

Department of Electrical and Computer Engineering 2000-2001

Department of Electrical And Computer Engineering

**ANNUAL REPORT  
2000-2001**

Submitted by

David A. Lowther  
Chairman

June 2001

**APPENDIX II          PUBLICATIONS**

The Departmental publications for the year 2000 will appear on the Departmental website at [www.ece.mcgill.ca/publications](http://www.ece.mcgill.ca/publications).

A copy of the publications from the Faculty database is included in the following pages.

## Publications

### Electrical & Computer Engineering

#### Professor Eric Adler

##### Books or Book Chapters

**Author(s)** Eric Adler  
**Title** Bulk and Surface Acoustic Waves in Anisotropic Solids  
**Journal/  
Publication:** International Journal of High Speed Electronics  
**Volume:** 10      **Inclusive Page Numbers** 653-684      **Date:** Mar 2000  
Invited

#### Professor Jan Bajcsy

##### Other refereed Contributions

**Author(s)** J. Bajcsy  
**Title** " Iterative Decoding using Bisection Principle  
**Journal/  
Publication:** Int. Symp. Info. Theory & Appl., Recent Results  
**Volume:**      **Inclusive Page Numbers**      **Date:** Nov 2000

##### Non-refereed Contributions

**Author(s)** H. Leib, J. Bajcsy  
**Title** Transmit Diversity Concatenated Codes with Iterative Decoding  
**Journal/  
Publication:** CITR Annual Research Conference  
**Volume:**      **Inclusive Page Numbers**      **Date:** Aug 2000  
Poster presented in Ottawa

**Author(s)** J. Bajcsy  
**Title** On Coding in Wireless Communication Systems  
**Journal/  
Publication:** Proceedings of Communicate 2000  
**Volume:**      **Inclusive Page Numbers** online publi      **Date:** Jan 2000

##### Refereed Journal publications

**Author(s)** J. Bajcsy, C.-V. Chong, J. Hunziker, D. Garr, H. Kobayashi  
**Title** Iterative Decoding in Some Existing Systems  
**Journal/  
Publication:** IEEE Journal on Selected Areas in Communications  
**Volume:**      **Inclusive Page Numbers** x-y      **Date:** May 2001

**Author(s)** L. R. Chen, G. E. Town, P.-Y. Cortès, S. LaRochelle, and P. W. E. Smith  
**Title** Dual-wavelength, actively mode-locked fiber laser with 0.7-nm wavelength spacing  
**Journal/ Publication:** IEE Electronics Letters  
**Volume:** 36      **Inclusive Page Numbers** 1921 - 1923      **Date:** Nov 2000

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**Author(s)** L. R. Chen  
**Title** Influence of grating group delay ripple on the reduction of dispersion induced intensity noise in subcarrier multiplexed systems  
**Journal/ Publication:** Optics Communications  
**Volume:** 187      **Inclusive Page Numbers** 125-128      **Date:** Jan 2001

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**Author(s)** L. R. Chen  
**Title** XPM-induced intensity distortion due to dispersion in fiber Bragg grating filters  
**Journal/ Publication:** Optics Communications  
**Volume:** 190      **Inclusive Page Numbers** 141-145      **Date:** Apr 2001

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**Author(s)** L. R. Chen and P. W. E. Smith  
**Title** Demonstration of incoherent wavelength-encoding/time-spreading optical CDMA using chirped moiré gratings  
**Journal/ Publication:** IEEE Photonics Technology Letters  
**Volume:** 12      **Inclusive Page Numbers** 1281 - 1283      **Date:** Sep 2000

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### ***Professor James Clark***

#### ***Other refereed Contributions***

**Author(s)** Z.M. Hafed and J.J. Clark  
**Title** Neural network model of saccade generation and control  
**Journal/ Publication:** ARVO Conference  
**Volume:**      **Inclusive Page Numbers** -      **Date:** May 2000  
Published in Abstract booklet and presented orally at the conference.

