *Optics Express*, vol. 19, no. 24, pp. 24331-24343 (2011).
- [14] M. Morsey-Osman, Q. Zhuge, L. R. Chen, and D. V. Plant, "Joint mitigation of laser phase noise and fiber nonlinearity for polarization-multiplexed QPSK and 16-QAM coherent transmission systems," *Optics Express*, vol. 19, no. 26, pp. B330-B336 (2011).
- [15] P. Muñoz, R. García-Olcina, C. Habib, L. R. Chen, X. J. M. Leijtens, J. D. Doménech, M. Rius, J. Capmany, T. de Vries, M. J. R. Heck, L. Augustin, R. Notzel, and D. Robbins, "Sagnac loop reflector and arrayed waveguide grating based multi-wavelength laser monolithically integrated on InP," *IET Optoelectronics*, vol. 5, no. 5, pp.207-210 (2011).
- [16] T. Huang, J. Li, J. Sun, and L. R. Chen, "Photonic generation of UWB pulses using a nonlinear optical loop mirror and its distribution over a fiber link," *IEEE Photonics Technology Letters*, vol. 23, no. 17, pp. 1255-1257 (2011).
- [17] M. Bolea, J. Mora, L. R. Chen, and J. Capmany, "Highly chirped reconfigurable microwave photonic filter," *IEEE Photonics Technology Letters*, vol. 23, no. 17, pp. 1192-1194 (2011).
- [18] T. Huang, J. Li, J. Sun, and L. R. Chen, "All-optical UWB signal generation and multicasting using a nonlinear optical loop mirror," *Optics Express*, vol. 19, no. 17, pp. 15885-15890 (2011).
- [19] P. Muñoz, R. García-Olcina, C. Habib, L. R. Chen, X. J. M. Leijtens, T. de Vries, D. Robbins, and J. Capmany, "Label swapper device for spectral amplitude coded optical packet networks monolithically integrated on InP," *Optics Express*, vol. 19, no. 14, pp. 13540-13550 (2011).
- [20] P. Samadi, L. R. Chen, C. L. Callender, P. Dumais, S. Jacob, and D. Celo, "RF arbitrary waveform generation using tunable planar lightwave circuits," *Optics Communications, Special Issue on Optical Pulse Shaping, Arbitrary Waveform Generation, and Pulse Characterization*, vol. 284, no. 15, pp. 3737-3741 (2011).
- [21] J. Li, T. Huang, and L. R. Chen, "Rational harmonic mode-locking of a fiber optical parametric oscillator at 30 GHz," *IEEE Photonics Journal*, vol. 3, no. 3, pp. 468-475 (2011).
- [22] K. Fouli, L. R. Chen, and M. Maier, "Time-, wavelength-, and code-domain optical reflection monitoring for next-generation access-metro networks," *Computer Communications*, vol. 34, no. 8, pp. 1011-1021 (2011)

---

**CHODAVARAPU, VAMSY:**

- [23] M. Hajj-Hassan, M. Khayyat-Kholghi, H. Wang, V. P. Chodavarapu, J. E. Henderson, "Response of Murine Bone Marrow-Derived Mesenchymal Stromal Cells to Dry-Etched Porous Silicon Scaffolds", *Journal of Biomedical Materials Research: A*, vol. 99A, pp. 269-274, 2011.
- [24] A. Hu and V. P. Chodavarapu, "Linearization of Oscillation Frequency for Integrated LC-VCO with Inversion-Mode Varactor", *Analog Integrated Circuits and Signal Processing*, vol. 68, pp. 307-314, 2011.
- [25] D. S. Daivasagaya, L. Yao, Ka Yi Yung, M. Hajj-Hassan, M. C. Cheung, V. P. Chodavarapu, and F. V. Bright, "Contact CMOS Imaging of Gaseous Oxygen Sensor Array", *Sensors and Actuators: B Chemical*, vol.157, pp. 408-416, 2011.
- [26] L. Yao, P. Lamarche, N. Tawil, R. Khan, A. M. Aliakbar, M. Hajj-Hassan, V. P. Chodavarapu and R. Mandeville, "CMOS Conductometric System for Growth Monitoring and Sensing of Bacteria", *IEEE Transactions on Biomedical Circuits & Systems*, vol. 3, pp. 223-230, 2011.

- [27] M. C. Cheung, P. J. R. Roche, M. Hajj-Hassan, A. G. Kirk, Z. Mi, V. P. Chodavarapu, "Controlling optical properties and surface morphology of dry etch xenon difluoride porous silicon, SPIE Journal of Nanophotonics, vol.5, iss. 1, art. 053503, 2011.
- [28] M. Hajj-Hassan, M. C. Cheung, V. P. Chodavarapu, "Ultra-thin Porous Silicon Membranes Fabricated using Dry Etching", IET Micro & Nano Letters, vol 6. iss.4, pp. 226-228, 2011.
- [29] L. Yao, K. Y. Yung, V. P. Chodavarapu, F. V. Bright, "CMOS Imaging of Temperature Effects of Pin-Printed Xerogel Sensor Microarrays", IEEE Transactions on Biomedical Circuits & Systems, vol. 5, iss. 2, pp. 189-196, 2011.

---

**CLARK, JAMES J.:**

- [30] Skaff, S. and Clark, J.J., "Spectral Color Constancy using a Maximum Entropy Approach", JOSA A, Vol. 28, Issue 11, pp. 2385-2399 (2011)
- [31] Au, C.E. and Clark, J.J., "Integrating Multiple Views with Virtual Mirrors to Facilitate Scene Understanding", ACM Transactions on Applied Perception, Volume 8 Issue 4, November 2011

---

**COATES, MARK J.:**

- [32] B. Oreshkin and M.J. Coates, "Analysis of error propagation in particle filters with approximation," Annals of Applied Probability, vol. 21, no. 6, pp. 2343-2378, Dec. 2011.
- [33] B. Oreshkin, X. Liu and M.J. Coates, "Efficient delay-tolerant particle filtering," IEEE Trans. Sig. Proc., vol. 59, no.7, pp. 3369-3381, July 2011.
- [34] F. Thouin, M.J. Coates, and M. Rabbat, "Large scale probabilistic available bandwidth estimation", Computer Networks, vol. 55, no. 9, pp. 2065-2078, June 2011.
- [35] Y. Pointurier, M.J. Coates and M. Rabbat, "Cross-layer monitoring in transparent optical networks," IEEE/OSA J. Optical Comm. and Networking, vol. 3, no. 3, pp. 189-198, Mar. 2011.

---

**COOPERSTOCK, JEREMY R.:**

- [36] J. R. Cooperstock. "Multimodal Telepresence Systems: Supporting Demanding Collaborative Human Activities." In: IEEE Signal Processing 28.1 (Jan. 2011), pp. 77-86.
- [37] L. To, B. Thompson, J.R. Blum, G. Maehara, R. Hess, and J. R. Cooperstock. "A game platform for treatment of amblyopia." In: IEEE Transactions on Neural Systems and Rehabilitation Engineering 19.3 (June 2011), pp. 280-289. url: <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5713843>.
- [38] S. Pelletier and J. R. Cooperstock. "Preconditioning for Edge-Preserving Image Super-Resolution." In: IEEE Transactions on Image Processing (2011). url: <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5898412>.
- [39] Y. Visell, B.L. Giordano, G. Millet, and J. R. Cooperstock. "Vibration Influences Haptic Perception of Surface Compliance During Walking." In: PLoS ONE 6.3: e17697 (2011). doi:10.1371/journal.pone.0017697. url: <http://dx.plos.org/10.1371/journal.pone.0017697>.
- [40] Z. Qi and J. R. Cooperstock. "Towards Dynamic Image Mosaic Generation With Robustness to Parallax." In: IEEE Transactions on Image Processing (2011). url: <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5959979>.
- [41] D. El-Shimy, F. Grond, A. Olmos, and J. R. Cooperstock. "Eyes-Free Environmental Awareness for Navigation." In: Springer Journal on Multimodal User Interfaces, Special Issue on Interactive Sonification (2011), 11 pages. doi: 10.1007/s12193-011-0065-5. url: <http://www.springerlink.com/content/857h542884084q12/>.

---

**EL-GAMAL, MOURAD N.:**

- [42] F. Nabki, T. A. Dusatko, S. Vengallatore, and M. N. El-Gamal, "Low-stress, CMOS-compatible silicon carbide surface micromachining technology part-I: process development and characterization," the Journal of Microelectromechanical Systems, pp. 720 - 729 (10 pages), June 2011.

- [43] F. Nabki, T. A. Dusatko, P.-V. Cicek, and M. N. El-Gamal, "Low-stress, CMOS compatible silicon carbide surface micromachining technology part-II: beam resonators for MEMS above-IC," the Journal of Microelectromechanical Systems, pp. 730 - 744 (14 pages), June 2011.
- [44] N. Constantin, P. Zampardi, and M. N. El-Gamal, "Automatic hardware reconfiguration for current reduction at low power in RFIC PAs," IEEE Transactions on Microwave Theory and Techniques (T-MTT), pp. 1560 - 1570, June 2011.

---

**FERRIE, FRANK P.:**

- [45] Phan, Andrew, and Ferrie, Frank. P., "Interpolating Sparse GPS Measurements Via Relaxation Labeling and Belief Propagation for the Redeployment of Ambulances," IEEE Transactions on Intelligent Transportation Systems, Volume 12, Number 4, December 2011, pp. 1587-1598.

---

**GIANNACOPOULOS, DENNIS:**

- [46] M. Mehri Dehnavi\*, D. Fernández\*\* and D. Giannacopoulos. (2011). Enhancing the performance of conjugate gradient solvers on graphic processing units. IEEE Transactions on Magnetics, 47(5): 1162-1165.
- [47] M. Mehri Dehnavi\*, D. Fernández\*\*, J. Gaudiot and D. Giannacopoulos. (2011). Parallel Sparse Approximate Inverse Preconditioning on Graphic Processing Units. IEEE Trans. Parallel and Distributed Computing (accepted 2011-08-14).

---

**GROSS, WARREN J.:**

- [48] A. Naderi, S. Mannor, M. Sawan, and W. J. Gross, "Delayed Stochastic Decoding of LDPC Codes," IEEE Transactions on Signal Processing, Vol. 59, No. 11, pp. 5617-5625, November 2011.
- [49] M. N. Sakib, T. Huang, W. J. Gross, and O. Liboiron-Ladouceur, "Low-Density Parity-Check Coding in Ultra Wideband over Fiber Systems," IEEE Photonics Technology Letters, Vol. 23, No. 20, pp. 1493-1495, October 15, 2011.
- [50] F. D. Côté, I. N. Psaromilogkos, and W. J. Gross. "GNSS Modulation: A Unified Statistical Description," IEEE Transactions on Aerospace and Electronic Systems, Vol. 47, No. 3, pp. 1814-1836, July 2011.
- [51] Matthieu Arzel, Cyril Lahuec, Christophe Jégo, Warren J. Gross, and Yvain Bruned, "Stochastic Multiple-Stream Decoding of Cortex Codes," IEEE Transactions on Signal Processing, Vol. 59, No. 7, pp. 3486-3491, July 2011.
- [52] M. N. Sakib, V. Mahalingam, W. J. Gross, and O. Liboiron-Ladouceur, "Optical Front-end for Soft Decision LDPC Codes in Optical Communications Systems," IEEE/OSA Journal of Optical Communications and Networking, Vol. 3, No. 6, pp. 533-541, June 2011. (#1 most downloaded paper for July 2011- September 2011)
- [53] S. Sharifi Tehrani, A. Naderi, G. Kamendje, S. Mannor, and W. J. Gross, "Tracking Forecast Memories for Stochastic Decoding," Journal of Signal Processing Systems, Special Issue on the DISPS Track of ICASSP 2009. Volume 63, No. 1, DOI 10.1007/s11265-009-0441-5, pp. 117-127, April 2011. Invited paper.

---

**JOOS, GEZA:**

- [54] S.R. Samantaray\*, I. Kamwa and G. Joos, "On the Accuracy Versus Transparency Trade-Off of Data-Mining Models for Fast-Response PMU-Based Catastrophe Predictors", IEEE Trans. on Smart Grids, 2011.
- [55] I. Kamwa, A. Pradhan\*, and G. Joos, "Adaptive Phasor and Frequency-Tracking Schemes for Wide-Area Protection and Control", IEEE Trans. on Power Delivery, Volume: 26 , Issue: 2, 2011 , pp. 744 - 753.

---

**KHAZAKA, RONI:**

- [56] D. Tannir and R. Khazaka, "Adjoint sensitivity analysis of nonlinear distortion in Radio Frequency circuits," *IEEE Trans. Computer Aided Design*, no 6, vol 30, pp. 934-939, June 2011.

---

**KIRK, ANDREW:**

- [27]
- [57] Z. Tian, V. Veerasubramanian\*, P. Bianucci, S. Mukherjee, Z. Mi, A. G. Kirk, and D.V. Plant 'Selective polarization mode excitation in InGaAs/GaAs microtubes using an adiabatically tapered fiber', *OSA Optics Letters* 36 (17), pp 3506-3508, 2011
- [58] A.Jafari\*, A.G.Kirk, 'Distributed Etched Diffraction Grating Demultiplexer with Flat-Top Insertion Loss Envelope', *IEEE Photonics Journal*, DOI 10.1109/JPHOT.2011.2162823, 2011
- [59] A.Jafari\*, A.G.Kirk, 'Demonstration of Distributed Etched Diffraction Grating Demultiplexer', *IEEE Photonics Journal*, 3 (4), p. 651-657, 2011
- [60] Z. Tian, V. Veerasubramanian\*, P. Bianucci, S. Mukherjee, Z. Mi, A. G. Kirk, and D.V. Plant 'Single rolled-up InGaAs/GaAs quantum dot microtubes integrated with silicon-on-insulator waveguides', *OSA Optics Express* 19, pp 12164-12171, 2011

---

**LABEAU, FABRICE:**

- [61] M. Akbari and F. Labeau, Instantaneous Erasures in Oversampled Filter Banks: Conditions for Output Perfect Reconstruction, *IEEE Transactions on Signal Processing*, Vol. 59, No. 12, December 2011, pp. 5800-5813.
- [62] V. Raissi Dehkordi, H. Daou and F. Labeau, A Channel Differential EZW Coding Scheme for EEG Data Compression, *IEEE Transactions on Information Technology in BioMedicine*, Vol. 15, No. 6, November 2011, pp. 831-838.
- [63] C. Despins, F. Labeau, R. Labelle, T. Le-Ngoc and . et al., Leveraging Green Communications for Carbon Emission Reductions: Techniques, Testbeds and Emerging Carbon Footprint Standards, *IEEE Communications Magazine*, Vol. 49, No. 8, August 2011, pp. 101-109.

