Andrew G. Kirk

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Academic Appointments

2019/09-2020/08	*Visiting Researcher* (sabbatical visit) Lady Davis Institute of the Jewish General Hospital, Montreal
2018/11-2019/7	*Visiting Researcher* (sabbatical visit) Universidad Politécnica de Valencia
2011-present	*Professor* Department of Electrical and Computer Engineering, McGill University
2013/06 to 2018/05	*Chair* Department of Electrical and Computer Engineering, McGill University
2011/09-2013/05	*Interim Dean* Faculty of Engineering, McGill University
2011/06-2011/09	*Chair* Department of Electrical and Computer Engineering, McGill University (service interrupted to take up position as Interim Dean)
2011-2018/05	*James McGill Professor* Department of Electrical and Computer Engineering, McGill University
2007-2018/8	*Director*, McGill Institute for Advanced Materials, McGill University
2006-2011	*Associate Dean for Research and Graduate Education* Faculty of Engineering, McGill University
2006 (6 months)	*Visiting Academic* (sabbatical visit) Centre for Ultrahigh Bandwidth Optical Systems, University of Sydney, Australia
2002–2010	*Associate Professor* Department of Electrical and Computer Engineering, McGill University
2002 (6 months)	*Visiting Researcher* (sabbatical visit) Department of Electronics and Electrical Engineering, University of Glasgow, UK.
1996–2002	*Assistant Professor* Department of Electrical and Computer Engineering, McGill University,

Post-doctoral research

1994–1996	*HCM Fellowship* Vrije Universiteit Brussels, Belgium, Department of Applied Physics Design, analysis and packaging of parallel optical interconnects.
1992–1993	*JGF Research Fellow* University of Tokyo, Japan, Department of Mathematical Engineering. Reconfigurable optical interconnects for parallel processing applications.

Education

1989-1992	Ph.D. in Physics, King's College, London. UK
1986-1989	B.Sc. (Hons) in Physics, University of Bristol, UK

Awards, Scholarships and Fellowships

2014 McGill University, Faculty of Engineering, *William and Rhea Seath Award for Engineering Innovation*
2011 McGill University, *James McGill Professor* (7 year appointment, equivalent to CRC Tier I)
2009 Erasmus Mundus *Distinguished Professor Scholarship* (European Commission)
2009 *Bourse d'enseignment en genie* (Québec Government, Ministère de l'Education, du Loisir et du Sport)
2006 NSERC *Synergy Award (*as member of Agile All-Photonic Networks team)
2005 McGill University: *Renewal of William Dawson Scholar* (5 year appointment, equivalent to CRC Tier II)
2004 McGill University: *Principal's Award for Excellence in Teaching at the Associate Professor Level*
2003 McGill University: *Royal Bank Faculty Associate Award for Teaching and Learning*
2004 Department of Electrical and Computer Engineering: *Professor of the Year*
2001 McGill University: *Principal's Award for Excellence in Teaching at the Assistant Professor Level*
2001 Department of Electrical and Computer Engineering: *Outstanding Teacher Award*
2000 McGill University: *Appointment as William Dawson Scholar* (5 year appointment, equivalent to CRC Tier II)
1992 Japanese-German Foundation: *JGF Research Fellowship*

Research Centre and Network Affiliations

- **Centre for Advanced Systems and Technologies** (SYTACOM; FQRNT Research Network and McGill Research Centre):Member (2006-)
- **Centre for Biorecognition and Biosensors** (CBB; FQRNT Research Network and McGill Research Centre): Associate Member (2005-2011)
- **McGill Institute for Advanced Materials** (MIAM): Member (2004-)
- **Agile All-Photonic Networks** (AAPN; NSERC Strategic Research Network): Member (2002-2008)
- **Canadian Institute for Telecommunications Research** (CITR; NSERC Network of Centres of Excellence Program): Member and leader of Micro-optics program (1996-2001).

Professional activities

- **Guest Editor**, *IoP J.Phys Photonics* focus issue on applications of integrated photonic devices (2019)
- **Member,** International Advisory Board for IOP Journal *J.Phys Photonics* and **Chair** of Optical sensors and detection, and photonic sensing' cluster (2018-present)
- **Treasurer**, Canadian Heads of Electrical and Computer Engineering Departments (CHECE) (2016-2018)
- **Member of Board**, *PROMPT* (2013-2015)
- **Elected Member**, *IEEE-Photonics Society Board of Governors* (2012/15)
- **Chair**, *Joseph Fraunhofer Award Committee*, Optical Society of America (OSA), responsible for leading the deliberations for the selection of the 2010 recipient (2009-2011)
- **Member**, *Young Investigator Award Committee*, IEEE Photonics Society (2009-2012)
- **Member**, *Conseil Scientifique*, NanoQuebec (responsible for advising Administrative Committee on Scientific Directions), (2009-12)
- **Member** of *IEEE-Photonics Society Meetings Council*, responsible for developing strategic planning process for conferences (2008-2011)
- **Member** of the Awards Committee of the Optical Society of America (OSA) (2008-2011)
- **Chair** of IEEE-Photonics Society (formerly IEEE-LEOS) *Nanophotonics Technical Area Committee*, responsible for coordination of nanophotonics activities (2008-2010)
- **Chair**, *Symposium on Metamaterials and Plasmonics*, 2008 IEEE-LEOS Annual Meeting (Newport Beach, CA)
- **Chair** of *Nanophotonics Program* for 2007 and 2008 *IEEE-LEOS Annual Meeting* (Lake Buena Vista, FL and Newport Beach, CA)
- **Representative** for the Optical Society of America (OSA) for *IEICE Photonics in Switching* Conference, Sapporo, Japan, 2008
- **Member of Board**, Centre québécois de recherche et de développement de l'aluminium (CQRDA), (2006-2013)