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#### ***Refereed Journal publications***

**Author(s)** J. K O'Regan, H. Deubel, J.J. Clark and R.A. Rensink  
**Title** Picture changes during blinks: looking without seeing and seeing without looking  
**Journal/ Publication:** Visual Cognition  
**Volume:** 7      **Inclusive Page Numbers** 191-212      **Date:** Jan 2000

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**Author(s)** Saroyan, A., Harris, R., and Cooperstock, J.  
**Title** Applying pedagogical principles to teaching and learning with technology.  
**Journal/  
Publication:** Multi-cultural perspectives on technology in educ.  
**Volume:** **Inclusive Page Numbers** ?? **Date:** Jan 2000

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***Refereed Journal publications***

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**Author(s)** Xu, A., Woszczyk, Settle, Pennycook, Rowe, Galanter, Bary, Martin, Corey, and Cooperstock, J.R.  
**Title** Real-Time Streaming of Multichannel Audio Data over Internet  
**Journal/  
Publication:** Journal of the Audio Engineering Society  
**Volume:** 48 **Inclusive Page Numbers** 627-641 **Date:** Jul 2000

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***Refereed Conference Proceedings***

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**Author(s)** Hochstein, L, Lerner, S., Clark, J.J. and Cooperstock, J.R.  
**Title** Soccer-Swarm: A Graphical Framework for Soccer Player Design  
**Journal/  
Publication:** International Symposium on Robotics  
**Volume:** **Inclusive Page Numbers** 108-113 **Date:** Jan 2000  
Montreal

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**Author(s)** Arseneau, S., Sun, W., Zhao, C., and Cooperstock, J.R.  
**Title** Inter-layer Learning Towards Emergent Cooperative Behavior.  
**Journal/  
Publication:** 17th Annual Conference on Artificial Intelligence  
**Volume:** **Inclusive Page Numbers** 3-8 **Date:** Jan 2000  
Austin, Texas

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**Author(s)** Cooperstock, J.R.  
**Title** Classroom of the Future: Enhancing Education through Augmented Reality  
**Journal/  
Publication:** HCI International 2001  
**Volume:** **Inclusive Page Numbers** ?? **Date:** Aug 2001  
New Orleans

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**Author(s)** Xu, A. and Cooperstock, J.R.  
**Title** Real Time Streaming of Multi-Channel Audio through Internet.  
**Journal/  
Publication:** 108th Audio Engineering Society Convention  
**Volume:** **Inclusive Page Numbers** ?? **Date:** Jan 2000  
[proceedings available on CD]

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***Professor Mourad El-Gamal***

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**Author(s)** Audette, M.A., Ferrie, F.P., and Peters, T.M.  
**Title** An Algorithmic Overview of Surface Registration Techniques for Medical Imaging  
**Journal/  
Publication:** Medical Image Analysis  
**Volume:** 4      **Inclusive Page Numbers** 201-217      **Date:** Sep 2000

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**Author(s)** Angeles, J., Soucy, G., and Ferrie, F.P.  
**Title** The On-Line Solution of the Hand-Eye Problem  
**Journal/  
Publication:** IEEE Transactions on Robotics and Automation  
**Volume:** 16      **Inclusive Page Numbers** 720-731      **Date:** Dec 2000

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***Refereed Conference Proceedings***

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**Author(s)** Arbel, T., and Ferrie, F.P.  
**Title** " Recognizing Objects from Curvilinear Motion  
**Journal/  
Publication:** Proc. Eleventh British Machine Vision Conference  
**Volume:**      **Inclusive Page Numbers** 765-774      **Date:** Sep 2000

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**Author(s)** Arbel, T., and Ferrie, F.P.  
**Title** Interactive Visual Dialog  
**Journal/  
Publication:** Proc. Eleventh British Machine Vision Conference  
**Volume:**      **Inclusive Page Numbers** 755-764      **Date:** Sep 2000

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***Professor Frank Galiana***

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***Non-refereed Contributions***

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**Author(s)** G. Jóos, B.T. Ooi, D. McGillis, F.D. Galiana, R. Marceau  
**Title** The Potential of Distributed Generation to Provide Ancillary Services  
**Journal/  
Publication:** IEEE Summer Power Meeting  
**Volume:**      **Inclusive Page Numbers** 1-7      **Date:** Jul 2000

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***Refereed Journal publications***

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**Author(s)** Giannacopoulos, D., and McFee, S.  
**Title** Adaptive finite element methods for analyzing the electromagnetic performance of microelectronic system interconnections.  
**Journal/ Publication:** TRN Recent Research Developments in Magnetics.  
**Volume:** 1 **Inclusive Page Numbers** 83-114 **Date:** Nov 2000  
Invited review.