---

**LEIB, HARRY:**

- [64] M. Kassouf, H. Leib, "DPC Rates and Multiplexing Gains for MIMO Broadcast Systems with Multi-Dimensional Modulation", *IEEE Trans. on Communications*, Vol. 59, No. 3, pp. 639-647, March 2011.

---

**LE-NGOC, THO:**

- [65] Leonardo Jimenez Rodriguez, Nghi H. Tran, Tho Le-Ngoc, "Bandwidth-Efficient Bit-Interleaved Coded Modulation over NAF Relay Channels: Error Performance and Precoder Design", *IEEE Transactions on Vehicular Technology*, Vol. 60, No.5, June 2011, pp. 2086-2101
- [66] Duy H. N. Nguyen, Tho Le-Ngoc, "Multiuser Downlink Beamforming in Multicell Wireless Systems: A Game Theoretical Approach", *IEEE Transactions on Signal Processing*, Vol.59, No.7, July 2011, pp.3326-3338
- [67] Duy T. Ngo, Tho Le-Ngoc, "Distributed Resource Allocation for Cognitive Radio Networks with Spectrum-Sharing Constraints", *IEEE Transactions on Vehicular Technology*, Vol. 60, No.7, September 2011, pp. 3436 - 3449.
- [68] Peng Jia, Mai Vu, Tho Le-Ngoc, Seung-Chul Hong, Vahid Tarokh, "Capacity- and Bayesian-based Cognitive Sensing with Location Side Information", *IEEE Journal on Selected Areas in Communications (Special Issue on Advances in Cognitive Radio Networking and Communications)*, Vol. 29, No. 2, February 2011, pp.276-289.
- [69] Quang Le-Dang and Tho Le-Ngoc, "Opportunistic Multicasting Scheduling using Erasure-Correction Coding over Wireless Channels", *EURASIP Journal on Wireless*

Communications and Networking. Volume 2010, Article ID 595431, 17 pages, 2010, doi:10.1155/2010/595431

- [63]
- [70] Kun-Nyeong Chang, Ki-Dong Lee, Tho Le-Ngoc, "Improving Packet Delay for Interactive Multimedia Satellite Networks", *Telecommunications Review (SK Telecom)*, Vol. 21, No.1, February 2011, pp.132-145.
- [71] Leonardo Jimenez Rodriguez, Nghi H. Tran, Tho Le-Ngoc, "Jointly Optimal Precoder and Power Allocation for the Amplify-and-Forward Half-duplex Relay System", *REV Journal on Electronics and Communications*, Vol.1, No.1, January-March 2011, pp. 38-44
- [72] Hung Nguyen-Le, Tho Le-Ngoc, Nghi Tran, "Iterative Receiver Design with Joint Doubly Selective Channel and CFO Estimation for Coded MIMO-OFDM Transmissions", *IEEE Transactions on Vehicular Technology*, Vol. 60, No. 8, October 2011, pp. 4052-4057
- [73] Leonardo Jimenez Rodriguez, Nghi H. Tran, Tho Le-Ngoc, "Multiple-Frame Precoding and Multi-D Mapping for BICM over Ergodic NAF Relay Channels", *Wireless Communications and Mobile Computing*, Dec 2011, pp. 1564–1575, online DOI: 10.1002/wcm.1242
- [74] Ha X. Nguyen, Ha H. Nguyen, Tho Le-Ngoc, "Throughput Maximization in Noncoherent Cooperative Networks", *IET Communications*, Vol. 5, No.16, November 2011, pp.2386 - 2396
- [75] Mahsa Derakhshani, Tho Le-Ngoc, Masoumeh Nasiri-Kenari, "Efficient Cooperative Cyclostationary Spectrum Sensing in Cognitive Radios at Low SNR Regimes", *IEEE Transactions on Wireless Communications*, Vol. 10, No. 11, November 2011, pp.3754-3764.

---

#### LIBOIRON-LADOUCEUR, ODILE:

- [76] M.N. Sakib, T. Huang, W.J Gross, and O. Liboiron-Ladouceur, "Low-Density Parity-Check Coding in Ultra Wideband over Fiber Systems," *IEEE Photonics Technology Letters*, 23(10), pp. 1041-1135, October 2011.
- [52]
- [77] O. Liboiron-Ladouceur, P.G. Raponi, N. Andriolli, I. Cerutti, M. S. Hai, and P. Castoldi, "A Scalable Space-Time Multi-Plane Optical Interconnection Network using Energy Efficient Enabling Technologies," *OSA/IEEE Journal of Optical Communication and Networking*, 3(8): A1-A11, June 2011. [invited]
- [78] O. Liboiron-Ladouceur, I. Cerutti, P.G. Raponi, N. Andriolli, and P. Castoldi, "Energy Efficient Design of a Scalable Optical Multi-Plane Interconnection Architecture," *IEEE Journal of Selected Topics in Quantum Electronics*, Special Issue on Green Photonics, 17: 377-383, Apr.-May 2011.

---

#### LOWTHER, DAVID A.:

- [79] Li, M., Lowther, D.A., "Global and Distributed Torque Calculations using the CDSA Approach," *Archives of Electrical Engineering*, v. 60, 4, 2011, pp. 459-471.
- [80] Ouyang, J., Lowther, D., "A Novel Adaptation Approach for Electromagnetic Device Optimization," *Archives of Electrical Engineering*, v. 60, 4, 2011, pp. 473-483.
- [81] Ouyang, J., Lowther, D., "Towards a Case-Based Computational Model for the Creative Design of Electromagnetic Devices," *Archives of Electrical Engineering*, v. 60, 4, 2011, pp. 485-496.
- [82] Nunes, C.R.S., Mayrink, P.C.G., Mesquita, R.C., Lowther, D.A., "A Parallel Remeshing Method," *IEEE Transactions on Magnetics*, v.47, 5, May 2011, pp. 1202-1205.
- [83] Das, R., Lowther, D.A., "Magnetic Field Computation Using Compact Support Radial Basis," *IEEE Transactions on Magnetics*, v.47, 5, May 2011, pp. 1362-1365.
- [84] Radziszewski, P., Martins, S., Faragalli, M., Kaveh-Moghaddam, N., Oyama, D., Briend, R., Gharib, N., Prahacs, C., Ouellette, S., Pasini, D., Thomson, V., Lowther, D., Farhat, M., Jones, B., "iRINGS – Development of a Wheel Prototype Concept For Lunar Mobility," *Canadian Aeronautics and Space Journal*, Vol. 57, No. 1, 2011, pp. 1-11.



---

**MAHAJAN, ADITYA:**

- [85] A. Nayyar, A. Mahajan, and D. Teneketzis, Optimal control strategies in delayed sharing information structures, *IEEE Transactions on Automatic Control*, vol. 56, no. 7, pp. 1606-1620, July, 2011.

---

**MEYER, BRETT:**

- [86] Karthik Sankaranarayanan, Brett H. Meyer, Mircea R. Stan, and Kevin Skadron, "Thermal Benefit of Multi- core Floorplanning: A Limits Study," *Sustainable Computing: Informatics and Systems*, vol. 1, no. 4, 2011.

---

**MI, ZETIAN:**

- [87] Invited: H. P. T. Nguyen, Y.-L. Chang, I. Shih and Z. Mi, "InN p-i-n nanowire solar cells on Si", *IEEE J. Sel. Topics Quantum Electron. Nanowires*, vol. 17, pp. 1062-1069, 2011.
- [88] Q. Li, K. R. Westlake, M. H. Crawford, S. R. Lee, D. D. Koleske, J. J. Figiel, K. C. Cross, S. Fatholouloumi, Z. Mi, and G. T. Wang "Optical performance of top-down fabricated InGaN/GaN nanorod light emitting diode arrays," *Opt. Exp.*, vol. 19, 25528, 2011.
- [89] H. P. T. Nguyen, K. Cui, S. Zhang, and Z. Mi, "Full-color InGaN/GaN dot-in-a-wire light emitting diodes on silicon," *Nanotechnol.*, vol. 22, 445202, 2011.
- [90] J. Qiu, A. Shih, W. Zhou, Z. Mi, and I. Shih, "Effects of metal contacts and dopants on the performance of ZnO-based memristive devices," *J. Appl. Phys.*, vol. 110, 014513, 2011.
- [57]
- [27]

---

**MICHALSKA, HANNAH:**

- [91] Gosline, A., Hayward, V., Michalska, H., "Ineluctability of oscillations in systems with digital implementation of derivative feedback", *Automatica*, Vol. 47, 2011, pp. 2444-2450 -- ( 7 pages).
- [92] Michalska, H., "Generic Nonlinear Stabilization of Systems with Matching Algebraic Structure", *Annual Reviews in Control*, Vol. 35, 2011, pp. 215-234 -- ( 20 pages).

---

**PLANT, DAVID V.:**

- [93] Q. Zhuge, M. Morsy-Osman, and D.V. Plant, "Analysis of dispersion-enhanced phase noise in CO-OFDM systems with RF-pilot phase compensation", *Optics Express*, 19:24030-24036, 2011.
- [94] Y. Zang, D. Xie, Y. Chen, M. Li, C. Chen, T. Ren, and D.V. Plant, "Temperature dependence of optical and structural properties of ferroelectric B3.15Nd0.85Ti3O12 thin film derived by sol-gel process", *Journal of Sol-Gel Science and Technology*, DOI 10.1007/s10971-011-2619-0. 2011.
- [13]
- [14]
- [95] Y. Zang, D. Xie, X. Wu, Y. Chen, Y. Lin, M. Li, H. Tian, X. Li, Z. Li, H. Zhu, T. Ren, and D.V. Plant, "Enhanced photovoltaic properties in grapheme/polycrystalline BiFeO3/Pt heterojunction structure," *Appl. Phys. Lett.*, 132904, 2011.
- [96] B.J. Shastri, C. Chen, K.D. Choquette, and D.V. Plant, "Circuit modeling of carrier--photon dynamics in composite-resonator vertical-cavity lasers", *IEEE J. Quantum. Electron.*, 47: 1537-1546, 2011.
- [97] Z. Tian, and D.V. Plant, "Picoseconds flat-top pulse generation using dual-mode fiber Mach-Zehnder interferometers", *Optics Letters*, 23: 4542-4544, 2011.
- [98] M.E.M. Pasandi, and D.V. Plant, "Non-Iterative Interpolation-Based Phase Noise ICI Mitigation for CO-OFDM Transport Systems", *IEEE Photon. Tech. Lett.*, 23: 1594-1596, 2011.
- [57]
- [60]



- [99] Q. Zhuge, C. Chen, and D.V. Plant, "Dispersion-enhanced Phase Noise Effects on Reduced-Guard-Interval CO-OFDM transmission", *Optics Express*, 19: 4472-4484, 2011.
- [100] C. Chen, Q. Zhuge, and D.V. Plant, "Zero-guard-interval CO-OFDM with Overlapped Frequency-Domain CD and PMD Equalization", *Optics Express*, 19: 7451-7467, 2011.

---

**POPOVIC, MILICA:**

- [101] K. G. Zhu and M. Popovic, "Comparison of radar and thermoacoustic techniques in microwave breast imaging", *Progress In Electromagnetics Research B*, Vol. 35, 1-14, 2011.

---

**PSAROMILIGKOS, IOANNIS:**

[50]

---

**RABBAT, MICHAEL:**

- [102] D. Üstebay, R. Castro, and M. Rabbat, "Efficient decentralized approximation via selective gossip," *IEEE Journal on Special Topics in Signal Processing*, special issue on "Signal Processing in Gossip Algorithms Design and Applications", vol. 5, no. 4, pp. 805--816, August, 2011.

[34]

[35]

---

**ROBERTS, GORDON:**

- [103] M. Ali-Bakhshian and G. W. Roberts, "Digital Storage, Addition and Subtraction of Time-Mode Variables," *Electronic Letters*, Vol. 47, Issue 16, pp. 910-911, August 2011.
- [104] M. Guttman and G. W. Roberts, "Sampled-Data IIR Filtering Via Time-Mode Signal Processing," *Analog Signal Processing Journal*, pp. 1-12, Sept. 2011.
- [105] S. Aouini, K. Chuai and G. W. Roberts, "Anti-Imaging Time-Mode Filter Design Using A PLL Structure With Transfer Function DFT," *IEEE Transactions on Circuits and Systems – I*, pp. 251-271, Dec 2011.

---

**ROCHETTE, MARTIN:**

- [106] C. Baker, R. Ahmad, and M. Rochette, "Simultaneous measurement of the core diameter and the numerical aperture in dual-mode step-index optical fibers," *Journal of Lightwave Technology* (2011).
- [107] M. Rochette, C. Baker, R. Ahmad, and A. Al Kadry, "Chalcogenide microwires and their applications," *Photons technical review* 9(2) 35-38 (2011).
- [108] C. Baker and M. Rochette, "A generalized heat-brush approach for precise control of the waist profile in fiber tapers," *Optical Material Express* 1(6) 1065-1076 (2011).
- [109] R. Ahmad and M. Rochette, "Photosensitivity at 1550 nm and Bragg grating inscription in As<sub>2</sub>Se<sub>3</sub> microwires," *Applied Physics letters* 99 061109 (2011).
- [110] R. Ahmad, M. Rochette, and C. Baker, "Fabrication of Bragg gratings in sub-wavelength diameter As<sub>2</sub>Se<sub>3</sub> chalcogenide wires," *Optics letters* 36(15) 2886-2888 (2011).