- **Member of Scientific Committee,** Centre for Research and Innovation in Aerospace in Quebec (CRIAQ), (2006-2008)
- **Member** of the Program Committees for Nanophotonics Program IEEE-LEOS Annual Meeting (2007), SPIE Annual Meeting (various programs, 2001-2003), CLEO Europe 2000 (optical interconnects program), SPIE Photonics Fabrication Europe, Canadian MEMS Workshop
- **Referee** for OSA Optics Express, OSA Applied Optics, OSA Optics Letters, OSA JOSA A, IEEE J. Photonics Technology Letters, IEEE J Sel Topics in Quantum Electronics, IEEE J Lightwave Technology, Optics Communications
- **Reviewer** for funding proposals to NSERC, FQRNT, CFI, CRC, Science Foundation Ireland, Singapore Science and Engineering Research Council, Israel Science Foundation, UK EPSRC
- **Consultant** for Nortel Networks, Corning Inc, JDS Uniphase, Texas Instruments
- **Member**, Scientific Committee for the annual '*Science, on tourne*' competition of the Quebec Federation of Cegeps (1997-2006), responsible for preparing the annual team challenge and for adjudicating on the day of the competition.

University responsibilities

- **Chair**, Department of Electrical and Computer Engineering (April 2011-September 2011 and July 2013-May 2018). Responsible for departmental of 44 professors, 1100 undergraduate students and over 300 graduate students.
- **Interim Dean**, Faculty of Engineering (October 2011-June 2013). Responsible for operation of one of Canada's leading schools of Engineering, containing 150 professors, 135 support staff, 3000 undergraduate students and 1100 graduate students. Successfully lead campaign for $10M endowment for the Trottier Institute for Sustainability in Engineering and Design; successfully proposed new Department of Bioengineering and led recruitment of first professors of bioengineering.
- **Member**, *Strategic Repositioning Initiative* (2010-2012)
- **Member**, *Working Group on Disclosure of Conflict of Interest*, Vice-Principal Research and International Relations, (2010-11)
- **Member**, *Tenure and Promotion Committee*, Department of Electrical and Computer Engineering, (2010-11)
- **Member**, *Advisory Committee for the Selection of a Provost* (2009)
- **Member**, *Task force on Indirect Costs*, Vice-Principal Research and International Relations, (2008-2010)
- **Member**, *Driving Innovation Steering Committee* (2008-2010)
- **Director**, McGill Institute for Advanced Materials (MIAM) (2007-present). Responsible for coordination and promotion of advanced materials, nanoscience and nanotechnology at McGill. Managing McGill Nanotools Microfabrication facilities and characterization facilities. Lead acquisition of $7.2M in new fabrication and characterization equipment, recruited new staff, obtained $1.6M in NSERC funding (over 6 years) for CREATE training program in integrated sensor systems, with participation of three other Montreal-area universities and several industrial and international partners.
- **Associate Dean for Research and Graduate Education**, Faculty of Engineering (2006-2011): Responsibilities include coordination of major research funding applications in the faculty, management of faculty graduate fellowship program, representation of Faculty on a range of university committees
- **Chair,** Search Committee for Lorne Trottier Chair in Aerospace Engineering (2007-08). Successfully identified inaugural chairholder.
- **Chair**, Search Committee for Nanophotonics/Nanoelectronics faculty position, Department of Electrical and Computer Engineering. Successfully recruited Prof. Zetian Mi (2006). Also member of numerous faculty search committees both within the Electrical and Computer Engineering Department and external to it.
- **Member**, search committee for Professional Associates for University Teaching and Learning Services (2006)
- **Member**, search committee of Director, University Teaching and Learning Services (2005)
- **Member** of Senate Nominating Committee (2004-2005 (stepped down due to sabbatical))
- **Member of Council**, McGill Association of University Teachers: (2002-2005). Organized University Forum on Teaching and Learning in 2005. Nominated as **MAUT President Elect** in 2006, but withdrew due to assumption of position of Associate Dean Research and Graduate Education position in Engineering.