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***Refereed Conference Proceedings***

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**Author(s)** Giannacopoulos, D., and McFee, S.  
**Title** The implications of adaptive finite element analysis on electromagnetic simulation for microelectronic system interconnections.  
**Journal/ Publication:** IEEE Proc. 42nd Midwest Sym. on Circ. & Sys.  
**Volume:** 1 **Inclusive Page Numbers** 325-332 **Date:** Aug 2000

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**Author(s)** Giannacopoulos, D., and McFee, S.  
**Title** " Optimal discretization based adaptive finite element analysis with vector tetrahedra.  
**Journal/ Publication:** Proc. 9th IEEE Conf. Electromag. Field Comp.  
**Volume:** **Inclusive Page Numbers** 179. **Date:** Jun 2000

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***Professor Vincent Hayward***

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***Other refereed Contributions***

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**Author(s)** Gregorio, P., Grant, D., Hayward V.  
**Title** Differential Optical Displacement Sensor  
**Journal/ Publication:** US Patent 6020967  
**Volume:** **Inclusive Page Numbers** 00 **Date:** Jan 2000

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**Author(s)** Hayward, V.  
**Title** Mechanism for placing and orienting articles  
**Journal/ Publication:** US patent 6116844  
**Volume:** **Inclusive Page Numbers** 00 **Date:** Jan 2000

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***Refereed Journal publications***

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**Author(s)** Dupont, P. E., Armstrong, B., Hayward, V.  
**Title** Elastic-plastic friction model: contact compliance and stiction  
**Journal/  
Publication:** Proc. IEEE American Control Conference  
**Volume:** **Inclusive Page Numbers** 1305-1310 **Date:** Jan 2000

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#### ***Books or Book Chapters***

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**Author(s)** Rovan, J., Hayward, V.  
**Title** Typology of tactile sounds and their synthesis in gesture driven computer music performance  
**Journal/  
Publication:** In "Trends in Gestural Control of Music", Wanderle  
**Volume:** **Inclusive Page Numbers** 297-320 **Date:** Jan 2000

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**Author(s)** Hayward, V., Armstrong, B.  
**Title** A new computational model of friction applied to haptic rendering  
**Journal/  
Publication:** In "Experimental robotics VI", Corke, P. I., Trevel  
**Volume:** **Inclusive Page Numbers** 403-412 **Date:** Jan 2000

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#### ***Professor Peter Kabal***

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##### ***Refereed Conference Proceedings***

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**Author(s)** N. Sheikholeslami Alagha and P. Kabal  
**Title** A filterbank structure for voice-band PCM channel pre-equalization  
**Journal/  
Publication:** Proc. IEEE Int. Conf. Acoustics, Speech, Signal Pr  
**Volume:** **Inclusive Page Numbers** 2793-2796 **Date:** Jun 2000

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**Author(s)** T. Islam and P. Kabal  
**Title** Partial-energy weighted interpolation of linear prediction coefficients  
**Journal/  
Publication:** Proc. IEEE Workshop on Speech Coding  
**Volume:** **Inclusive Page Numbers** 105-107 **Date:** Sep 2000

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**Author(s)** H. Najafzadeh and P. Kabal  
**Title** Perceptual bit allocation for low rate coding of narrowband audio  
**Journal/  
Publication:** Proc. IEEE Int. Conf. Acoustics, Speech, Signal Pr  
**Volume:** **Inclusive Page Numbers** 893-896 **Date:** Jun 2000

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**Author(s)** D.Plant and A.G.Kirk  
**Title** Optical Interconnects at the Chip and Board Level: Challenges and Solutions  
**Journal/  
Publication:** Proceedings of the IEEE  
**Volume:** 88      **Inclusive Page Numbers** 806-817      **Date:** Jan 2000

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**Author(s)** X.Xue, H. Wei and A. G. Kirk  
**Title** Intensity-based modal decomposition of optical beams in terms of Hermite-Gaussian functions  
**Journal/  
Publication:** J. Optical Society of America A,  
**Volume:** 17      **Inclusive Page Numbers** 1086-1091      **Date:** Jan 2000

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**Author(s)** T Maj, A G. Kirk, D V. Plant, J F. Ahadian, C G. Fonstad, K L. Lear, K Tatab, M S. Robinson, J A .Tr  
**Title** Interconnection of a two-dimensional array of vertical cavity surface emitting lasers to a receiver array via a fiber image guide  
**Journal/  
Publication:** OSA Applied Optics  
**Volume:** 39      **Inclusive Page Numbers** 683-689      **Date:** Jan 2000

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**Author(s)** F Lacroix, M Chateauneuf, X Xue, A G Kirk  
**Title** Experimental and numerical analysis of misalignment tolerances in free-space optical interconnects  
**Journal/  
Publication:** OSA Applied Optics  
**Volume:** 39      **Inclusive Page Numbers** pp 704-713      **Date:** Jan 2000

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**Author(s)** F. Lacroix, M. Ayliffe and A.G. Kirk  
**Title** Tolerancing of polarization losses in free-space optical interconnects  
**Journal/  
Publication:** OSA Optics Express,  
**Volume:** 7      **Inclusive Page Numbers** 381-392      **Date:** Jan 2000