---

**SHIH, ISHIANG:**

[90]

- [111] Shih, A., Qi, Y.F., Qiu, J., Mi, Z., and Shih, I. (2011) Observation of Memristive Effects in Alloys of ZnO, MgO, and TiO<sub>2</sub>. *Journal of Applied Physics*.

- [112] C.H. Champness, H.F. Myers and I. Shih, "Carrier polarity reversal with sodium addition in Bridgman-grown CuInSe<sub>2</sub>," *Thin Solid Films*, 519, 21 (2011) 7337-7340.

[87]

**SZKOPEK, THOMAS:**

- [113] H.S. Skulason, V.-H. Nguyen, A. Guermoune, V. Sridharan, M. Siaj, C. Caloz, and T. Szkopek, "110 GHz measurement of large-area graphene integrated in low-loss microwave structures", *Appl. Phys. Lett.* 99, 153504 (2011).
- [114] S.A. Imam, T. Deshpande, A. Guermoune, M. Siaj, and T. Szkopek, "Charge transfer hysteresis in graphene dual-dielectric memory cell structures", *Appl. Phys. Lett.* 99, 082109 (2011).
- [115] A. Guermoune, T. Chari, F.B. Popescu, S. Sabri, J. Guillemette, H.S. Skulason, T. Szkopek, and M. Siaj, "Chemical vapor deposition synthesis of graphene on copper with methanol, ethanol, and propanol precursors" *Carbon* 49, 4204-4210 (2011).
- [116] T. Szkopek, "The Fine Structure Constant Determines Spontaneous Emission Rates from Semiconductors", *Appl. Phys. Lett.* 98, 211117 (2011).
- [117] T. Szkopek, V. P. Roychowdhury, D. A. Antoniadis, and J. N. Damoulakis "Physical Fault Tolerance of Nanoelectronics", *Phys. Rev. Lett.* 106, 176801 (2011).
- [118] Featured in the online magazine "Physics : spotlighting exceptional research", of the American Physical Society. W. Strupinski, K. Grodecki, A. Wyszomolek, R. Stepniewski, T. Szkopek, P. E. Gaskell, A. Grueneis, D. Haberer, R. Bozek, J. Krupka, and J. M. Baranowski, "Graphene Epitaxy by Chemical Vapor Deposition on SiC", *Nano Lett.* 11, 1786 (2011) (Subject of a Communique by Agence France Presse)
- [119] - T. Szkopek, "Optical Frequency Conductance, Susceptance and Admittance of Quantum Wells", *IEEE JQE.* 47, 500 (2011)
- [120] - P.L. Levesque, S.S. Sabri, C.M. Aguirre, J. Guillemette, M. Siaj, P. Desjardins, T. Szkopek, and R. Martel, "Probing Charge Transfer at Surfaces Using Graphene Transistors", *Nano Lett.* 11, 132, (2011).

**VU, MAI:**

- [121] M. Vu, "MISO Capacity with Per-antenna Power Constraint," *IEEE Trans. on Communications (transactions letter)*, Vol. 59, No. 5, pp. 1268-1274, May 2011.
- [122] W-Y Shin, S-W Jeon, N. Devroye, M. Vu, S-Y Chung, Y.H. Lee, V. Tarokh, "Improved Throughput Scaling in Wireless Ad Hoc Networks With Infrastructure," *IEEE Trans. on Info. Theory*, Vol. 57, No. 8, pp. 5088-5102, Aug. 2011.
- [123] S-W Jeon, N. Devroye, M. Vu, S-Y Chung, and V. Tarokh, "Cognitive networks achieve throughput scaling of a homogeneous network," *IEEE Trans. on Info. Theory*, Vol. 57, No. 8, pp. 5103-5115, Aug. 2011.
- [68]

**WEBB, JONATHAN:**

- [124] H. Gu, J. Gotman, J. P. Webb, "Computed basis functions for finite element analysis based on tomographic data", *IEEE Trans. on Biomedical Engineering*, vol. 58, pp. 2498-2505, September 2011.
- [125] Bostani, J. P. Webb, "A sparse finite element method for modeling evanescent modes in the stopband of periodic structures", *IEEE Trans. Magnetics*, vol. 47, no. 8, p.1186-1189, May 2011.
- [126] J. Dai, H. Pinheiro, J. P. Webb, I. Tsukerman, "Flexible approximation schemes with numerical and semi-analytical bases", *COMPEL*, vol. 30, no. 2, pp.552-573, 2011.

**ZENG, HAIBO:**

- [127] Haibo Zeng, Marco Di Natale, Arkadeb Ghosal, and Alberto Sangiovanni-Vincentelli. Schedule Optimization of Time-Triggered Systems Communicating over the FlexRay Static Segment. *IEEE Transactions on Industrial Informatics*, Vol. 7, No. 1, February 2011, 1-17
- [128] Arkadeb Ghosal, Fan Bai, Rami Debouk, and Haibo Zeng. Timing and Safety Analysis for V2V and V2I Wireless Communication. In *Society of Automotive Engineers World Congress (SAE)*, April 2011. Also in *SAE International Journal of Passenger Cars: Electronic and Electrical Systems*, June 2011.

---

**ZILIC, ZELJKO:**

- [129] A. Chattopadhyay and Z. Zilic, "Flexible and Reconfigurable Mismatch-tolerant Serial Clock Distribution Networks", IEEE Transactions on Very Large Scale Integrated Circuits (VLSI), 2011, 14 pages. appeared online 2011. doi: DOI: 10.1109/TVLSI.2011.2104982.
- [130] Z. Zilic, P. Mishra and S. Shukla, "Challenges of Rapidly Emerging Consumer Space Multiprocessors", to appear in IEEE Design and Test of Computers, Vol. 28, No. 3, May-Jun. 2011, pp. 52-53.
- [131] S. Shukla, P. Mishra and Z. Zilic, "Brief History of Our Time with Multi-Processor Design and EDA", IEEE Design and Test of Computers, Vol. 28, No. 3, May-Jun. 2011, pp. 96.
- [132] S. Bourduas and Z. Zilic, "Modeling and Optimization of Ring-Based Interconnects for Network-on-Chip", Journal of System Architecture, Vol. 57, No. 1, Jan. 2011, pp. 39-60 (22 pages). doi: DOI: 10.1016/j.sysarc.2010.07.002
- [133] Z. Zilic and M. Boulé, "A Hardware Assertion Checker Generator", US Patent #8,024,691, Sep. 2011, submitted Sep. 2007 as application US11/864,030, 130 pages. (Also, as Patent Application PCT CA2006 01596).
- [134] Y. Fan and Z. Zilic, "Accelerating Test, Validation and Debug of High Speed Serial Interfaces", Springer Verlag. 2011. ISBN: 978-90-481-9397-4, Book, 300 pages.

---

**II-C.2 OTHER PUBLICATIONS**

---

**ABHARI, RAMESH:**

- [C1] A. E. Abdulhadi and R. Abhari, "Dual Printed Meander Monopole Antennas for Passive UHF RFID Tag," 2011 IEEE (AP-S) Intl. Symp. on Antenna and Propagation, July 2011.
- [C2] H. Memarzadeh Tehran and R. Abhari, "A Dual-Band Meander Monopole Antenna for Operation in the ISM band," 2011 IEEE (AP-S) Intl. Symp. On Antenna and Propagation, July 2011.
- [C3] K. Payandehjoo and R. Abhari, "On-Chip Implementation of Compact Electromagnetic Bandgap Structures for 60GHz Applications," 2011 IEEE (AP-S) Intl. Symp. On Antenna and Propagation, July 2011. (Finalist in the Student Paper Competition).

---

**ARBEL, TAL:**

- [C4] M. Demirkus, B. Oreshkin, J. Clark, and T. Arbel, "Spatial and probabilistic codebook template based head pose estimation from unconstrained environments", 2011 IEEE International Conference on Image Processing (ICIP 2011), Brussels, Belgium, Sept. 2011.
- [C5] N. Subbanna, S. Francis, D. Precup, D.L. Collins, D. L. Arnold and T. Arbel, "Adapted MRF Segmentation of MS Lesions Using Local Contextual Information", Conference on Medical Image Understanding and Analysis (MIUA '11), London, U.K., July 2011.

---

**BAJCSY, JAN:**

- [C6] Y. J. D. Kim and J. Bajcsy, "Information Rates of Cyclostationary Faster-than-Nyquist Signaling," Proc. Canadian Workshop on Information Theory, Kelowna, BC, pp. 1-4, May 2011.

---

**BOUFFARD, FRANCOIS:**

- [C7] Bouffard, F. & Ortega-Vazquez, M. (2011). The value of operational flexibility in power systems with significant wind power generation. In Proc. 2011 IEEE Power & Energy Society General Meeting, Detroit, MI. (Invited paper).
- [C8] Karangelos, E.\* & Bouffard, F. (2011). A cooperative game theory approach to wind power generation imbalance cost allocation. In Proc. PSCC 2011, Stockholm, Sweden.
- [C9] Karangelos, E.\* & Bouffard, F. (2011). Towards full integration of demand-side resources in joint energy/reserve electricity markets. IEEE Innovative Smart Grid Technology Conference Europe, Manchester, UK. (Invited paper).

- [C10] Bouffard, F., Belhomme, R., Diop, A., Sebastian-Viana, M., Yuen, C., Devine-Wright, H., Linares, P., Cerero, R. & Valtorta, G. (2011). The ADDRESS European project: A large-scale R&D initiative for the development of active demand. In *The Future of Electricity Demand: Customers, Citizens and Loads*. Jamasb, T. & Pollitt, M. eds., Cambridge, UK: Cambridge University Press. (Invited chapter).

---

**BOULET, BENOIT:**

- [C11] M. M. I. Chy and B. Boulet, "Development of an Improved Mathematical Model of the Heating Phase of Thermoforming Process" IEEE Industrial Application Society Annual Meeting, Orlando, Florida, Oct 9-13, 2011.
- [C12] M. M. I. Chy and B. Boulet, "Estimation and control of temperature profile over a sheet in thermoforming process using non-equidistant temperature sensor" IEEE Industrial Application Society Annual Meeting, Orlando, Florida, Oct 9-13, 2011.
- [C13] R. Modirnia and B. Boulet, "Model-Based Virtual Sensors and Core Temperature Observers in Thermoforming Applications" IEEE Industrial Application Society Annual Meeting, Orlando, Florida, Oct 9-13, 2011.
- [C14] A. Haddadi, A. Shojaei and B. Boulet, "Enabling High Droop Gain for Improvement of Reactive Power Sharing Accuracy in an Electronically-Interfaced Autonomous Microgrid" 2011 IEEE Energy Conversion Congress and Exposition , Phoenix, Arizona, Sept 17-22, 2011.
- [C15] M. M. I. Chy, A. Haidar and B. Boulet, "A model predictive controller of plastic sheet temperature for a thermoforming process" American Control Conference, June 29-July 1, 2011, San Francisco, California, pp. 4410-4415.
- [C16] A. Salehiomran, S. R. Modirnia, B. Boulet, M. Rochette, "Single-longitudinal-mode fiber optic parametric oscillator based on Smith predictor control scheme" Photonics North 2011, Ottawa, Canada, May 16, 2011, Proc. SPIE 8007, 80070E (2011); doi:10.1117/12.905717
- [C17] H. Azarnoush, S. Vergnole, B. Boulet, and G. Lamouche, Optical coherence tomography layer thickness characterization of a mock artery during angioplasty balloon inflation, Proc. SPIE, Feb. 15, 2011, 7963, 796328 (2011); doi:10.1117/12.877995
- [C18] G. Lamouche, H. Azarnoush, S. Vergnole, V. Pazos, C. E. Bisailon, P. Debergue, B. Boulet, and R. Diraddo, "Assessing mechanical properties with intravascular or endoscopic optical coherence tomography," Proc. SPIE, vol. 7897, p. 789708, 2011.
- [C19] H. Azarnoush, S. Vergnole, M. Hewko, B. Boulet, M. Sowa, and G. Lamouche, "Detection of inflating balloon in optical coherence tomography images of a porcine artery in a beating heart experiment," Proc. SPIE, vol. 7964, p. 79641V, 2011.
- [C20] H. Azarnoush, S. Vergnole, M. Hewko, B. Boulet, M. Sowa, and G. Lamouche, "Detection of inflating balloon in optical coherence tomography images of a porcine artery in a beating heart experiment," Proc. SPIE, vol. 7964, p. 79641V, 2011.