- **Chair,** Engineering Computing Committee, Faculty of Engineering, and Ex-officio member of McGill University Senate Committee on Information Services and Technology: (2004-2005). Implemented major review of support for undergraduate computing use and coordinated improved access to CAD tutorials.
- **Member**, Chair's Advisory Committee, Department of Electrical and Computer Engineering (2004-present)
- **Co-organizer** of the inaugural Faculty of Engineering Symposium on Teaching and Learning (2005)
- **Member** of the Learning Management Software (LMS) evaluation group (Office of the CIO). Responsible for reviewing candidate LMS systems and reporting on perceived strengths and weaknesses (2003-2004)
- **Senator**, McGill University Senate: Elected as Faculty Representative. First term: 2002-5; second term: 2007 (stepped down after also having stepped down as MAUT President Elect).
- **Member** of Senate Nominating Committee (2005)
- **Chair**, Management Committee of MIAM Microfabrication Facility: Chair (2002-2006): Responsible for recruitment, planning, outreach and fund raising
- **Member**, Planning Committee, Faculty of Engineering: (2002-2005)
- **Affiliate Member,** Teaching and Learning Services (TLS), McGill University (2003-present)
- **Co-instructor** for Course Design and Teaching Workshop (McGill TLS), offered to instructors (1 week course, 2 times at McGill and 2 times at Simon Fraser University) (2002-2007)
- **Member**, Graduate Committee, Department of Electrical and Computer Engineering, (2003-)
- **Reader**, Scholarships Committee, McGill University (2001-2006)
- **Departmental Secretary**, Department of Electrical and Computer Engineering. Responsible for organization and recording of departmental meetings (1999-2004)
- **Undergraduate Advisor**, Department of Electrical and Computer Engineering, 1996-2002

GRADUATE AND UNDERGRADUATE SUPERVISION

(*†Awarded external fellowship, (e.g. NSERC, FQRNT, INO, SPIE, national), ‡Awarded McGill graduate fellowship)*

PhD students in progress

1. Oudjedi, Fatma‡, "Nanoparticle-based photothermal therapy for cancer treatment", 2019-present
2. Motavas, Mohammad, "Multiplexed biosensors based on RF detection methods in optical microcavities", 2019-present
3. Mohammadyousef, Padideh‡, "Plasmonic thermocycling and amplicon monitoring", 2017-present
4. Gamal, Rania‡, "Integrated cavity ring down spectroscopy system", 2014-present

M.Eng (thesis) students in progress

1. Shen, Sihui, "Multichannel ultrafast plasmonic PCR system development", 2020/01-present
2. Benchekroun, Mamoun. Thesis topic: monitoring of ultrafast plasmonic thermocycling, 2019/09-present.

PhD students graduated

1. Boroojerdi,Merhnoosh, "Integrated Tunable Silicon-On-Insulator Filters", 2011-2017, current position: Research Engineer, Cienna Inc, Ottawa
2. Soltani, Fatemeh, "Investigation of Low-Power Integrated Optical Switches and Modulators", 2010-2017, current position: Applications Engineer, Cienna Inc, Ottawa
3. Abumazwed, Ahmed†, "Nano-imprint fabrication of plasmonic nanostructures for sensing", 2010-2017, current position: Optical Engineer, OZ Optics, Ottawa
4. Filion-Côté, Sandrine†, "Surface plasmon resonance sensors", co-supervised with M.Tabrizian (Biomedical Engineering), 2011-2016, current position: optical design engineer, Lumenwerx Inc, Montreal
5. Cheema, Imran‡, "Towards optimal whispering gallery mode microcavity sensors: Novel techniques and analyses", 2008-13, current position: Assist. Prof., Lahore University of Management Sciences, Pakistan
6. Zhang, Roy†, "Optical properties of nano-crystalline cellulose", co-supervised with M.Andrews (Chemistry), 2009-13, current position: Scientist at Blue-O-Technology Inc, Vancouver
7. Veerasubramanian, Ventakrishnan, "Applications of side-wall grating resonators", 2008-12, current position: Senior Optical Engineer, Infinera, India

8. Jafari, Amir‡, “Distributed etched diffraction grating demultiplexer”, 2006-11, present position: Senior Optical Designer, Huawei, Ottawa
9. Khorshidahmad, Amin, “Photonic crystal demultiplexers and wavelength converters”,2006-2011, current position: Research Associate, University Laval
10. Alleyne, Colin, “Enhancing sensitivity for surface plasmon resonance biosensors using periodic structures and spectro-angular image analysis”, 2003-2009, current position: Developer, Xtranormal Inc, Montreal
11. Menard, Michael†, “Integrated Fabry-Perot optical space switches”, 2003-2009, current position: Professor, UQAM, Montreal
12. Hoa, Xuyen†, “Guided immobilization of bioreceptors on nano-gratings for enhanced surface plasmon resonance biosensing”, co-supervised with M.Tabrizian (Biomedical Engineering), 2005-2009, current position: Research Officer at National Research Council Canada
13. Bisaillon, Eric†, “Applications of sub-wavelenegth diffractive optical structures”, 2002-2007, current position: Scientist, Government of Canada
14. Bakhtazad, Aref, “Photonic bandgap superprisms”, 2001-2006, current position: Research Associate at Nanofabrication Facility, University of Western Ontario
15. Dong, Po, “Techniques for vertical waveguide coupling”, 2001-2005, current position: Principal Scientist, Bell Labs
16. Chateauneuf, Marc†, “Scalability of dense free-space optical interconnects”, 1997-2003, current position: Research Scientist at Defence Research and Development Canada
17. Lacroix, Frederic†, “Design, analysis and implementation of free-space optical interconnects”, 1998-2001, current position: Medical Physicist at Centre hospitalier universitaire de Québec