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***Refereed Conference Proceedings***

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**Author(s)** M. Châteauneuf, F. Thomas-Dupuis, A.G. Kirk  
**Title** Design, implementation, and characterization of a folded spot array generator for a modulator-based free-space optical interconnect  
**Journal/  
Publication:** Proc. Intl. Topical Meeting on Optics in Computing  
**Volume:**      **Inclusive Page Numbers** 263-271      **Date:** Jun 2000

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**Author(s)** Fabrice Labeau  
**Title** Joint source-channel coding and related techniques  
**Journal/  
Publication:** Revue HF Tijdschrift  
**Volume:** **Inclusive Page Numbers** 25-37 **Date:** Jan 2001  
Revue de la Societe Belge des Ingenieurs de Telecommunications

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***Professor Tho Le-Ngoc***

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***Refereed Journal publications***

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**Author(s)** Weng, J.F., Le-Ngoc, T., Xue, GQ, Tahar, S.,  
**Title** Multilevel Quantized Soft-Limiting Detector for an FH-SSMA System  
**Journal/  
Publication:** Journal of Communications and Networks  
**Volume:** 2 **Inclusive Page Numbers** 379-388 **Date:** Dec 2000

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**Author(s)** Le-Ngoc, T., Elshabrawy, T.,  
**Title** Broadband Satellite Access For Interactive Multimedia Services  
**Journal/  
Publication:** Space Communications Journal (Special Issue on On-  
**Volume:** **Inclusive Page Numbers** (accepted) **Date:** May 2001

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**Author(s)** Le-Ngoc, T., Subramanian, S.N.  
**Title** Pareto Modulated Poisson Process (PMPP) Model for Long-Range Dependent Traffic  
**Journal/  
Publication:** Computer Communications  
**Volume:** **Inclusive Page Numbers** 123-132 **Date:** Jan 2000

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**Author(s)** Xiang, Z.J., Le-Ngoc, T., Bi GG.,  
**Title** Performance of Coherent MQAM Schemes in the Presence of Frequency-Selective Rayleigh Fading and CCI  
**Journal/  
Publication:** Journal on Special Topics in Mobile Networks and A  
**Volume:** 5 **Inclusive Page Numbers** 73-84 **Date:** Mar 2000

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**Author(s)** Xue, GQ, Weng, J.F., Le-Ngoc, T., Tahar, S.,  
**Title** An Analytical Model for Performance Evaluation of Parallel Interference Cancellers in CDMA Systems  
**Journal/  
Publication:** IEEE Communications Letters  
**Volume:** 4 **Inclusive Page Numbers** 184-186 **Date:** Jun 2000

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**Author(s)** Gu, YH., Le-Ngoc, T.,  
**Title** An Adaptive Combined DFE/RSSE Structure for Unknown Channel with Severe ISI  
**Journal/  
Publication:** Wireless Personal Communications  
**Volume:** 14      **Inclusive Page Numbers** 13-27      **Date:** Jul 2000

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**Author(s)** Xue, GQ, Weng, J.F., Le-Ngoc, T.,  
**Title** Impact of Imperfect Power Control and Channel Estimation on the Performance of Multiuser Detectors in Synchronous DS-CDMA Systems  
**Journal/  
Publication:** Wireless Personal Communications  
**Volume:**      **Inclusive Page Numbers** (accepted)      **Date:** Jun 2001

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***Refereed Conference Proceedings***

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**Author(s)** Besbes, H., Le-Ngoc, T., Lin, H.,  
**Title** "Fast Adaptive Digital Predistortion Techniques  
**Journal/  
Publication:** WPMC'00  
**Volume:**      **Inclusive Page Numbers** (5 pages)      **Date:** Dec 2000

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**Author(s)** Elshabrawy, T.O, Le-Ngoc, T., Tahar, S.,  
**Title** Two-way Broadband Satellite Access for Interactive Multimedia Services  
**Journal/  
Publication:** Int. Conference on Telecommunications(ICT2000)  
**Volume:**      **Inclusive Page Numbers** (5 pages)      **Date:** May 2000

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**Author(s)** Garjani, A., Le-Ngoc, T., Khendek, F.,  
**Title** Inter-LAN Services over Broadband Satellite Systems  
**Journal/  
Publication:** Int. Conference on Telecommunications (ICT2000)  
**Volume:**      **Inclusive Page Numbers** (5 pages)      **Date:** May 2000