---

**CAINES, PETER E.**

- [C21] F. Taringoo and P.E.Caines, "On the Extension of the Hybrid Maximum Principle to Riemannian Manifolds." Proc. 50th IEEE Conference on Decision and Control, 2011, Orlando, FLA. pp 3301-3306
- [C22] M. Nourian, P. E. Caines, R. P. Malhame', "An Evolution Mean Field Equation System for Initial Mean Consensus Behaviour: A Stability Analysis", Proc. 50th IEEE Conference on Decision and Control (CDC) and European Control Conference, Orlando, Florida, December 2011, pp 5029-5034
- [C23] M. Nourian, P. E. Caines and R. P. Malhame', "A Solution to the Consensus Problem Via a Continuum Based Mean Field Control Approach." Proc. 50th IEEE Conference on Decision and Control (CDC) and European Control Conference, Orlando, Florida, December 2011, pp 5808-5713
- [C24] A. C. Kizilkale and P.E. Caines, "Mean Field (NCE) Stochastic Control: Populations of Major and Egoist-Altruist Agents, " Proc. 50th IEEE Conference on Decision and Control, Orlando, Florida, December 2011, pp 5547-5552
- [C25] D. Gromov and P.E. Caines, "Stability of Interconnected Thermodynamic Systems", Proc. 50th IEEE Conference on Decision and Control (CDC) and European Control Conference, Orlando, Florida, December 2011, pp 6730 – 6735

- [C26] M. Nourian, P. E. Caines, R. P. Malhame', "Mean field analysis of Controlled Cucker-Smale Type Flocking: Linear Analysis and Perturbation Equations", Proc. 18th IFAC World Congress, Milan, Italy, August 2011, pp. 4471-4476.
- [C27] D. Gromov and P.E.Caines, "Interconnection of Thermodynamic Control Systems." Proc. 18th IFAC World Congress, Milan, Italy, August 2011, pp 6091-6097
- [C28] F. Taringoo and P.E.Caines, "Hybrid Optimal Control on Riemannian Manifolds and Geometric Optimization Algorithms", Journe'es de l'Optimisation 2009, HEC, Montreal, 2 - 4 May, 2011. Abstracts p. 19.
- [C29] D. Gromov and P.E.Caines, "Optimization of Hybrid Thermodynamic Control Systems with Phase Transitions", Journees de l'Optimisation 2009, HEC, Montreal, 2 - 4 May, 2011. Abstracts p. 20
- [C30] A.C. Kizilkale and P.E. Caines, "Initial Investigations of the Emergence of Coalitions in Mean Field Stochastic Systems," Journe'es de l'Optimisation 2009, HEC, Montreal, 2 - 4 May, 2011. Abstracts p. 25
- [C31] M. Nourian, P. E. Caines, R. P. Malhame', "An Evolution Mean Field Equation System of the Consensus Problem", Journe'es de l'Optimisation 2009, HEC, Montreal, 2 - 4 May, 2011. Abstracts p. 25
- [C32] M. Nourian, P. E. Caines, R. P. Malhame', "A Continuum Mean Field Stochastic Control Approach to the Consensus Problem," SIAM Conference on Control & its Application (CT'11), Baltimore, Maryland, July. 2011, Abstract p.35.

---

#### CHAMPAGNE, BENOIT:

- [C33] Assra (post-doc), A. Vakili (M. Eng.) and B. Champagne, "Iterative joint channel and noise variance estimation and primary user signal detection for cognitive radios", in Proc. IEEE Int. Symp. on Signal Processing and Information Technology (ISSPIT), Dec. 2011, pp. 279-283.
- [C34] C. Zhao (Ph.D.) and B. Champagne, "MMSE-based non-regenerative parallel MIMO relaying with simplified receiver," in Proc. IEEE GLOBECOM, Houston, Texas, Dec. 2011, 5 pages.
- [C35] A. Vakili (M. Eng.) and B. Champagne, "An adaptive energy detection technique applied to cognitive radio networks," in Proc. IEEE PIMRC, Toronto, Ontario, Sept. 2011, 6 pages.
- [C36] R. Abdolee (Ph.D.) and B. Champagne, "Diffusion LMS algorithms for sensor networks over non-ideal inter-sensor wireless channels," in Proc. Int. Workshop on Interconnection of Wireless Sensor Networks (along with DCOSS), Barcelona, Spain, June 2011, 6 pages.
- [C37] S. Rahimi (Ph.D.) and B. Champagne, "Perfect Reconstruction DFT Modulated Oversampled Filter Bank Transceivers," in Proc. EUSIPCO, Barcelona, Spain, Aug. 2011, 5 pages.

---

#### CHEN, LAWRENCE R.:

- [C38] J. Wang and L. R. Chen, "All-optical OOK-to-DPSK modulation format conversion using XPM in HNLF," International Conference on Optical Communications and Networks, 5-7 December 2011, Guangzhou, China.
- [C39] J. Li, T. Huang, and L. R. Chen, "Wavelength tunable all-optical clock recovery at 40 Gb/s based on a fiber optical parametric oscillator," IEEE Photonics Conference, 9-13 October 2011, Arlington, VA.
- [C40] T. Huang, J. Li, J. Sun, and L. R. Chen, "Photonic UWB signal generation and multicasting using a nonlinear optical loop mirror," IEEE Photonics Conference, 9-13 October 2011, Arlington, VA.
- [C41] H. Kishikawa, P. Seddighian, N. Goto, S.-I. Yanagiya, and L. R. Chen, "All-optical modulation format conversion from binary to quadrature phase-shift keying using delay line interferometer," IEEE Photonics Conference, 9-13 October 2011, Arlington, VA.
- [C42] T. Huang, J. Li, and L. R. Chen, "40 GHz and 80 GHz mode-locked semiconductor fiber laser using nonlinear polarization rotation in a highly nonlinear fiber," IEEE Photonics Conference, 9-13 October 2011, Arlington, VA.
- [C43] J. Li, T. Huang, and L. R. Chen, "40 - 200 GHz pulse train generation in a mode-locked fiber optical parametric oscillator," IEEE Photonics Conference, 9-13 October 2011, Arlington, VA.



- [C44] H.-Y. Lu, R. Adams, M. Saad, P. Orsini, R. Burga, and L. R. Chen, "Mechanically induced and cascaded long period gratings in ZBLAN fibers," IEEE Photonics Conference, 9-13 October 2011, Arlington, VA.
- [C45] L. Zhang, A. R. Sarmani, M.-I. Comanici, L. R. Chen, X. Gu, and P. Kung, "Monitoring multiple strain sensors based on all-fiber distributed Bragg reflector lasers and wavelength-to-power mapping," IEEE Photonics Conference, 9-13 October 2011, Arlington, VA.
- [C46] M. Morsy-Osman, L. R. Chen, and D. V. Plant, "Joint mitigation of laser phase noise and fiber nonlinearity using pilot-aided transmission for single-carrier systems," European Conference on Optical Communications, 18-22 September 2011, Geneva, Switzerland.
- [C47] J. Qiu, Z. Yin, K. Sun, L. R. Chen, M. Rochette, J. Wu, L. Zhao, and W. Wang, "Wavelength tolerance of an all-optical multi-logic gate based on XPM in a HNLF," Optoelectronics and Communications Conference, 4-8 July 2011, Kaoshiung, Taiwan.
- [C48] H.-Y. Lu, R. Adams, M. Saad, P. Orsini, R. Burga, and L. R. Chen, "Mechanically induced long period gratings in ZBLAN fibers," Information Photonics, 18 - 20 May 2011, Ottawa, Ontario.
- [C49] M.-I. Comanici, L. R. Chen, and P. Kung, "Measurement of dynamic strain using fiber Bragg grating-based laser sensor system," Information Photonics, 18 - 20 May 2011, Ottawa, Ontario.
- [C50] D. Celo, T. Smy, P. Gunupudi, L. R. Chen, P. Samadi, and C. L. Callender, "Thermo-electro-optic simulation of a tunable lattice-form Mach-Zehnder interferometer," Photonics North, 16-18 May 2011, Ottawa, Ontario.
- [C51] C. Blanchetiere, C. L. Callender, S. Jacob, C. J. Ledderhof, P. Dumais, D. Celo, L.R. Chen, and P. Samadi, "Thermo-optic silica PLC devices for applications in high speed optical signal processing," Photonics North, 16 - 18 May 2011, Ottawa, Ontario.
- [C52] P. Samadi, L. R. Chen, I. Kostko, P. Dumais, C. L. Callender, S. Jacob, B. Shia, "Reconfigurable time-domain demultiplexing of optical signals at 40 Gb/s," Conference on Optical Fiber Communications, 6 - 10 March 2011, Los Angeles, CA.

---

#### CHODAVARAPU, VAMSY P.:

- [C53] L. Yao, K. Yi Yung, M. C. Cheung, V. P. Chodavarapu, F. V. Bright, "CMOS Direct Time Interval Measurement of Long-Lived Luminescence Lifetimes", Proceedings of IEEE EMBC Conference, Boston, 2011.
- [C54] Yu Ping Zhang, M. Andrews, A. G. Kirk, V. P. Chodavarapu, "Origin of iridescence in chiral nematic phase nanocrystalline cellulose for encryption and enhanced color", Proceedings of SPIE Photonics West (OPTO), San Francisco, 2011.
- [C55] P. J. R. Roche, M. C. Cheung, S. Taslimi, A. G. Kirk, V. P. Chodavarapu, "Demonstration of a reusable plasmonic polymer microarray sensing platform", Proceedings of SPIE Photonics West (BIOS), San Francisco, 2011.

---

#### CLARK, JAMES J.:

- [C56] Au, C.E., Ng, V. and Clark, J.J., "MirrorMap: Augmenting 2D Mobile Maps with Virtual Mirrors", 2011 Mobile HCI conference
- [C4] [C57] Haji-Abolhassani, A. and Clark, J.J., "Visual Task Inference Using Hidden Markov Models", 2011 International Joint Conference on Artificial Intelligence (IJCAI), pp 1678-1683.
- [C58] Haji-Abolhassani, A. and Clark, J.J., "Realization of an Inverse Yarnbus Process via Hidden Markov Models for Visual-Task Inference", 2011 Vision Science Symposium (VSS).

---

#### COATES, MARK J.:

- [C59] S. Nannuru, Y. Li, M. J. Coates, and B. Yang, "Multi-target device-free tracking using radio frequency tomography", in Proc. Int. Conf. Intelligent Sensors, Sensor Networks and Information Processing, Adelaide, Australia, Dec. 2011.
- [C60] Emily Porter, Adam Santorelli, Alexandre Bourdon, Dady Coulibaly, Mark Coates, Milica Popovic, "Time-Domain Microwave Breast Cancer Detection: Experiments with Comprehensive Glandular Phantoms", In Proc. Asia-Pacific Microwave Conf., Melbourne, Australia, Dec. 2011.

- [C61] F. Thouin, S. Nannuru and M.J. Coates, “Multi-target tracking for measurement models with additive contributions,” in Proc. ISIF Int. Conf. Information Fusion, Chicago, IL, July 2011. [8 pages].
- [C62] E. Porter, A. Santorelli, M. Coates and M. Popovic, “Microwave breast imaging: time-domain experiments on tissue phantoms”, in Proc. IEEE Int. Symp. on Antennas and Propagation, Spokane, Washington, USA, July 2011.
- [C63] Y. Li, X. Chen, M.J. Coates and B. Yen, “Sequential Monte Carlo radio-frequency tomographic tracking”, in Proc. IEEE Int. Conf. Acoustics, Speech and Signal Proc., Prague, May 2011.
- [C64] D. Ūstebay, M.J. Coates, and M.G. Rabbat, “Distributed auxiliary particle filters using selective gossip”, in Proc. IEEE Int. Conf. Acoust., Speech, Signal Proc. (ICASSP), Prague, May 2011.
- [C65] X. Chen, A. Edelstein, Y. Li, M.J. Coates, A. Men, and M. Rabbat, “Sequential Monte Carlo for simultaneous passive device-free tracking and sensor localization using received signal strength measurements”, in Proc. IEEE/ACM Int. Conf. Inf. Proc. Sensor Networks, Apr. 2011. [10 pages, Acceptance Rate (IP Track): 20%] E. Porter, A. Santorelli, M.J. Coates and M. Popović, “An Experimental System for Time-Domain Microwave Breast Imaging,” in Proc. Eur. Conf. Antenn. Prop., Rome, Italy, Apr. 2011.
- [C66] E. Kirshin, G. K. Zhu, M. Popovic and M. Coates, “Evaluation of the mono-static microwave radar algorithms for breast imaging”, in Proc. European Conference on Antennas and Propagation, Rome, Italy, April 2011.
- [C67] E. Kirshin, B. Oreshkin, G. Zhu, M.J. Coates and M. Popović, “Fusing Microwave Radar and Microwave-induced Thermoacoustics for breast cancer detection” in Proc. Int. Symp. Biomedical Imaging, Chicago, IL, USA, Mar. 2011.

---

COOPERSTOCK, JEREMY R.:

- [C68] F. Bérard, G. Wang, and J. R. Cooperstock. “On the Limits of the Human Motor Control Precision: the Search for a Device’s Human Resolution.” In: INTERACT. Lisbon, Portugal, Sept. 2011, pp. 107–122.
- [C69] A. Olmos, P. Rushka, D. Ko, G. Foote, W. Woszczyk, and J. R. Cooperstock. “Where do you want your ears? Comparing performance quality as a function of listening position in a virtual jazz band.” In: Sound, Music and Computing. July 2011, 6 pgs.
- [C70] G. Millet, M. Otis, G. Chaw, and J. R. Cooperstock. “Initial Development of a Variable- Friction Floor Surface.” In: Canadian Medical and Biological Engineering Conference. Festival of International Conferences on Caregiving, Disability, Aging and Technology, June 2011, 4 pgs.
- [C71] G. Wang, M. McGuffin, F. Bérard, and J. R. Cooperstock. “Pop-up Depth Views for Improving 3D Target Acquisition.” In: Graphics Interface. St. John’s, NL, May 2011, pp. 41–48.
- [C72] I. Garcia-Dorado and J. R. Cooperstock. “Automatic multi-projector calibration with an uncalibrated camera.” In: International Workshop on Projector-Camera Systems. Colorado Springs: IEEE, June 2011, pp. 29–36.
- [C73] J. Blum, H. Sun, A. Olmos, and J. R. Cooperstock. “End-User Viewpoint Control of Live Video from a Medical Camera Array.” In: International Conference on Distributed Smart Cameras. Ghent, Belgium, Aug. 2011, pp. 1–6. url: <http://www.cim.mcgill.ca/sre/publications/2011-ICDSC.pdf>.
- [C74] J. Blum, M. Bouchard, and J. R. Cooperstock. “What’s around me? Spatialized audio augmented reality for blind users with a smartphone.” In: Mobile and Ubiquitous Systems (BEST PAPER AWARD). Published as Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering. Springer, Dec. 2011.
- [C75] J. Ip and J. R. Cooperstock. “To Virtualize or Not? The Importance of Physical and Virtual Components in Augmented Reality Board Games.” In: International Conference on Entertainment Computing. Vancouver, BC, Canada: Springer-Verlag, Oct. 2011.
- [C76] M. Otis, G. Millet, S. Beniak, and J. R. Cooperstock. “Modeling of Lower Limbs for Vibrotactile Compensation.” In: Canadian Medical and Biological Engineering Conference. Festival of International Conferences on Caregiving, Disability, Aging and Technology, June 2011, 4 pgs.