M.Eng (thesis) students graduated

1. Uchehara, Gideon, 2016-2018, thesis title “Real Time Label-Free Monitoring of Plasmonic Polymerase Chain Reaction Products", currently seeking a position
2. Tran, Ngoc Anh Minh, 2016-2017, thesis title “Universal Point of Care Biosensor using Ultrafast Plasmonic Polymerase Chain Reaction”, current position: PhD student, McGill
3. Burns, Margaret, 2015-2017, thesis title “Towards the Plasmonic-Photonic Hybridization of High Whispering Gallery Mode Microcavity Sensor and Gold Nanorod”, current position: Engineer, l3-Wescam, Ontario
4. Haines, Matthew, 2014-2016, thesis title: “Progress Towards Development of Loop Mirror and Resonant Coupling Modulators in Silicon with Integrated Electro-Optic Polymers “, current position: Optical R&D Engineer, Thalmic Labs, Ontario
5. Najih, Mohammed†, thesis title: “Modeling Coherence Effects on Cavity-Based Spectroscopy”, 2013-2017. Current position, PhD student, McGill
6. Wang, Songzhe, 2012-13, current position: Engineer, Nuance Inc, Montreal
7. Boechler, Graham, 2011-13, current position: Engineer, URS, San Francisco
8. Karami, Sara, co-supervised with Odile Liboiron-Ladouceur, 2011-13, current position: Engineer at Iridian Inc, Ontario
9. St-Quentin, Andra†, 2010-12, current position: Optics R&D, MTT Innovation Inc, Vancouver
10. Filion-Côté, Sandrine†, 2009-2011, current position: optical design engineer, Lumenwerx Inc, Montreal
11. Fatehi, Arya, 2009-11, current position: Engineer, Novellis Inc
12. Taslimi, Shahrzad, 2008-10, current position: Optical system designer, Ciena Inc, Ontario
13. Chien, Wein†, co-supervised with M.Tabrizian (Biomedical Engineering), 2006-2008, current position: unknown
14. Bhatnagar, Sameer, 2005-2008, current position: Cegep instructor
15. Khalid, Zeeshan, 2005-2007, current position: Princpal Test Engineer at Broadcom Corporation
16. Marinescu, Cristina†, 2003-2005, current position: Electro-Optics Developer at Ciena
17. Sanyal, Poulomi, 2003-2005, current position: RF Account Manager-Aerospace and Defense, Automotive and Utilities at Rohde & Schwarz

18. Malic, Lidija†, 2003-2005, current position: Research Officer at National Research Council Canada
19. Souleymani, Ali, 2002-2004, current position: Hardware design engineer, SoleNet Inc
20. Hoa, Xuyen†, 2002-2004, current position: Research Officer at National Research Council Canada
21. Prentice, James, 2001-2003, current position: Senior Product Manager, PMC-Sierra
22. Alleyne, Colin, 2001-2003, current position: Developer, Xtranormal Inc, Montreal
23. Varano, Robert†, 2001-2003, current position: Senior Principal Engineer at Reflex Photonics, Montreal
24. Thomas-Dupuis, Frederic†, 2001-2003, current position: Partner at Oliver Wyman, Montreal,
25. Simard, Marc, 2000-2002, current position: unknown
26. Lin, Julianna†, 1999-2001, current position: Design Engineer, Apple Inc, CA
27. Michael, Feras, 1999-2000, current position: Senior Electrical Engineer, TeraDiode Inc
28. Bisaillon, Eric†, 1999-2001, current position: Scientist, Government of Canada
29. Brady, Greg†, 1998-2000, current position: Optical Engineer, KLA Tencor
30. Maj, Tomasz, 1998-2000, current position: Product Line Manager, Finisar
31. Cheng, Fan, 1997-2000, current position: unknown
32. F.-Brosseau, Daniel, 1997-1999, current position: Associate, McKinsey and Company
33. Mathieu, Frederick, 1996-2000, current position: Engineer, ALSTOM
34. Lacroix, Frederic, 1996-1998, current position: Medical Physicist at Centre hospitalier universitaire de Québec