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**Author(s)** Lynch, W.E., Le-Ngoc, T.,  
**Title** Syntax and Discontinuity Based Error Concealment for Compressed Video in a Packet Environment  
**Journal/  
Publication:** ITCC 2001  
**Volume:**      **Inclusive Page Numbers** (5 pages)      **Date:** Apr 2001

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**Author(s)** Y. Huang, H. Leib  
**Title** SINR maximzing space-time filtering for asynchronous DS-CDMA  
**Journal/  
Publication:** IEEE Journal on Selected Areas in Communications  
**Volume:** 18      **Inclusive Page Numbers** 1191-1202      **Date:** Jul 2000

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**Author(s)** E. Malkamaki, H. Leib  
**Title** Performance of truncated type II hybrid ARQ schemes with noisy feedback over block fading channels  
**Journal/  
Publication:** IEEE transactions on Communications  
**Volume:** 48      **Inclusive Page Numbers** 1477-1487      **Date:** Sep 2000

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### ***Professor Martin Levine***

#### ***Refereed Journal publications***

**Author(s)** Ziad M. Hafed, Martin D. Levine  
**Title** Face Recognition Using the Discrete Cosine Transform  
**Journal/  
Publication:** International Journal of Computer Vision  
**Volume:**      **Inclusive Page Numbers** in press      **Date:** Jan 2001

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#### ***Books or Book Chapters***

**Author(s)** Anthony HF Lau Martin Levine  
**Title** Finding a Small Number of Regions in an Image using Low-level features  
**Journal/  
Publication:** Pattern Recognition Journal  
**Volume:**      **Inclusive Page Numbers** in review      **Date:** Jan 2001

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**Author(s)** John S Zelek and Martin Levine,  
**Title** Local-Gobal Concurrent Path Planning and Execution  
**Journal/  
Publication:** IEEE Transactions on Systems, Man, & Cybernetics  
**Volume:** 30      **Inclusive Page Numbers** 865-870      **Date:** Nov 2000

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### ***Professor David Lowther***

#### ***Refereed Journal publications***

**Author(s)** Vo.Q., Lowther,D.A.  
**Title** Electromagnetic device design: An architecture for a multi-reasoning approach  
**Journal/  
Publication:** Digests of the 9th Biennial Conf. on EM Field Comp  
**Volume:** **Inclusive Page Numbers** 144 **Date:** Jun 2001

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**Author(s)** Mohammed,O., Lowther,D.A., Lean,M., Alhalabi,B.  
**Title** On the creation of a generalized design optimization environment for electromagnetic devices  
**Journal/  
Publication:** Digests of the 9th Biennial Conf. on EM Field Comp  
**Volume:** **Inclusive Page Numbers** 138 **Date:** Jun 2000

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### ***Professor Steve McFee***

#### ***Refereed Journal publications***

**Author(s)** S. McFee and D. Giannacopoulos (Dennis was PDF)  
**Title** Optimal discretizations in adaptive finite element electromagnetics  
**Journal/  
Publication:** IJNME  
**Volume:** **Inclusive Page Numbers** 1-44 **Date:** Nov 2000

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**Author(s)** S. McFee and D. Giannacopoulos (McFee invited to contribute paper; Dennis was PDF)  
**Title** Adaptive finite element methods for analyzing the electromagnetic performance of microelectronic system interconnections  
**Journal/  
Publication:** TRN Recent Research Developments in Magnetics  
**Volume:** **Inclusive Page Numbers** 83-114 **Date:** Jun 2000

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#### ***Refereed Conference Proceedings***

**Author(s)** S. McFee and D. Giannacopoulos (Dennis was PhD student)  
**Title** The implications of adaptive finite element analysis on electromagnetic simulation for microelectron  
**Journal/  
Publication:** IEEE Proceeding of Midwest Symposium on Circuits a  
**Volume:** **Inclusive Page Numbers** 325-332 **Date:** Jan 2000

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**Author(s)** S. McFee and Donglin Ma  
**Title** Irregular tetrahedra for finite element analysis in electromagnetics  
**Journal/  
Publication:** IEEE Proceedings of CEFC'2000  
**Volume:** **Inclusive Page Numbers** 212- **Date:** Jun 2000

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**Author(s)** Hannah Michalska Alexandre Jouan Benoit Jarry  
**Title** Tracking closely maneuvering targets in clutter with an IMM-JVC algorithm  
**Journal/  
Publication:** Proc. 3rd International Conf. on Data Fusion  
**Volume:** 1 **Inclusive Page Numbers** MoD2-10 - **Date:** Jul 2000  
ISIF Fusion 2000 Conference,  
Paris, July 10-13, 2000.