- [C77] N. Bouillot, M. Tomiyoshi, and J. R. Cooperstock. "Extended User Control over Multi-channel Content Delivered over the Web." In: Conference on Audio Networking. San Diego: Audio Engineering Society, Nov. 2011, 5 pgs.
- [C78] J. R. Cooperstock. "From Rehearsal to Performance: Ensemble Learning in Open Orchestra and Distributed Rehearsal for World Opera." In: Music Anywhere, Anytime: International Symposium on Synchronous Distance Learning. Oct. 2011

---

#### EL-GAMAL, MOURAD N.:

- [C79] M. Elsayed, F. Nabki, and M. N. El-Gamal, "A 2000 degree/s dynamic range bulk mode dodecagon gyro for a commercial SOI technology," the IEEE 18th International Conference on Electronics, Circuits, and Systems (ICECS'11), accepted, 4 pages, Dec. 2011.
- [C80] M. Elsayed, F. Nabki, M. Sawan, and M. N. El-Gamal, "A 5V MEMS gyroscope with 3 aF/degree/s sensitivity, 0.6 degree/root\_square(Hz) mechanical noise and drive-sense crosstalk minimization," the IEEE International Conference on Microelectronics (ICM Dec.'11), accepted, 4 pages, December 2011.
- [C81] B. Azmy, M. N. El-Gamal, A. El-Henawy, and H. Ragai, "An accurate model for fluid loading on circular CMUTs", the IEEE International Ultrasonics Symposium, accepted, 4 pages, October 2011.

---

#### FERRIE, FRANK P.:

- [C82] Abou-Moustafa, Karim and Ferrie, Frank P., "A Framework for Hypothesis Learning Over Sets of Vectors," Proc. ACM SIG KDD 9th Workshop on Data Mining and Learning with Graphs, Washington D.C., July 24-25, 2011.
- [C83] Abou-Moustafa, Karim, Shah, Mohak, De La Torre, Fernando, and Ferrie, Frank P., "Relaxed Exponential Kernels for Unsupervised Learning," Proc. 3rd Annual Symposium of the German Assoc. for Pattern Recognition, Frankfurt, Germany, August 30 to September 2, 2011, pp. 184-195.
- [C84] Wang, R., and Ferrie, F.P., "Window Detection from Mobile Lidar Data," IEEE Workshop on Applications of Computer Vision (WACV), Kona, Hawaii, January 5-7, 2011, pp. 58-65.

---

#### GIANNACOPOULOS, DENNIS:

- [C85] D. M. Fernández\*\*, M. Mehri Dehnavi\*, W. J. Gross, D. Giannacopoulos. (2011). Alternate parallel processing approach for FEM. Proceedings of the 18th Conference on the Computation of Electromagnetic Fields, p.1, Sydney, Australia, July 12- 5, 2011.
- [C86] M. Mehri Dehnavi\*, D. Fernández\*\*, J. Gaudiot and D. Giannacopoulos. (2011). Parallel Sparse Approximate Inverse Preconditioning on Graphic Processing Units. Proceedings of the 18th Conference on the Computation of Electromagnetic Fields, p.1, Sydney, Australia, July 12-15, 2011.
- [C87] Y. El-Kurdi\*\*, W. J. Gross and D. Giannacopoulos. (2011). Efficient implementation of Gaussian Belief Propagation solver for large sparse diagonally dominant linear systems. Proceedings of the 18th Conference on the Computation of Electromagnetic Fields, p.1, Sydney, Australia, July 12-15, 2011.
- [C88] D. Q. Ren, E. Bracken, S. Polstyanko, N. Lambert, R. Suda and D. D. Giannacopoulos. (2011). Power aware parallel 3-D finite element mesh refinement performance modeling and analysis with CUDA/MPI on GPU and multi-core architecture. Proceedings of the 18th Conference on the Computation of Electromagnetic Fields, p.1, Sydney, Australia, July 12-15, 2011.

---

#### GROSS, WARREN J.:

- [C89] C. Leroux, I. Tal, A. Vardy, and W. J. Gross, "Architectures matérielles pour le décodage des codes polaires," GRETSI Symposium on Signal and Image Processing, Bordeaux, France, September 5-8, 2011.
- [C85]
- [C87]

- [C90] M. N. Sakib, V. Mahalingam, A. J. Wong, W. J. Gross and O. Liboiron-Ladouceur, "Low Complexity Soft Decision Circuit for LDPC decoders," Proceedings of the Conference on Lasers and Electro Optics (CLEO:2011), May 1-6, 2011, Baltimore, MD.
- [C91] M. N. Sakib, A. J. Wong, W. J. Gross and O. Liboiron-Ladouceur, "Decoding of Long-Block Soft Decision LDPC Codes for Optical Communication Systems," Proceedings of Information Photonics, May 18-20, 2011, Ottawa, Ontario, Canada.
- [C92] C. Leroux, I. Tal, A. Vardy, and W. J. Gross, "Hardware Architectures for Successive Cancellation Decoding of Polar Codes," Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing, Prague, Czech Republic, May 22-27, 2011.

---

#### JOOS, GEZA:

- [C93] M. de Freige\*, G. Joos, and M. Dubois, "Energy management & scheduling in a fast charging station for PHEV batteries," in IEEE Power & Energy Society General Meeting, 2011.
- [C94] R. Hidalgo\*, C. Abbey, and G. Joos, "Technical and economic assessment of active distribution network technologies," IEEE Power & Energy Society General Meeting, 2011.
- [C95] M. Ross\*, C. Abbey, and G. Joos, "Cost analysis for sizing energy storage systems in wind-diesel microgrids," IEEE Power & Energy Society General Meeting, 2011.
- [C96] S. EL Itani\*, U.D. Annakkage, and G. Joos, "Short-term frequency support utilizing inertial response of DFIG wind turbines," IEEE Power & Energy Society General Meeting, 2011.
- [C97] A. Haddadi\* and G. Joos, "Load sharing of autonomous distribution-level microgrids," IEEE Power & Energy Society General Meeting, 2011.
- [C98] S. EL Itani\*, and G. Joos, "Assessment of inertial potential of variable-speed wind turbines," IEEE Energy Conversion Congress and Exposition (ECCE), 2011.
- [C99] M. de Freige\*, M. Ross\*, G. Joos, and M. Dubois, "Power & energy ratings optimization in a fast charging station for PHEV batteries," IEEE Electric Machines & Drives Conference (IEMDC), 2011.
- [C100] H. Golestani Far\*, A. Rodolakis, and G. Joos, "Application of Intelligent Relays to Synchronous Distributed Generation Islanding Detection," CIGRÉ Canada Conf on Power Systems, 2011.
- [C101] M. Ammar\*, P. Venne, C. Abbey, and G. Joos, "A Methodology for Assessing the Impact of Distributed Wind Power on Voltage Flicker," CIGRÉ 2011 Bologna Symposium on the Electric Power System of the Future.
- [C102] G. Young Morris\*, C. Abbey, and G. Joos, C. Marnay, "A framework for the evaluation of the cost and benefits of microgrids," CIGRÉ 2011 Bologna Symposium on the Electric Power System of the Future.
- [C103] M. Ross\*, C. Abbey, and G. Joos, "Parametric analysis of ESS sizing in wind-diesel microgrids," CIGRÉ 2011 Bologna Symposium on the Electric Power System of the Future.

---

#### KABAL, PETER:

- [C104] H. Khan and P. Kabal "Tree Encoding for the ITU-T G.711.1 Speech Coder", Proc. Interspeech (Florence, Italy), pp. 2553-2556, Aug. 2011.
- [C105] Q. Gong and P. Kabal, "Improved Quality for Conversational VoIP using Path Diversity Properties of Quantization Noise", Proc. Interspeech (Florence, Italy), pp. 2549-2552, Aug. 2011.
- [C106] A. Nour-Eldin and P. Kabal, "Memory-Based Approximation of the Gaussian Mixture Model Framework for Bandwidth Extension of Narrowband Speech", Proc. Interspeech (Florence, Italy), pp. 1185-1188, Aug. 2011.
- [C107] P. Kabal, "Correlation Properties of Quantization Noise", Proc. IEEE Int. Conf. Acoustics, Speech, Signal Processing (Prague, Czech Republic), pp. 5244-5247, May 2011.
- [C108] M. Konaté and P. Kabal, "Quantization Noise Estimation for Log-PCM", Proc. Canadian Conf. Elect., Computer Eng. (Niagara Falls, ON), pp. 1337-1341, May 2011.

---

#### KHAZAKA, RONI:

- [C109] M. Kanaan and R. Khazaka "Model order reduction for nonlinear macromodeling of RF circuits," Proc. IEEE NEWCAS, June 2011.

---

**KIRK, ANDREW G.:**

- [C110] Z. Mi, P. Bianucci, M. H. T. Dastjerdi, S. Mukherjee, Z. Tian, V. Veerasubramanian\*, A. G. Kirk, and D. V. Plant, '1.3 - 1.55  $\mu\text{m}$  Self-organized InAs Quantum Dot Microtube Lasers on Silicon', Proc. IEEE Photonics Conference 2011, Arlington, VA, 2011
- [C111] V. Veerasubramanian\*; G. Beaudin; A. Giguere; B. LeDrogoff; V. Aimez; A.G.Kirk, 'Vertical SG-DBR Based Tunable Hybrid Silicon Evanescent Laser', Proc. Conference on Lasers and Electro-optics, Baltimore 2011.
- [C112] A.G.Kirk, 'Integration strategies for planar photonic devices', Proc. Intl. Topical Meeting on Information Photonics, Ottawa, ON, May 2011 (Invited)
- [C113] M.I.Cheema\* and A.G.Kirk, 'Application of ring down measurement approach to micro-cavities for bio-sensing applications', Proc. SPIE Photonics West, San Francisco, CA, 2011.
- [C54]
- [C114] V. Veerasubramanian\*, G. Beaudin, A. Giguère, B. LeDrogoff, V. Aimez, A. G. Kirk, 'Hybrid III-V silicon Silicon evanescent lasers with vertical sidewalled gratings', . IEEE Photonics Society Winter Topical Meeting (Keystone, CO), January 2011
- [C115] A.Khorshidahmad\*, A.G.Kirk, 'Tunable Multi-wavelength Source based on a Nested Heterostructure Photonic Crystal Cavity', Proc. IEEE Photonics Society Winter Topical Meeting (Keystone, CO), January 2011

---

**LABEAU, FABRICE:**

- [C116] Naghdinezhad and F. Labeau, Distortion Estimation for Reference Frame Modification Methods, EURASIP European Conference on Signal Processing (EUSIPCO), August 2011
- [C117] A. Naghdinezhad and F. Labeau, An Error Resilient Technique for Temporal and Spatial Scalability, in Proc. IEEE International Conference on Multimedia and Expo (ICME), July 2011.
- [C118] D. Lin and F. Labeau, Bandwidth allocation in view of EMI on medical equipments in healthcare monitoring systems, in Proc. IEEE International Conference on e-Health Networking, Applications and Services (HealthCom), June 2011, pp. 209-212.
- [C119] M. Akbari and F. Labeau, Design of High Order FIR Unimodular Filter Banks and Its Application in Combatting Instantaneous Erasures', in Proc. IEEE DSP Workshop, January 2011, pp. 60-65.
- [C120] D. Lin and F. Labeau, Schemes of bandwidth allocation for medical data transmission, in Proc. IEEE Radio Wireless Week - BioWireless workshop, January 2011, pp. 27-30.

---

**LEIB, HARRY:**

- [C121] D. Radji, H. Leib, "Bounded Complexity Tree Search MMSE Detection for MIMO Systems Using Improved Channel Partition Preprocessing", IEEE Canadian Conference on Electrical and Computer Eng. (CCECE 2011), Niagara Falls, Ontario, Canada, May 2011, pp. 708-712, Digital Object Identifier : 10.1109/CCECE.2011.6030546
- [C122] K. L. Wong, H. Leib, "Space-Time-Frequency Pilot-Symbol Assisted Channel Estimation for MIMO-OFDM", (invited), chapter in K.N. Le, Editor, "OFDM and OFDMA with linear diversity for future wireless communications", Bentham Science Publishing, Oak Park IL, U.S.A, 2011, Sept. 2011. (invited book chapter)

---

**LE-NGOC, THO:**

- [C123] S. P. Herath, Nghi H. Tran, Tho Le-Ngoc, "Rotated Multi-D Constellations in Rayleigh Fading: Mutual Information Improvement and a Pragmatic Approach for Near-Capacity Performance in High-Rate Regions", IEEE WCNC2011, Cancun, Mexico, March 28-31, 2011
- [C124] Ho Van Khuong, Tho Le-Ngoc, "Effect of Impulsive Noise on Decode-and-Forward Cooperative Relaying over Fading Channel", IEEE WCNC2011, Cancun, Mexico, March 28-31, 2011
- [C125] Quang-Dung Ho, Tho Le-Ngoc, "An Integrated Wireless Communications Platform for Smart Electronic Healthcare Applications", IEEE International Workshop on Sensor Networks for Intelligence Gathering and Monitoring (SNIGM), Niagara Falls, Ontario, May 8-11, 2011.