Post-doctoral researchers completed

1. Roche, Philip, 2008-2012,
2. Sun, Guilin†, 2005-2008,
3. Jugessur, Aju, 2004-2006,
4. Jafari, Reza†, 2003-2004,
5. Lugo, Eduardo*, 2001-2004,
6. Belanger, Nicholas*, 2003-2005

Honors Undergraduate Students, 2 semesters)

1.	Zang, Wen Bo	2016
2.	Tranh, Ngoc Anh Minh	2015
3.	Najih, Mohamed	2012
4.	Xue, Hao Ying	2011
5.	Salih Safa, Muhammed	2011
6.	Wang, Songzhe	2010
7.	Xu, Da-Qian	2009
8.	Filion-Cote, Sandrine	2008
9.	Khatamian, Yasha	2007
10.	Larom, Bar	2006
11.	Khalid, Zeeshan	2004
12.	Radita, Christian	2003
13.	Sharma, Vikas	2002
14.	Latif, Salman	2002
15.	Kena-Cohen, Stephane	2001
16.	Marinescu, Cristina	2001
17.	Bres, Camille	2001
18.	Brien, Samuel	2001
19.	Sabourin, Patrick	2001
20.	Xuyen, Hoa	2001
21.	Hooshangi, Sara	2000
22.	Hsieh, Taulee	1999
23.	Dalle, Marwan	1999
24.	Varano, Robert	1999
25.	Thomas-Dupuis, Frederic	1999
26.	Seghal, Puja	1998
27.	Girolamo, Cosmo	1998
28.	Barakat, Neil	1998
29.	Lin, Julianna	1998
30.	Chateauneuf, Marc	1996
31.	F.-Brosseau, Daniel	1996

B.Eng. Capstone Design Project Teams supervised, 2 semesters

2020-21: Kenny Huynh, Adrian Dybka

2019-20: Ryan Lo, Zuoya Wang, Lucas Shtychno, Nafisa Islam (Mechanical Engineering)

2017-18: Peter Moutsatsos, James McCallum; Liam Ashworth; Aram Nercessian (Mechanical Engineering)

2017-18: Nasif Alam, Wesley Sun, Hunter Hauswirth,

SURE undergraduate summer students

1.	Benchekroun, Mamoun	2018
2.	Shen, Sihui	2018
3.	Fulleringer, Alexander	2017
4.	Savoie, Mathieu	2017
5.	Tang, Vera	2017
6.	Khan, Fazal Mahmood	2017
7.	Mian, Muhammad Anees Rehman	2017
8.	Lemes Arai, Juliana	2016

9.	Bozzo, Sara Anne	2016	
10.	Fang, Szu-Chieh	2016	
11.	Guenin, Laurent	2016	
12.	Quinn, Peter	2016	
13.	Gong, Yanhao	2016	
14.	Shen, Chen	2015	
15.	Zang, Wen Bo	2015	
16.	Wolfe, Sean	2015	
17.	Tranh, Ngoc Anh Minh	2014	
18.	Shen, Lulan	2014	
19.	Wang, Hong Yi	2014	
20.	Ben Zvi, Libby	2013	
21.	Robinson, Warren	2013	
22.	Bare, Milena	2013	
23.	Dupressoir, Patrick	2012	
24.	Fakih, Ibrahim	2011	
25.	Dhane, Sina	2011	
26.	Hemsworth, Nick	2011	
27.	Wong, Jeremy	2010	
28.	Hamza, Rias	2010	
29.	Waldman, Eric	2010	

FUNDING HISTORY

Operating grants

Investigators (PI: Principal Investigator)	**Project**	**Amount/year , % available to candidate)**	**Years of tenure**
B.Brenner (Co-PI), N.Kronfli (Co-PI), A.Kirk (Co-Investigator), M.Paliouras (Co-Investigator)	*Design of a Rapid Point-of-Care PCR device for the diagnosis and management of HIV, HCV and other infectious diseases for key vulnerable populations in real-world settings* McGill MI4 Seed Grant	$150,000 (30%)	2019-20
Kirk, AG (PI), Trifiro M; Paliouras, M; Yargeau, V.	*High speed, portable PCR system for rapid and in situ water quality testing* Trottier Institute for Sustainability in Engineering and Design Planetary Health Seed Funding Program	$75,000 (40%)	2018-20
Trifiro, M (PI), Kirk, AG (Co-PI), Paliouras, M and Roche, P	*Plasmonic PCR: Rapid Diagnostics through Plasmonics* Genome Quebec, Disruptive Innovation in Genomics Competition	$125,000 (30%)	2016-18
Kirk, A.G. (PI)	*Integrated photonic biosensors for time domain measurements* NSERC Discovery Grant	$47,000 (100%)	2015-2020
Tabrizian, M. (PI), Kirk, A.G., Faucher, S.	*Integrated on-chip microfulidic system with surface plasmon resonance biosensor for time-effective detection of legionella pneumophila in contaminated water* NSERC Strategic Grant	$142,000 (33%)	2014-2017
Mi, Z. (principal), D. V. Plant, and A. G. Kirk.	*3-Dimensionally integrated nanophotonic circuits on Si for terahertz-speed chip-level optical communications* NSERC, Strategic Grant,.	$136,000 (33%)	2012-2015
Kirk, A.G. (PI)	*Nanophotonic Engineering for Telecommunications and Biomedicine* McGill University, James McGill Chair	15,000 (100%)	2011-2018