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### ***Professor Radu Negulescu***

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#### ***Refereed Journal publications***

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**Author(s)** J.A. Brzozowski, R. Negulescu  
**Title** Automata of Asynchronous Behaviors  
**Journal/  
Publication:** Theoretical Computer Science  
**Volume:** **Inclusive Page Numbers** 113-128 **Date:** Jan 2000

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#### ***Refereed Conference Proceedings***

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**Author(s)** H. Hallal, R. Negulescu, A. Petrenko  
**Title** Design of divergence-free protocol converters using supervisory control techniques  
**Journal/  
Publication:** IEEE Int Conf on Electronics, Circuits and Systems  
**Volume:** **Inclusive Page Numbers** 705-708 **Date:** Dec 2000  
An IEEE conference  
Proceedings of the Seventh IEEE International Conference on Electronics, Circuits and Systems

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**Author(s)** R. Negulescu  
**Title** Process spaces  
**Journal/  
Publication:** Int. Conf. on Concurrency Theory  
**Volume:** **Inclusive Page Numbers** 196-210 **Date:** Aug 2000  
Proceedings of the 11th International Conference in Concurrency Theory (CONCUR) is a top conference on modeling concurrent systems.

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**Author(s)** S.Laberge, R. Negulescu  
**Title** An asynchronous FIFO: case study in speed-optimizations  
**Journal/  
Publication:** IEEE Int Conf on Electronics, Circuits and Systems  
**Volume:** **Inclusive Page Numbers** 755-758 **Date:** Dec 2000  
An IEEE conference  
Proceedings of the Seventh IEEE International Conference on Electronics, Circuits and Systems

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### ***Professor Boon-Teck Ooi***

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#### ***Non-refereed Contributions***

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**Author(s)** D.F.-Brosseau, F. Lacroix, M.H. Ayliffe, E. Bernier, B. Robertson, F. Tooley, D.V. Plant, A.G. Kirk

**Title** Design, implementation, and characterization of a kinematically aligned cascaded spot array generator for a modulator based optical free-space optical backplane

**Journal/  
Publication:** Applied Optics

**Volume:** 39      **Inclusive Page Numbers** 733-745      **Date:** May 2000

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**Author(s)** T. Maj, A.G. Kirk, D.V. Plant, J. Ahadian, C. Fonstad, K. Lear, K. Tatah, M. Robinson, J.A. Trezza

**Title** Interconnection of a two-dimensional array of vertical cavity surface emitting lasers to a receiver array by means of a fiber image guide

**Journal/  
Publication:** Applied Optics

**Volume:** 39      **Inclusive Page Numbers** 683-689      **Date:** May 2000

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### ***Professor Gordon Roberts***

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#### ***Refereed Journal publications***

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**Author(s)** V. Leung and G.W. Roberts

**Title** Effects Of Transistor Non-Idealities On High-Order Log-Domain Ladder Filter Frequency Response

**Journal/  
Publication:** IEEE Trans. on Circuits and Systems-II

**Volume:**      **Inclusive Page Numbers** 373-387      **Date:** May 2000

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**Author(s)** B. Dufort and G. W. Roberts

**Title** Increasing the Performance of Arbitrary Function Generators Using Sigma-Delta Coding Techniques

**Journal/  
Publication:** IEEE Trans. on Instruments and Measurements

**Volume:** 49      **Inclusive Page Numbers** 188-199      **Date:** Feb 2000

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#### ***Refereed Conference Proceedings***

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**Author(s)** M. Hafed, N. Abaskharoun, and G. W. Roberts

**Title** A Stand-Alone Integrated Test Core For Time And Frequency Domain Measurements

**Journal/  
Publication:** Proc. IEEE International Test Conference

**Volume:**      **Inclusive Page Numbers** 1031-1040      **Date:** Oct 2000

This paper will receive the IEEE Best Paper Award for 2000

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**Author(s)** Vo.Q., Lowther,D.A.  
**Title** Electromagnetic device design: An architecture for a multi-reasoning approach  
**Journal/  
Publication:** Digests of the 9th Biennial Conf. on EM Field Comp  
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**Author(s)** Mohammed,O., Lowther,D.A., Lean,M., Alhalabi,B.  
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### **Professor Steve McFee**

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**Author(s)** S. McFee and D. Giannacopoulos (Dennis was PDF)  
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**Journal/  
Publication:** IJNME  
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**Author(s)** S. McFee and D. Giannacopoulos (McFee invited to contribute paper; Dennis was PDF)  
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**Journal/  
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**Journal/  
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**Volume:** **Inclusive Page Numbers** 325-332 **Date:** Jan 2000

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**Author(s)** S. McFee and Donglin Ma  
**Title** Irregular tetrahedra for finite element analysis in electromagnetics  
**Journal/  
Publication:** IEEE Proceedings of CEFC'2000  
**Volume:** **Inclusive Page Numbers** 212- **Date:** Jun 2000

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**Author(s)** Hannah Michalska Alexandre Jouan Benoit Jarry  
**Title** Tracking closely maneuvering targets in clutter with an IMM-JVC algorithm  
**Journal/  
Publication:** Proc. 3rd International Conf. on Data Fusion  
**Volume:** 1 **Inclusive Page Numbers** MoD2-10 - **Date:** Jul 2000  
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Paris, July 10-13, 2000.