- [C126] Quang-Dung Ho, Thanh Ngon Tran, Tho Le-Ngoc, "Electromagnetic-interference-aware Adaptive Routing for Wireless Communication Networks Deployed in Healthcare Institutions", IEEE Canadian Conference on Electrical and Computer Engineering 2011, Niagara Falls, Ontario, May 8-11, 2011
- [C127] Mahsa Derakhshani, Tho Le-Ngoc, "Aggregate Interference and Capacity-Outage Analysis in a Cognitive Radio Network using Cooperative Sensing", IEEE Canadian Conference on Electrical and Computer Engineering 2011, Niagara Falls, Ontario, May 8-11, 2011
- [C128] Long B. Le, Tho Le-Ngoc, "QoS Provisioning for OFDMA-based Wireless Network Infrastructure in Smart Grids", IEEE Canadian Conference on Electrical and Computer Engineering 2011, Niagara Falls, Ontario, May 8-11, 2011
- [C129] Khuong Ho-Van, Tho Le-Ngoc, "Performance of 2-1-1 Coded Cooperative Relaying Scheme", IEEE Canadian Conference on Electrical and Computer Engineering 2011, Niagara Falls, Ontario, May 8-11, 2011
- [C130] Loic Canonne-Velasquez, Hung Nguyen-Le and Tho Le-Ngoc, "Doubly Selective Cascaded Channel Estimation in Amplify-and-Forward Relay Systems", IEEE ICC2011, Kyoto, Japan, June 5-9, 2011
- [C131] Soham Ghosh, Thanh-Ngon Tran, Tho Le-Ngoc, "A Dual-layer EBG-based Miniaturized Patch Multi-antenna Structure, 2011 IEEE AP-S International Symposium on Antennas and Propagation, Spokane, Washington, USA, July 3-8, 2011.
- [C132] Leonardo Jimenez Rodriguez, Nghi H. Tran, Tho Le-Ngoc, "Multiple-Frame Precoding Scheme for BICM over AF Relay Channels", IEEE 7th International Wireless Communications and Mobile Computing Conference (IWCMC 2011), Istanbul, Turkey, July 5-8, 2011.
- [C133] Leonardo Jimenez Rodriguez, Nghi H. Tran, Tho Le-Ngoc, "Capacity-Approaching Design for Half-Duplex NAF Relay Channels", IEEE VTC2011-Fall, San Francisco, September 5-8, 2011.
- [C134] Duy T. Ngo, Long Bao Le, Tho Le-Ngoc, Ekram Hossain, Dong In Kim, "Distributed Interference Management in Femtocell Networks", IEEE VTC2011-Fall, San Francisco, September 5-8, 2011.
- [C135] Peng Jia, Tho Le-Ngoc, "Capacity-Maximization Threshold Design for Wideband Sensing with Guaranteed Minimum Primary-User Rate", IEEE VTC2011-Fall, San Francisco, September 5-8, 2011.
- [C136] Hung Nguyen-Le, Duy H. N. Nguyen, Tho Le-Ngoc, "Game-Based Zero-Forcing Precoding for Multicell Multiuser Transmissions", IEEE VTC2011-Fall, San Francisco, September 5-8, 2011.
- [C137] Duy T. Ngo, Long B. Le, Tho Le-Ngoc, "Distributed Pareto-Optimal Power Control in Femtocell Networks", 22nd IEEE Symposium on Personal, Indoor, Mobile and Radio Communications (PIMRC 2011), Toronto, September 11-14, 2011
- [C138] Long Bao Le, Tho Le-Ngoc, "Joint Cooperative Scheduling and Power Control for Interference-Limited Wireless Networks", 22nd IEEE Symposium on Personal, Indoor, Mobile and Radio Communications (PIMRC 2011), Toronto, September 11-14, 2011
- [C139] Nguyen Le Hung, Tho Le-Ngoc, Chi Chung Ko, "Pilot-Aided Jamming Cancellation in Slow FH/MFSK Systems", International Conference on Advanced Technologies for Communications (ATC/REV), Danang, Vietnam, August 3-5, 2011.
- [C140] Mahsa Derakhshani, Tho Le-Ngoc, "Adaptive Hopping Transmission Strategy for Opportunistic Spectrum Access", IEEE GLOBECOM 2011, Houston, Texas, December 5-9, 2011.
- [C141] Duy H. N. Nguyen, Tho Le-Ngoc, "Efficient Coordinated Multicell Beamforming with Per-Base-Station Power Constraints", IEEE GLOBECOM 2011, Houston, Texas, December 5-9, 2011.
- [C142] Sean Huberman, Christopher Leung, Tho Le-Ngoc, "A Clustering Approach to Autonomous Spectrum Balancing Using Multiple Reference Line for DSL", IEEE GLOBECOM 2011, Houston, Texas, December 5-9, 2011.
- [C143] Sean Huberman, Tho Le-Ngoc, "Ergodic Capacity of a DSL Binder Channel", IEEE GLOBECOM 2011, Houston, Texas, December 5-9, 2011.
- [C144] Sajjad Beygi, Hamid Reza Bahrami, Tho Le-Ngoc, "Space-Time Codes For Amplify-and-Forward (AF) Relay Channels: Performance and Code Design", IEEE GLOBECOM 2011, Houston, Texas, December 5-9, 2011.

- [C145] Ha X. Nguyen, Ha H. Nguyen, Tho Le-Ngoc, "Noncoherent Receiver for Amplify-and-Forward Relaying with M-FSK Modulation", IEEE GLOBECOM 2011, Houston, Texas, December 5-9, 2011.

---

LEVINE, MARTIN D.:

- [C146] Jian Li (NUDT), Martin Levine (McGill), Xiangjing An (NUDT), Hangen He (NUDT) Saliency Detection Based on Frequency and Spatial Domain Analyses, BMVC 2011, The 22nd British Machine Vision Conference, University of Dundee, 29 August - 2 September 2011

---

LIBOIRON-LADOUCEUR, ODILE:

- [C147] B. Banan, A. Salehiomran, and O. Liboiron-Ladouceur, "Investigation of a Flexible On-chip Interconnection using a Plasmonic Strip," IEEE Photonics Conference, MB4, October 2011.
- [C148] M.S. Hai and O. Liboiron-Ladouceur, "Thermally Stable 50 Gb/s SOI DPSK Demodulator," IEEE Photonics Conference, TuR2, October 2011.
- [C149] M. Sowailam, D.V. Plant, and O. Liboiron-Ladouceur, "Implementation of Optical Burst Switching in Data Centers," IEEE Photonics Conference, WG4, October 2011.
- [C150] M.N. Sakib and O. Liboiron-Ladouceur, "Ultra-Narrow-Spacing Tb/s Long Haul Transmission using Soft LDPC Decoding with Gaussian Processes," IEEE Photonics Society Topicals, MC4.2, July 2011.
- [C151] M.N. Sakib, A. Shourky, M. Sowailam, R. Varano, D. Rolston, and O. Liboiron-Ladouceur, "Development of Optically Enhanced Interconnectivity for Computing Platforms", CIPI Annual General Meeting, G.3, May 2011.
- [C152] P. Castoldi, N. Andriolli, I. Cerutti, P. G. Raponi, and O. Liboiron-Ladouceur, "Energy-Efficient Switching in Optical Interconnection Networks," 13th International Conference on Transparent Optical Networks (ICTON), We.D3.5, June 2011, [invited].
- [C91]
- [C153] M.S. Hai and O. Liboiron-Ladouceur, "Temperature Compensated 50 Gb/s DPSK Demodulator," Conference on Lasers and Electro-Optics (CLEO), JTuI76, May. 2011.
- [C154] M.N. Sakib, V. Mahalingam, A.J. Wong, W.J. Gross, and O. Liboiron-Ladouceur, "Low Complexity Soft Decision Circuit for LDPC Decoders," Conf. Lasers and Electro-Optic (CLEO), JWA18, May 2011.
- [C155] M.N. Sakib, O. Liboiron-Ladouceur, and X. Zhang, "Impact of RF Noise on Transmission Performance of Multiband OFDM UWB over Fiber Systems," Optical Fiber Communication Conference & Exposition (OFC/NFOEC), JWA041, Mar. 2011.

---

LOWTHER, DAVID A.:

- [C156] Moghnieh, H., Lowther, D.A., "Architecture Independent Performance Evaluation of Sparse Matrix Vector Multiplication on Multi-Core Processors," Proceedings of the International Conference on the Computation of Electromagnetic Fields (COMPUMAG Sydney), Sydney Australia, July, 2011, 2 pages (CDROM).
- [C157] Li, M., Lowther, D.A., "Robust Topology Optimization of an IPM Machine using Topological Sensitivity Analysis," Proceedings of the International Conference on the Computation of Electromagnetic Fields (COMPUMAG Sydney), Sydney Australia, July, 2011, 2 pages (CDROM).
- [C158] Ouyang, J., Lowther, D.A., "Comparison of Evolutionary and Rule-Based Strategies for Electromagnetic Device Optimization," Proceedings of the International Conference on the Computation of Electromagnetic Fields (COMPUMAG Sydney), Sydney Australia, July, 2011, 2 pages (CDROM).
- [C159] Ramirez, J., Lowther, D.A., "Modeling of the Cell Membrane Response to Ultra Short Electric Pulses," Proceedings of the IET 8th International Conference on Computation in Electromagnetics, April 2011, pp1-2.

---

MAHAJAN, ADITYA:

- [C160] Mahajan, Optimal decentralized control of coupled subsystems with control sharing, in the Proceedings of the 50th IEEE Conference on Decision and Control, Dec 2011.

---

**MEYER, BRETT:**

- [C161] Brett H. Meyer, Benton Calhoun, John Lach, and Kevin Skadron, "Cost-effective Safety and Fault Localization using Distributed Temporal Redundancy," in the Proceedings of the IEEE/ACM International Conference on Compilers, Architectures, and Synthesis of Embedded Systems, CASES '11, October 2011.

---

**MI, ZETIAN:**

- [C162] K. Cui and Z. Mi, "Study on the self-organization mechanism of InGaN quantum dot in GaN nanowires," 2011 Materials Research Society Fall Meeting, Boston, MA, Nov. 28 – Dec. 2, 2011.
- [C163] M. G. Kibria, K. Cui, A. Shih, M. Harati, D. Wang, and Z. Mi, "Photocatalytic water splitting on III-nitride nanowires," 2011 Materials Research Society Fall Meeting, Boston, MA, Nov. 28 – Dec. 2, 2011.
- [C164] Invited: Z. Mi, P. Bianucci, K. Cui, Md G. Kibria, Y. Nagai, and R. Sladek, "Self-organized III-V semiconductor microtube and nanowire lasers and integrated DNA sensors on a silicon platform," Nanoelectronic Device for Defense & Security Conference, Polytechnic Institute of New York University, Brooklyn, NY, Aug. 29-Sept.1, 2011.
- [C165] Invited: H. P. T. Nguyen, K. Cui, S. Zhang, S. Fathololoumi, and Z. Mi, "Study on the quantum efficiency enhancement in InGaN/GaN dot-in-a-wire light emitting diodes grown by molecular beam epitaxy," IEEE Photonics 2011 Conference, Arlington, VA, Oct. 9-13, 2011. (Best Student Paper Award)
- [C110]
- [C166] Invited: Z. Mi, S. Zhao, S. Fathololoumi, and K. Cui "Nearly intrinsic InN nanowire: epitaxial growth, properties and device applications," International Workshop on Quantum Nanostructures and Nanoelectronics, University of Tokyo, Tokyo, Japan, Oct. 3-4, 2011.
- [C167] Invited: Z. Mi, H. P. T. Nguyen, K. Cui, S. Zhang, and S. Fathololoumi, "Ultra-high efficiency phosphor-free nanowire light emitting diodes monolithically grown on silicon," 15th Canadian Semiconductor Science and Technology Conference, Vancouver, BC, Canada, Aug. 15-17, 2011.
- [C168] Invited: Z. Mi, P. Bianucci, S. Mukherjee, and M. H. T. Dastjerdi, "Rolled-up InAs quantum dot tube lasers," 28th North American Molecular Beam Epitaxy Conference, University of California San Diego, San Jolla, CA, Aug. 14-17, 2011.
- [C169] H. P. T. Nguyen, S. Zhang, K. Cui, S. Fathololoumi, and Z. Mi, "High efficiency phosphor-free InGaN/GaN nanowire white light emitting diodes on silicon," 28th North American Molecular Beam Epitaxy Conference, University of California San Diego, San Jolla, CA, Aug. 14-17, 2011. (Outstanding Student Paper Award).
- [C170] H. P. T. Nguyen, Zhang, K. Cui, X. Han, S. Fathololoumi, and Z. Mi, "High-efficiency p-doped InGaN/GaN dot-in-a-wire white light emitting diodes monolithically grown on Si(111)," International Conference on Nitride Semiconductors, Glasgow, UK, July 10-15, 2011.
- [C171] H. P. T. Nguyen, K. Cui, S. Fathololoumi, X. Han, S. Zhao, Z. Mi, Q. Li, G. Wang, K. Bevan, and H. Guo, "On the surface electron accumulation and Fermi-level pinning at InN nonpolar growth surfaces," International Conference on Nitride Semiconductors, Glasgow, UK, July 10-15, 2011.
- [C172] Q. Li, G. Wang, K. Westlake, M. Crawford, S. Lee, D. Koleske, J. Figiel, K. Cross, S. Fathololoumi, and Z. Mi, "Internal quantum efficiency in nanorod LED arrays created by top-down techniques," 52nd Electronic Materials Conference, University of California, Santa Barbara, CA, June 22 – 24, 2011.
- [C173] Invited: Z. Mi, "Nanotube and nanowire based coherent light sources on silicon," CMOS Emerging Technologies Workshop, Whistler, BC, Canada, June 15-17, 2011.
- [C174] Invited: Z. Mi, H. P. T. Nguyen, K. Cui, Md. G. Kibria, D. Wang and I. Shih, "Harvesting solar energy using group III-nitride nanowires," Photonics North and Photovoltaics 2nd National Scientific Conference, Ottawa, ON, May 16-18, 2011.
- [C175] J. Qiu, A. Shih, Y. F. Qi, S. Park, Z. Mi, and I. Shih, "Growth of large crystalline CuInSe<sub>2</sub> ingots," Photonics North and Photovoltaics 2nd National Scientific Conference, Ottawa, ON, May 16-18, 2011.