Tabrizian, M.T. (PI); Kirk, A.G.; Juncker, D; Veres, T.	*Towards a Portable and Fully Automated SPR-Based Digital Microfluidics Array Platform Integrating Diffractive Optical Elements for Genomics and Proteomics* Genome Quebec	132,500 (25%)	2010-2013
Kirk, A.G. (PI) and Andrews, M	*Integrated polymer electro-optic switches* NanoQuebec	66,667 (50%)	2010-2012
Andrews, M (PI); Kirk, AG and 2 others	*Encres à base de nano cellulose cristalline pour une sécurité et une couleur* FQRNT Arbora-Nano program	75,000 (25%)	2010-2013
Kirk, A.G. (PI) and 9 others	*NSERC CREATE training program in Integrated Sensor Systems* NSERC CREATE program	300,000 (10%)	2010-2016
Kirk A.G. (PI); Mi, Z and Plant, D.V.	*Direct integration of microtube lasers on silicon* NSERC Strategic Research Program	136,000 (30%)	2010-2013
Kirk, A.G. (PI); Charette, P; Tabrizian, M; Beauvais, J.	*Senseurs à résonance de plasmon de surface à sensibilité accrue* FQRNT Team Grant	43,200 (33%)	2008-2010
Kirk, A.G. (PI); Plant, D.V., Aimez, V.	*Heterogeneous integration processes for planar optoelectronics* NSERC Strategic Research Program	99,900 (33%)	2008-2010
Tabrizian, M.T. (PI); Kirk, A.G.; Juncker, D; Charette, P.; Veres, T.	*Integrated Proteomics Platforms for High-Throughput Biomarker Discovery and Validation* Genome Canada and Genome Quebec, Technology Development Program	816,704 (20%)	2008-2010
Kirk A.G. (PI)	*Nanoplasmonic Optical Biosensors* NSERC Discovery Grant	36,000 (100%)	2007-2015
Kirk, A.G. (PI)	*Integrated Fabry-Perot Optical Space Switch* NSERC Idea to Innovation program	94,035 (100%)	2007
Kirk, A.G. (PI) and 9 others	*Microfabrication Facilities Access* NSERC Major Resource Access	60,000 (10%)	2006
Colman, D.R. (PI); Kirk A.G., and 9 others	*Engineering Repair of the Central Nervous System* CIHR (Innovative Approaches to Health Research	295,000 (5%)	2005-2007
Tabrizian, M. (PI) ; Kirk, A.G. ; Verres, T.	*Novel surface plasmon resonance biointerface for time-effective analysis of sepsis biomarkers* NSERC CRD	99,300 (33%)	2005-2007
Kirk, A.G. (PI)	*William Dawson Scholar Research Grant (renewal)* McGill University	15,000 (100%)	2005-2010
Kirk, A.G.(PI) and 4 others	*Fully integrated grating-based surface plasmon resonance sensors* FQRNT Team Grant	76,550 (30%)	2005-2007
Kirk, A.G. (PI)	*Integrated micro-optical systems for future optical networks* NSERC Discovery Grant	35,850 (100%)	2004-2006

Kirk, A.G. (PI)	*Integrated planar waveguide structures* NSERC eMPOWR program	20,000 (100%)	2005
Kirk, A.G. (PI)	*Improved optical systems for particle Measurements* (NSERC CRD	42,778 (100%)	2005
Kirk, A.G. (PI)	*Novel technique for efficient nonlinear optical frequency conversion* NSERC Idea to Innovation program	79,535 (100%)	2004
Ward, B. (PI); Kirk, A.G. and 3 others	*SELDI-ToF MS in blood-borne protozoan* infections: novel diagnostic approach CIHR	98,000 (10%)	2004-2005
Plant, D.V. (PI); Kirk A.G. and 12 others	*Agile All-Photonic Networks* NSERC Research Networks program	1,700,000 (8%)	2003-2007
Beauvais, J. (PI); Kirk A.G. and 4 others	*High resolution lithography for the fabrication of photonic devices* PROMPT (VRQ)	125,000 (12%)	2003-2004
Kirk, A.G. (PI)	*3-D integrated micro-optics* NSERC eMPOWR program	20,000 (100%)	2003
Grutter, P. (PI); Kirk, A.G. and 5, others	*Micromachining facilities access* NSERC Major Facilities Access	130,000 (15%)	2003-2005
Kirk, A.G. (PI) and Plant, D.V.	*Tunable photonic bandgap devices* NanoQuebec (VRQ)	60,000 (50%)	2002-2003
Plant, D.V. (PI); Kirk, A.G. (and 3others	*Optical CDMA for local access* FQRNT (Team Grant)	70,000 (25%)	2002-2004
Kirk, A.G. (PI)	*William Dawson Scholar Research Grant* McGill University	15,000 (100%)	2000-2004
Kirk, A.G. (PI)	*Multi-drop free-space optical interconnects* NSERC Research Grant	33,160 (100%)	1999-2002
Kirk, A.G (PI),	*Micro-optics for wavelength routing* CIPI (NSERC NCE program)	59,000 (100%)	1999-2002
Kirk, A.G. (PI)	*Optical technology* CITR (NSERC NCE program)	118,000 (100%)	1998-2001
Plant, D.P. (PI); Kirk, A.G.	*VLSI photonics* BAE Systems (Research contract)	502,000 (50%)	1998-2001
Kirk, A.G., (PI)	*Optical Technology* CITR (NSERC NCE program)	135,000 (100%)	1998-1999
Plant, D.P. (PI); Kirk, A.G.	*Free space optical interconnect ASIC development* Nortel Advanced Technologies (Research contract)	208,000 (50%)	1998- 1999
Kirk, A.G. (PI)	*Robust micro-optical components for fre*e-space digital optical systems FCAR New Researcher grant	14,000 (100%)	1997-1999
Plant, D. (PI); Kirk, A.G.	*The optomechanics of free-space optical interconnects.* NSERC IOR	25,000 (50%)	1997-1998