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**Author(s)** J.A. Brzozowski, R. Negulescu  
**Title** Automata of Asynchronous Behaviors  
**Journal/  
Publication:** Theoretical Computer Science  
**Volume:** **Inclusive Page Numbers** 113-128 **Date:** Jan 2000

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#### ***Refereed Conference Proceedings***

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**Author(s)** H. Hallal, R. Negulescu, A. Petrenko  
**Title** Design of divergence-free protocol converters using supervisory control techniques  
**Journal/  
Publication:** IEEE Int Conf on Electronics, Circuits and Systems  
**Volume:** **Inclusive Page Numbers** 705-708 **Date:** Dec 2000  
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Proceedings of the Seventh IEEE International Conference on Electronics, Circuits and Systems

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**Author(s)** R. Negulescu  
**Title** Process spaces  
**Journal/  
Publication:** Int. Conf. on Concurrency Theory  
**Volume:** **Inclusive Page Numbers** 196-210 **Date:** Aug 2000  
Proceedings of the 11th International Conference in Concurrency Theory (CONCUR) is a top conference on modeling concurrent systems.

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**Author(s)** S.Laberge, R. Negulescu  
**Title** An asynchronous FIFO: case study in speed-optimizations  
**Journal/  
Publication:** IEEE Int Conf on Electronics, Circuits and Systems  
**Volume:** **Inclusive Page Numbers** 755-758 **Date:** Dec 2000  
An IEEE conference  
Proceedings of the Seventh IEEE International Conference on Electronics, Circuits and Systems

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### ***Professor Boon-Teck Ooi***

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#### ***Non-refereed Contributions***

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**Author(s)** D.F.-Brosseau, F. Lacroix, M.H. Ayliffe, E. Bernier, B. Robertson, F. Tooley, D.V. Plant, A.G. Kirk

**Title** Design, implementation, and characterization of a kinematically aligned cascaded spot array generator for a modulator based optical free-space optical backplane

**Journal/  
Publication:** Applied Optics

**Volume:** 39      **Inclusive Page Numbers** 733-745      **Date:** May 2000

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**Author(s)** T. Maj, A.G. Kirk, D.V. Plant, J. Ahadian, C. Fonstad, K. Lear, K. Tatah, M. Robinson, J.A. Trezza

**Title** Interconnection of a two-dimensional array of vertical cavity surface emitting lasers to a receiver array by means of a fiber image guide

**Journal/  
Publication:** Applied Optics

**Volume:** 39      **Inclusive Page Numbers** 683-689      **Date:** May 2000

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### ***Professor Gordon Roberts***

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#### ***Refereed Journal publications***

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**Author(s)** V. Leung and G.W. Roberts

**Title** Effects Of Transistor Non-Idealities On High-Order Log-Domain Ladder Filter Frequency Response

**Journal/  
Publication:** IEEE Trans. on Circuits and Systems-II

**Volume:**      **Inclusive Page Numbers** 373-387      **Date:** May 2000

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**Author(s)** B. Dufort and G. W. Roberts

**Title** Increasing the Performance of Arbitrary Function Generators Using Sigma-Delta Coding Techniques

**Journal/  
Publication:** IEEE Trans. on Instruments and Measurements

**Volume:** 49      **Inclusive Page Numbers** 188-199      **Date:** Feb 2000

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#### ***Refereed Conference Proceedings***

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**Author(s)** M. Hafed, N. Abaskharoun, and G. W. Roberts

**Title** A Stand-Alone Integrated Test Core For Time And Frequency Domain Measurements

**Journal/  
Publication:** Proc. IEEE International Test Conference

**Volume:**      **Inclusive Page Numbers** 1031-1040      **Date:** Oct 2000

This paper will receive the IEEE Best Paper Award for 2000

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**Author(s)** A.A. Hamoui and N.C.Rumin  
**Title** An analytical model for current, delay, and power analysis of submicron CMOS logic circuits  
**Journal/  
Publication:** IEEE Transactions on Circuits and Systems II:ADSP  
**Volume:** 47      **Inclusive Page Numbers** 999-1007      **Date:** Oct 2000