- [C176] H. P. T. Nguyen, K. Cui, S. Zhang, X. Han, Z. Mi, "InGaN/GaN dot-in-a-wire nanoscale heterostructures and high-efficiency light emitting diodes on Si," 5th (OSA) International Conference on Nanophotonics, Fudan University, Shanghai, China, May 22-26, 2011.
- [C177] H. P. T. Nguyen, S. Zhang, K. Cui, X. Han, and Z. Mi, "High efficiency InGaN/GaN dot-in-a-wire light emitting diodes grown by molecular beam epitaxy on Si(111)," Conference on Lasers and Electro-Optics, Baltimore, MD, May 1-6, 2011.
- [C178] P. Bianucci, S. Mukherjee, P. Poole, and Z. Mi, "Optically pumped room-temperature InAs/InGaAsP microtube laser operating near 1.55  $\mu\text{m}$ ," Conference on Lasers and Electro-Optics, Baltimore, MD, May 1-6, 2011.
- [C179] H. P. T. Nguyen, S. Zhang, K. Cui, X. Han, and Z. Mi, "Molecular beam epitaxial growth, fabrication, and characterization of high efficiency InGaN/GaN dot-in-a-wire light emitting diodes on Si(111)," 219th Electrochemical Society Meeting, Montreal, Canada, May 1-6, 2011.
- [C180] Invited: Z. Mi, P. Bianucci, F. Li, Z. Tian, V. Veerasubramanian, A. G. Kirk, D. V. Plant, and P. J. Poole, "Self-organized InAs quantum dot tube lasers and integrated optoelectronics on Si," Photonics West Conference, San Francisco, CA, Jan. 22-27, 2011.
- [C181] P. Bianucci, S. Mukherjee, P. J. Poole, and Z. Mi, "Self-organized 1.55  $\mu\text{m}$  InAs/InP quantum dot tube nanoscale coherent light sources," IEEE Photonics Society Winter Topical Meeting 2011, Keystone, CO, Jan. 10-12, 2011.
- [C182] Invited: Z. Mi, H. P. T. Nguyen, S. Zhang, and K. Cui, "High performance InGaN/GaN dot-in-a-wire light emitting diodes on Si(111)," IEEE Photonics Society Winter Topical Meeting 2011, Keystone, CO, Jan. 10-12, 2011.

---

#### MICHALSKA, HANNAH:

- [C183] Hadzagic, M, Michalska, H., "A Bayesian inference approach for batch trajectory estimation", Proceedings of the 14th International Conference on Information Fusion, Print ISBN: 978-1-4577-0267-9 ; INSPEC Accession Number: 12177654; 5-8 July 2011, Chicago, IL, USA, pp. 1-8.

---

#### MUSALLAM, WISSAM (SAM):

- [C184] Sarvadevabhatla, K., Benovoy, M., Musallam, S. & Ng-Thow-Hing, V. (2011). Adaptive Facial Expression Recognition Using Inter-Modal Top-Down Context. Transactions of ACM International Conference on Multimodal Interaction.
- [C185] Talebinejad, M., Musallam, S. & Marble, E.A. (2011). A transcranial magnetic stimulation coil using rectangular braided Litz wire. IEEE International Symposium on Medical Measurements and Applications.
- [C186] Talebinejad, M., Tsoulfas, G. & Musallam, S. (2011). Lempel-Ziv complexity for analysis of neural spikes. Canadian Medical and Biological Engineering Society Annual Conference.
- [C187] Poustinchi, M. & Musallam, S. Low Power Noise Immune Circuit for Implantable CMOS Neurochemical Sensory Applied in Neural Prosthetics. (2011). 5th Annual International Conference of the IEEE: Engineering in Medical and Biology Society: Conference on Neural Engineering.

---

#### PLANT, DAVID V.:

- [C188] M. Mirshafiei, J. Schwartz, D.V. Plant, and L.A. Rusch, "UWB Matched Filter Reception Using an Electromagnetic Bandgap Structure", IEEE International Conference on Ultra-Wideband, 2011.
- [C189] B.J. Shastri and D.V. Plant, "Scaling technologies for terabit fiber optic transmission systems", Proc. SPIE, vol. 7942, paper 794206, 2011.
- [C190] B.J. Shastri and D.V. Plant, "A 10-Gb/s space sampling burst-mode clock and data recovery circuit for passive optical networks", IEEE Photonics Conference, paper THFF.5.2011.
- [C149]
- [C191] Z.A. El-Sahn, B.J. Shastri, J.M. Buset, and D.V. Plant, " A Robust Overlapped-SCM WDM PON with a Standalone Burst-mode OLT Receiver", IEEE Photonics Conference, Paper TuE6.2011.



- [C192] J.M. Buset, Z.A. El-Sahn, and D.V. Plant, "Symmetric 2.5 Gb/s RSOA-based WDM-PON with electronic Equalization and Overlapped-subcarrier Multiplexing", IEEE Photonics Conference, paper TuE1, 2011.
- [C193] Z. Tian, C. Chen, and D.V. Plant, "Optical fiber Mode Filters in the Dual-Mode Fiber transmission systems. IEEE Photonics Conference Paper, TuF4, 2011.
- [C194] Z. Tian, V. Veerasubramanian, P. Bianucci, Z. Mi, A.G. Kirk, and D.V. Plant, "Characterization of InGaAs/GaAs Microtubes at Transparent Wavelengths", IEEE Photonics Conference, paper ThJ5.
- [C195] M.E.M. Pasandi, and D.V. Plant, "Non-Iterative Interpolation-Based Phase Noise ICI Mitigation for CO-OFDM Transport Systems", Signal Processing in Photonics Communications, paper SPMB6, 2011.
- [C196] Q. Zhuge, and D.V. Plant, " Compensation for Dispersion-Enhanced Phase Noise in Reduced-Guard-Interval CO-OFDM Transmissions", Signal Processing in Photonics communications, paper SPTuC4, 2011.
- [C197] Q. Zhuge, B. Chatelain, C. Chen, and D.V. Plant, "Mitigation of Equalization-Enhanced Phase Noise Using Reduced-Guard-Interval CO-OFDM", European conference Optical Communication, paper Th.11.B.5, 2011.
- [C46]
- [C198] P. Bianucci, Z. Tian, V. Veerasubramanian, A.G. Kirk, D.V. Plant, P.J. Poole, and Z. Mi, "Self-Organized Quantum-Dot Semiconductor Microtube Lasers and their Integration on Silicon Photonics Platforms", Information Photonics, 2011
- [C199] C.Chen, M. Pasandi, K. Choquette, D.V. Plant, "Transmission Experiment Using a Coupled-Cavity VCSEL for Radio Frequency Conversion", Optical Fiber Communications Conference, paper OThG3, 2011.
- [C200] B. Chatelain, C. Laperle, D. Krause, K. Roberts, M. chignon, X. Xu, A. Borowiec, F. Gagnon, J.C. Cartledge, and D.V. Plant, "Optimized Pulse Shaping for Intra-channel Nonlinearities Mitigation in a 10 Gbaud Dual-Polarization 16-QAM System", Optical Fiber Communications Conference, paper OW05, 2011.
- [C201] C. Chen, Q. Zhuge, and D.V. Plant, "Reduced-Guard-Interval CO-OFDM with Overlapped Frequency-Domain CD and PMD Equalization", Optical Fiber Communications Conference, paper OWE7, 2011.
- [C202] Z. Pan, B. Chatelain, M. Chagnon and D.V. Plant, " Volterra Filtering for Nonlinearity Impairment Mitigation in DP-16-QAM and DP-QPSk Fiber Optic Communication Systems," Optical Fiber Communications Conference, paper JThA4, 2011.
- [C203] Q. Zhuge, L.R. Chen, and D.V. Plant, "Low Computation Complexity Two-Stage Feedforward Carrier Recovery Algorithm for M-QAM," Optical Fiber Communications Conference, paperOMJ5, 2011.
- [C204] Z.A. El-Sahn, J.M. Buset, and D.V. Plant, "Bidirectional WDM PON Enabled by reflective ONUs and a Novel Overlapped-Subcarrier Multiplexing Technique", Optical Fiber Communications Conference, paper OMP7, 2011.
- [C205] Q. Zhuge, C. Chen, and D.V. Plant, "Impact of Intra-Channel fiber Nonlinearity on Reduced-Guard-Interval CO-OFDM Transmission", Optical Fiber Communications Conference, paper OW03, 2011.

---

**POPOVIC, MILICA**

- [C206] Adam Santorelli, Milica Popović, "SAR Distribution in Microwave Breast Screening: Results with TWTLTLA Wideband Antenna", In Proc. Seventh International Conference on Intelligent Sensor, Sensor Networks and Information Processing ISSNIP '12, Adelaide, Australia, December 6-9, 2011.
- [C60]
- [C207] Adam Santorelli, Michael Vander Schueren, Milica Popovic, "SAR Levels in Microwave Breast Imaging: 3-D Safety Assessment with Plane-Wave Illumination", In Proc. Asia-Pacific Microwave Conference APMC 2011, Melbourne, Australia, December 5 - 8, 2011.
- [C62]
- [C66]
- [C67]

---

**PSAROMILIGKOS, IOANNIS N.:**

- [C208] S. Abdallah, and I. N. Psaromiligkos, "Widely Linear vs. Conventional Subspace-Based Estimation of SIMO Flat-Fading Channels," in Proc. 22nd IEEE Symposium on Personal, Indoor, Mobile and Radio Communications (PIMRC 2011), Toronto, ON, Sept. 2011.
- [C209] B. Lawrence, and I. N. Psaromiligkos, "Single-Port MMSE Beamforming," in Proc. 22nd IEEE Symposium on Personal, Indoor, Mobile and Radio Communications (PIMRC 2011), Toronto, ON, Sept. 2011.
- [C210] S. Abdallah, and I. N. Psaromiligkos, "Blind channel estimation for MPSK-based amplify-and-forward two-way relaying," in Proc. 2011 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP '11), Prague, Czech Republic, May 2011.

---

**RABBAT, MICHAEL:**

- [C211] K.I. Tsianos and M.G. Rabbat, "Distributed consensus and optimization under communication delays," Allerton Conference on Communication, Control, and Computing, Urbana-Champaign, September, 2011.
- [C212] A. Daher, M. Rabbat, and V.K.N. Lau, "Local stopping rules for randomized gossip algorithms," IEEE International Conference on Distributed Computing in Sensor Systems (DCOSS'11), Barcelona, June, 2011. Acceptance rate: 28% (34/121 papers accepted).
- [C213] W. Qin, B. Yang, and M. Rabbat, "A correlation model for shadow fading in multi-hop wireless networks," Society for Modeling and Simulation/ACM 44th Annual Simulation Symposium (ANSS'11), Boston, April, 2011.
- [C64]
- [C65]
- [C214] A. Edelstein, X. Chen, Y. Li, and M. Rabbat, "RSS-based node localization in the presence of attenuating objects," IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP'11), Prague, May, 2011.

---

**ROBERTS, GORDON W.:**

- [C215] G. W. Roberts, F. Taenzler and M. Burns, An Introduction to Mixed-Signal IC Test and Measurement, Second Edition. Oxford University Press, New York, USA, 2011 (900 pages).
- [C216] Chowdhury and G. W. Roberts, "A Probabilistic Test Instrument using a  $\Sigma\Delta$ -Encoded Amplitude/Phase-Signal Generation Technique," accepted for presentation at the IEEE International Symposium on Circuits and Systems, Seoul, Korea, May 2012.
- [C217] M. Macedo, G. W. Roberts and I. Shih, "Track and Hold for Giga-Sample ADC Applications using CMOS Technology," accepted for presentation at the IEEE International Symposium on Circuits and Systems, Seoul, Korea, May 2012.
- [C218] Chowdhury and G. W. Roberts, "Performance Investigation Of A 1-Bit Periodic  $\Sigma\Delta$  Phase-Signal Generator For Mixed-Signal Embedded Test," Proceedings of the International Conference on Electronic Measurement & Instruments, Chengdu, China, August 2011. Winner of best Presentation Award.
- [C219] T. Tsai and G. W. Roberts, "Programmable Phase/Frequency Generator for System Debug and Diagnosis Using The IEEE 1149.1 Test Bus," Proceedings of the IEEE Custom Integrated Circuit Conference, San Jose, CA, September 2011.
- [C220] Ameri and G. W. Roberts "Time-Mode Reconstruction IIR Filters for  $\Sigma\Delta$  Phase Modulation Applications," Proceedings of the 21st IEEE/ACM Great Lakes Symposium on VLSI, Lausanne, Switzerland, May 2-4, 2011 (4 pages).

---

**ROCHETTE, MARTIN:**

- [C221] T. North and M. Rochette, "Subpicosecond As<sub>2</sub>Se<sub>3</sub> fiber ring laser," at the IEEE Photonics 2011 Conference (IPC11), WE2, Arlington, Virginia, Oct. (2011).
- [C222] A. Salehiomran and M. Rochette, "A Systematic Approach to Generation of Arbitrary Transfer Function Based on Waveguide Couplers," at the IEEE Photonics 2011 Conference (IPC11), ThR3, Arlington, Virginia, Oct. (2011).