Kirk, A.G. (PI)	*Micro-optics for free-space digital optical systems* NSERC Research Grant	24,000 (100%)	1996-1998
Kirk, A.G. (PI)	*Start-up funding* McGill University Dept. Electrical and Computer Engineering and Faculty of Engineering	30,000 (100%)	1996

Infrastructure and equipment Grants

Investigators	**Project**	**Amount/year (% available to candidate)**	**Years of tenure**
Plant, D.V (PI), Kirk, A.G., and four others	*All-Band Device Testbed* (NSERC Research Tools and Instruments	150,000 (50%)	2014
Mi, Z. (PI), Kirk, A.G. and 8 others	*An RF Plasma Nitrogen Source for the Development of Nanoscale Nitride Semiconductors for Phosphor-Free Solid State Lighting (Solar Fuels (and Chip-Level Optical Communications* (NSERC Research Tools and Instruments	57,839 (10%)	2013
Kirk, A.G. (PI) and 9 others	*Electron Beam Deposition System for Multi-User Nanofabrication Facility* (NSERC Research Tools and Instruments	148,200 (10%)	2011
Kirk, A.G (PI).; Charette, P; Tabrizian, M; Beauvais, J.	*Senseurs à résonance de plasmon de surface à sensibilité accrue (* Equipment funding component)	46,900 (50%)	2008
Plant, D.V. (PI); Kirk, A.G. and 8 others	*IFLOWS* MDEIE (Quebec)/McGill infrastructure program	2,979,000 (50%)	2007
Kirk, A.G. (co-PI); Vinals, co-PI), J and 8 others	Tools for Functional Materials MDEIE (Quebec)/McGill infrastructure program	7,200,000 (25%)	2007
Plant,D, (PI) Kirk, A.G., Chen, L.	*Burst Mode Technologies for High Bit Rate All-Photonic Access Networks* NSERC Research tools and instruments	36,122 (33%)	2005
Kirk, A.G. (PI), Plant,D, Chen, L.	*Photonic nanopositioning equipment* NSERC Research Tools and Instruments	63,640 (33%)	2004
Chen, L. (PI), Kirk, A.G., Plant,D,	*Components for ultrahigh bandwidth transmission experiments and ultrafast photonics research* NSERC Research Tools and Instruments	33,616 (33%)	2003
Chen, L. (PI), Kirk, A.G., Plant,D	*10 Gb/s lightwave receiver for dynamic recirculating loop transmission experiments* NSERC Research Tools and Instruments	70,068 (33%)	2002
Chen, L. (PI), Kirk, A.G., Plant,D	*Wavelength-division-multiplexing transmitters and components for lightwave systems research* NSERC Research Tools and Instruments	23,461 (33%)	2001
Grutter, P. (PI), Kirk, A.G. and 5 others	*Tools for Nanoscience and Technology* Canadian Foundation for Innovation	9,396,172 (10%)	2001

Blostein, M.L (PI), Kirk, A.G. and 8 others	*Experimental facilities for research in multimedia communications systems* Canadian Foundation for Innovation	1,824,355 (10%)	2001
Kirk, A.G. (PI), Kordoc, K.	*The impact of high capacity parallel optical interconnects on system design and performance* CFI New Opportunities Program	321,068 (50%)	2000
Kirk, A.G. (PI)	*Micro-optics for free-space digital optical systems* McGill University (Faculty of Graduate Studies (Equipment grant	15,000 (100%)	1998
Kirk, A.G. (PI)	*Robust micro-optical components for free-space digital optical systems* FCAR New Researcher Equipment grant	15,000 (100%)	1998