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### ***Professor Ishiang Shih***

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#### ***Refereed Journal publications***

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**Author(s)** H.P. Wang, I. Shih and C.H. Champness  
**Title** Studies on Monocrystalline CuInSe<sub>2</sub> and CuIn<sub>2</sub>Se<sub>5</sub>  
**Journal/  
Publication:** Thin Solid Films  
**Volume:** 361      **Inclusive Page Numbers** 494-497      **Date:** Feb 2000

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#### ***Refereed Conference Proceedings***

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**Author(s)** H.P. Wang, I. Shih and C.H. Champness  
**Title** Bridgman-grown Ingots from CuIn<sub>3</sub>Se<sub>5</sub>  
**Journal/  
Publication:** Proc.16th European Photovoltaic Solar Energy Conf.  
**Volume:**      **Inclusive Page Numbers** 702-705      **Date:** May 2000  
Crystals of CuIn<sub>3</sub>Se<sub>5</sub> have been grown by the Bridgman method. These were studied by X-ray and electrical measurements. The results showed that the CuIn<sub>3</sub>Se<sub>5</sub> crystals are highly compensated with high electrical resistivity.

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**Author(s)** H.P. Wang, I. Shih and C.H. Champness  
**Title** Characteristics of CuInSe<sub>2</sub> Bridgman Ingots Grown with Sodium  
**Journal/  
Publication:** 28th IEEE Photovoltaic Specialists Conf.  
**Volume:**      **Inclusive Page Numbers** 642-645      **Date:** Sep 2000  
Crystals of CuInSe<sub>2</sub> grown by the Bridgman method with 0.05, 0.25 and 2 at.% of Na were obtained. Lattice constants were obtained by X-ray diffraction. Electrical resistivity, carrier density and mobilities have been determined on these crystals.

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### ***Professor Jonathan Webb***

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#### ***Refereed Journal publications***

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**Author(s)** H. Akel, J. P. Webb  
**Title** Design sensitivities for scattering-matrix calculation with tetrahedral edge elements  
**Journal/  
Publication:** IEEE Trans. on Magnetics  
**Volume:** 36      **Inclusive Page Numbers** 1043-1046      **Date:** Jul 2000

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**Author(s)** M. M. Gavrilovic, J. P. Webb  
**Title** An error estimator for design sensitivities of microwave device parameters  
**Journal/  
Publication:** Finite Element Workshop for Microwave Engineering  
**Volume:** **Inclusive Page Numbers** 14 **Date:** Jun 2000

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### ***Professor Zeljko Zilic***

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#### ***Other refereed Contributions***

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**Author(s)** L. R. Albu, Z. Zilic, W-B. Leung, R. Stuby, J. Thompson and B. Britton  
**Title** A Programmable Clock Manager that Can Implement Delay-Locked Loop Function  
**Journal/  
Publication:** US Patent 6043677  
**Volume:** **Inclusive Page Numbers** 1-34 **Date:** Mar 2000

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**Author(s)** L. R. Albu, Z. Zilic, W-B. Leung, R. Stuby, J. Thompson and B. Britton  
**Title** A Programmable Clock Manager that Can Generate at Least Two Different Clocks  
**Journal/  
Publication:** US Patent 6028463  
**Volume:** **Inclusive Page Numbers** 1-34 **Date:** Feb 2000

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**Author(s)** L. R. Albu, Z. Zilic, W-B. Leung, R. Stuby, J. Thompson and B. Britton  
**Title** A Programmable Clock Manager that Can be Programmed without Reconfiguring the Device  
**Journal/  
Publication:** US Patent 6060902  
**Volume:** **Inclusive Page Numbers** 1-34 **Date:** May 2000

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**Author(s)** Z. Zilic, H. Nguyen, G. Powell, W-B. Andrews and R. Stuby  
**Title** Signalling Voltage Range Discriminator  
**Journal/  
Publication:** US Patent 6124732  
**Volume:** **Inclusive Page Numbers** 1-23 **Date:** Oct 2000  
Patent Granted

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**Author(s)** I. Brynjolfson and Z. Zilic  
**Title** Dynamic Programmable Clock Divider  
**Journal/  
Publication:** US Patent (Submitted after McGill, lawyer review)  
**Volume:** **Inclusive Page Numbers** 1-43 **Date:** Nov 2000

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#### ***Refereed Conference Proceedings***

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**Total publications:**

**201**

**Total publications:**

**201**