- [C223] A. Al Kadry and M. Rochette, "Widely Tunable Soliton Frequency Shifting for Mid-Infrared Applications," at the IEEE Photonics 2011 Conference (IPC11), MG2, Arlington, Virginia, Oct. (2011).
- [C224] A. Al Kadry and M. Rochette, "Optimization of Ultrashort Optical Soliton self-frequency shifting in Mid-Infrared Radiation," at the Workshop on Fibre and Optical Passive Components (WFOPC), Proc. SPIE to be released, Montréal, Canada, July (2011).
- [C47]  
[C225] R. Ahmad and M. Rochette, "Bragg grating in sub-wavelength chalcogenide wires," at the OSA Specialty optical fibers (SOF), SOTuB4, Toronto, Canada, June (2011).
- [C226] R. Ahmad and M. Rochette, "Photosensitivity at 1550 nm and Bragg grating inscription in As<sub>2</sub>Se<sub>3</sub> microwires for sensing applications," postdeadline presentation at the OSA Specialty optical fibers (SOF), SOWE1, Toronto, Canada, June (2011).
- [C17]  
[C227] A. Al Kadry and M. Rochette, "Mid infrared sources based on the soliton self-frequency shift," at Photonics North, Proc. of SPIE Vol.8007 80070D, Ottawa, Canada, May (2011).

---

**ROSE, RICHARD C.:**

- [C228] Shirin Badiezedegan and Richard Rose. "A Performance Monitoring Approach to Fusing Enhanced Spectrogram Channels in Robust Speech Recognition". Proceedings of the International Conference on Speech Communication - InterSpeech 2011, Florence, August, 2011.
- [C229] Shirin Badiezedegan and Richard Rose. "A Comparison of Performance Monitoring Approaches to Fusing Spectrogram Channels in Speech Recognition" The International Machine Learning Society (IMLS) 2011 International Conference on Machine Learning, Bellevue Washington, June, 2011.
- [C230] Richard Rose, Shou-Chun Yin, and Yun Tang. "An investigation of subspace modeling for phonetic and speaker variability in ASR." Proceedings of the IEEE 2011 International Conference on Acoustics, Speech, and Signal Processing, Prague, May, 2011.
- [C231] Shirin Badiezedegan and Richard Rose. "A wavelet-based reconstruction approach to spectrogram reconstruction for robust speech recognition." Proceedings of the IEEE 2011 International Conference on Acoustics, Speech, and Signal Processing, Prague, May, 2011.

---

**SHIH, ISHIANG:**

- [C175]  
[C232] C.H. Champness, H.F. Myers, I. Shih, "N-type Bridgman CuInSe<sub>2+x</sub> by Addition of Sodium," 26th European Photovoltaic Solar Energy Conf., Hamburg, Sept. 5-9, 2011 p.p. 2832-2835.
- [C233] H.F. Myers, C.H. Champness, I. Shih, M. Sutton, "Sodium - Excess Selenium Interaction in Bridgman-grown CuInSe<sub>2</sub>," 37th IEEE Photovoltaic Specialists Conf., Seattle, Washington, June 19-24, 2011.
- [C234] H.F. Myers, C.H. Champness, I. Shih, "Relation between Sodium Addition and Excess Selenium in Bridgman-grown CuInSe<sub>2</sub>," Photonics North 2011, Ottawa, May 16-18, 2011, Proc. SPIE vol. 8007.

---

**SZKOPEK, THOMAS:**

- [C235] H.S. Skulason, H.V. Nguyen, A. Guermoune, M. Siaj, C. Caloz, and T. Szkopek, "High-Frequency Coplanar Waveguide Graphene Circuit Components on Low-Loss Dielectric Substrates", Graphene Technology: Production, Assembly and Applications, 12th International Conference on Science and Applications of Carbon Nanotubes, Cambridge, UK, 11-16 July 2011.
- [C236] S. Sabri, J. Guillemette, A. Guermoune, M. Siaj, and T. Szkopek, "CO<sub>2</sub> Sensitivity of Polyethyleneimine Coated Graphene Field Effect Transistors", Graphene Technology: Production, Assembly and Applications, 12th International Conference on Science and Applications of Carbon Nanotubes, Cambridge, UK, 11-16 July 2011.
- [C237] H.S. Skulason, H.V. Nguyen, A. Guermoune, M. Siaj, C. Caloz, and T. Szkopek, "High-Frequency Coplanar Waveguide Graphene Circuit Components on Low-Loss Dielectric Substrates", Graphene: the Road to Applications, Boston, 11-13 May 2011.

- [C238] P. Levesque, S. Sabri, C. Aguirre, J. Guillemette, M. Sij, P. Desjardins, T. Szkopek and R. Martel, "Probing Electrochemical Charge Transfer at Surfaces Using Graphene Transistors", 219th Electrochemical Society Meeting, Montréal, 4 May 2011.
- [C239] S.A. Imam, A. Guermoune, M. Sij, and T. Szkopek, "Large Area Graphene Field Effect Devices with Sputtered Nitride and Oxide Top-Dielectrics", Graphene 2011, ImagineNano, Bilbao, Spain, 11-14 April 2011.
- [C240] T. Szkopek and E. Ledwosinska, "Optical Frequency Conductance Model of TeraHertz/Infrared Emission and Detection in Semiconductors", Proc. SPIE, vol. 7938 (2011).

---

**VU, MAI:**

- [C241] M. Vu, "MIMO Capacity with Per-antenna Power Constraint," IEEE Conf. on Global Comm. (GlobeCom), Dec 2011.
- [C242] P. Zhong and M. Vu, "Decode-forward and Compute-forward Coding Schemes for the Two-Way Relay Channel," IEEE Information Theory Workshop, Oct 2011.
- [C243] F. Parzysz, M.Vu, F. Gagnon, "A Half-Duplex Relay Coding Scheme Optimized for Energy Efficiency," IEEE Information Theory Workshop, Oct 2011.
- [C244] "Compress-Forward without Wyner-Ziv Binning for the One-Way and Two-Way Relay Channels," [pdf] P. Zhong and M. Vu Forty-Ninth Annual Allerton Conference, Sept 2011.
- [C245] "A Half-Duplex Cooperative Scheme with Partial Decode-Forward Relaying," [pdf] A. Al Haija and M. Vu, IEEE Int'l Symposium on Info. Theory (ISIT), July 2011.
- [C246] "Throughput-Optimal Half-Duplex Cooperative Scheme with Partial Decode-Forward Relaying", [pdf] A. Al Haija and M. Vu, IEEE Int'l Conf. on Communications (ICC), June 2011.
- [C247] "Energy-Efficient Schemes for On-Demand Relaying," [pdf] F. Parzysz, M.Vu, F. Gagnon, The 34th IEEE Sarnoff Symposium, May 2011.
- [C248] "Joint Typicality Analysis for Half-Duplex Cooperative Communication," [pdf] A. Al Haija and M. Vu, The 12th Canadian Workshop on Information Theory (CWIT), May 2011.
- [C249] "On the Capacity of the Cognitive Z-Interference Channel," [pdf] M. Vaezi and M. Vu, The 12th Canadian Workshop on Information Theory (CWIT), May 2011.
- [C250] "Performance Analysis of Differential Chaotic Shift Keying Communications in MIMO Systems", G. Kaddoum, M. Vu and F. Gagnon, IEEE International Symposium on Circuits and Systems, May 2011.
- [C251] "On the Performance of Chaos Shift Keying in MIMO Communications Systems", G. Kaddoum, M. Vu and F. Gagnon, IEEE Wireless Communications and Networking Conf. (WCNC), Mar 2011.
- [C252] "Can Half-Duplex Be Simply Derived from Full-Duplex Communications?", [pdf] A. Al Haija and M. Vu, Workshop on Information Theory and Applications, UCSD, San Diego, Feb 2011.

---

**WEBB, JONATHAN P.:**

- [C253] A. Bostani, J. P. Webb, "A model-order reduction method for the passband and stopband characteristics of periodic structures", 41st European Microwave Conference Proceedings, Manchester, UK, October 10-13, 2011.

---

**ZENG, HAIBO:**

- [C254] Haibo Zeng and Marco Di Natale. Mechanisms for Guaranteeing Data Consistency and Time Determinism in AUTOSAR Software on Multi-core Platforms. In Proceedings of the IEEE Symposium on Industrial Embedded Systems (SIES), July 2011.
- [C255] Marco Di Natale and Haibo Zeng. Task Implementation and Schedulability Analysis of Synchronous Finite State Machines. In Work-in-Progress session, IEEE Real-Time and Embedded Technology and Application Symposium (RTAS), April 2011.
- [C256] Chung-Wei Lin, Marco Di Natale, Haibo Zeng, and Alberto Sangiovanni-Vincentelli. Performance Analysis of Synchronous Models Implementations on Loosely Time-Triggered Architectures. In Work-in-Progress session, IEEE Real-Time and Embedded Technology and Application Symposium (RTAS), April 2011.

- [C257] Arkadeb Ghosal, Paolo Giusto, Prakash Peranandam, Purnendu Sinha, and Haibo Zeng Metrics for Quantifying and Evaluating Ability of Electronic Control System Architectures to Accommodate Changes. In SAE World Congress, April 2011.
- [C258] Haibo Zeng and Marco Di Naale. Efficient Implementation of AUTOSAR Components with Minimal Memory Usage. In Workshop on Synthesis and Optimization Methods for Real-time Embedded Systems, in conjunction with the 32nd IEEE Real-Time Systems Symposium (RTSS), December 2011.

---

ZILIC, ZELJKO:

- [C259] Z. Zilic and K. Radecka, "Fault Tolerant Glucose Sensor Readout and Recalibration", Proceedings of Wireless Health Conference, WH2011, Oct. 2011. doi>10.1145/2077546.2077585 (conference acceptance ratio: 36%)
- [C260] MH. Neishaburi and Z. Zilic, "A Fault Tolerant Hierarchical Network on Chip Router", Proceedings of IEEE International Symposium on Defect and Fault Tolerance, DFT 2011, Oct. 2011, pp. 445-453.
- [C261] MH. Neishaburi and Z. Zilic, "Debug-aware AXI-based Network Interface", Proceedings of IEEE International Symposium on Defect and Fault Tolerance, DFT 2011, Oct. 2011, pp. 399-407.
- [C262] MH. Neishaburi and Z. Zilic, "Hierarchical Embedded Logic Analyzer for Accurate Root-Cause Analysis", Proceedings of IEEE International Symposium on Defect and Fault Tolerance, DFT 2011, Oct. 2011, pp. 120-128.
- [C263] Z. Zilic and B. Karajica, "High-level Design of Integrated Microsystems – Arithmetic Perspective", IEEE International Symposium on Robotics and Sensor Environments, ROSE2011, Sep. 2011, pp. 77-82.
- [C264] MH. Neishaburi and Z. Zilic, "Failure Rate Assessment Technique Using an Executable Model of the System", Proceedings of Euromicro Conference on Digital System Design, DSD 2011, August 2011, pp. 29-36.
- [C265] Z. Zilic and B. Karajica, "Teaching for Evolution Towards Embedded Multi-sensory Interfaces," Proceedings of IEEE International Conference on Microelectronics Systems Education, MSE'11, Jun. 2011, pp. 1-4. (This paper has earned the opening presentation slot, which even our awarded papers at the same conference have not achieved)
- [C266] MH. Neishaburi and Z. Zilic, "Shared Debugging Unit: An Infrastructure for Post-Silicon Validation", Proceedings of IEEE International VLSI Test Symposium, VTS 2011, May 2011, pp. 8-13.
- [C267] B. Mihajlovic and Z. Zilic, "Real-Time Address Trace Compression for Emulated and Real System-on-Chip Processor Core Debugging", Proceedings of IEEE Intl. Great Lakes Symposium on VLSI, GLVLSI 2011, May 2011, pp. 331-336. (conference acceptance ratio 28%)
- [C268] MH. Neishaburi and Z. Zilic, "On Post-Silicon Root-Cause Analysis and Debug using Enhanced Hierarchical Triggers", Proceedings of IEEE European Test Symposium, ETS 2011, May 2011, 6 pages. (conference acceptance rate: 27%),
- [C269] MH. Neishaburi and Z. Zilic, "Hierarchical Trigger Generation for Post-silicon", Proceedings of IEEE VLSI Design Automation and Test Conference, VLSI-DAT 2011, Apr. 2011, 4 pages.
- [C270] MH. Neishaburi and Z. Zilic, "Enhanced Reliability Aware NoC Router", Proc. Intl. Symposium on Quality Electronic Design, ISQED 2011, Mar. 2011, 6 pages.
- [C271] Y. Pang, K. Radecka and Z. Zilic, "An Efficient Hybrid Engine to Perform Range Analysis and Allocate Integer Bit-widths for Arithmetic Circuits", Proceedings of ACM/IEEE Asia and South Pacific Design Automation Conference, ASP-DAC 2011, Jan. 2011, pp. 455-460. (acceptance rate 34%: 102 papers out of 300; acceptance is lower for long papers like this one)
- [C272] J. Tong, D. Sarraf, M. Boule and Z. Zilic, "Generating Compact Assertions for Control-based Logic Signals", Proceedings of IEEE International Midwest Symposium on Circuits and Systems, MWSCAS2011, August 2011.
- [C273] H. Zarrabi, Z. Zilic, Y. Savaria and A. Al-Khalili, "On the Efficient Design and Synthesis of Differential Clock Distribution Networks", Chapter 17 in Book: VLSI, edited by Zhongfeng Wang, InTech Publishers, ISBN 978-953-307-049-0, Feb. 2011, pp. 331-352.

- [C274] B. Mihajlovic, Z. Zilic and K. Radecka, "Infrastructure for Testing Nodes of a Wireless Sensor Network", Book Chapter in Handbook of Research on Developments and Trends in Wireless Sensor Networks: From Principles to Practice, 2011. Edited by H. Jin and W-B. Jiang. 34 pages.