Grants for Teaching (Infrastructure and operations)

Investigator	Purpose	Amont per year	Years of tenure
Kirk, A.G.	*Bourse d'enseignment en genie* (Québec Government (MELS)	25,000, (stipend and teaching support)	2009-2013
Kirk, A.G.	*Enhancement of the undergraduate Optical Communications teaching laboratory,* Québec Government (MELS)	$214,000 (equipment)	2000
Kirk, A.G.	*Creation of an undergraduate Optical Communications teaching laboratory,* Québec Government (MELS)	$273,000 (equipment)	1999

RESEARCH CONTRIBUTIONS

My research is focused on the integration of optical nano- and micro-systems, for applications in biosensing and communications. My 'h-index' as currently determined by Google Scholar is 30, with over 3700 citations to my articles. In the sections below, the names of research trainees are underlined.

1. Articles in refereed journals

J1. F.Soltani, D.Patel, M.Ménard, D.V.Plant, **A.G.Kirk**, 'DPSK Modulation With a Dual-Drive Silicon Photonic Loop-Mirror Modulator', *IEEE Photonics Technology Letters*. **31**(3), pp 1037-1040, 2019

J2. A.Abumazwed, W.Kubo, T.Tanaka**, A.G.Kirk**, 'Improved method for estimating adlayer thickness and bulk RI change for gold nanocrescent sensors', *Scientific Reports* **8**, 6683, DOI: 10.1038/s41598-018-24950-7, 2018

J3. A.Abumazwed, W.Kubo, T.Tanaka, **A.G.Kirk**, 'Improved self-referenced biosensing with emphasis on multiple-resonance nanorod sensors', *OSA Optics Express*, **25** (20),pp 24803-24815, 2017

J4. P.J.R. Roche, M. Najih, S.S. Lee, L. K. Beitel, M. Carnevale, M. Paliouras, **A. G. Kirk**, M. A. Trifiro, 'Real Time Plasmonic qPCR: How fast is Ultra-fast? 30 cycles 1 in 54 seconds', *The Analyst*, **142**, pp 1746-1755, 2017

J5. S. Filion-Côté, F.Melaine, **A. G. Kirk,** M. Tabrizian**,** 'Monitoring of bacterial film formation and its breakdown with an angular-based surface plasmon resonance biosensor', *The Analyst*, **142** (13), pp 2386-2394, 2017

J6. S. Filion-Côté, M. Tabrizian and **A. G. Kirk,** 'Real-Time Measurement of Complex Refractive Indices with Surface Plasmon Resonance', *Sensors and Actuators B,* **245**, pp 747-752, June 2017

J7. A.Abumazwed, C.Shen, W.Kubo, T.Tanaka, **A.Kirk**, 'Projection method for improving signal to noise ratio of localized surface plasmon resonance biosensors', *OSA Biomedical Optics Express*, **8** (1), pp. 446-459, 2017

J8. M. T. Boroojerdi, M. Ménard and **A. G. Kirk**, 'Two-period contra-directional grating assisted coupler', *OSA Optics Express*, **24** (20), pp 22865-22874, 2016

J9. M. T. Boroojerdi, M. Ménard and **A. G. Kirk**, 'Wavelength tunable integrated add-drop filter with 10.6 nm bandwidth adjustability', *OSA Optics Express,* **24** (19), pp 22043-22051, 2016

J10. M.I.Cheema and **A.G.Kirk** , Analytical expressions for wave-guide coupled phase shift microcavity ring down spectroscopy, JOSA B, **32** (2), pp 355-362, 2015

J11. S. Filion-Côté, P. J. R. Roche, A. M. Foudeh, M. Tabrizian and **A. G. Kirk**, 'Design and analysis of a spectro-angular surface plasmon resonance biosensor operating in the visible spectrum', *Rev. Sci. Instrum*. **85**, 093107, 2014

J12. M. I. Cheema, C.Shi, A. M. Armani, and **A. G. Kirk,** 'Optimizing the signal to noise ratio of microcavity sensors, *IEEE Photonics Technology Letters,* **26** (20), pp 2023-2026, 2014

J13. M. I. Cheema, U. A. Khan, A. M. Armani, and **A. G. Kirk**, "Towards more accurate microcavity sensors: maximum likelihood estimation applied to combination of quality factor and wavelength shifts", *OSA Optics Express*, **21** (19), pp. 22817-22828, 2013

J14. M.I.Cheema and **A.G.Kirk**, 'Accurate determination of the quality factor and tunneling distance of axisymmetric resonators for biosensing applications', *OSA Optics Express* , **21** (7), pp 8724-8735, DOI: 10.1364/OE.21.008724, April 2013

J15. Y. P. Zhang, V. P. Chodavarapu, **A. G. Kirk**, and M. P. Andrews, 'Structured color humidity indicator from reversible pitch tuning in self-assembled nanocrystalline cellulose films', Sensors And Actuators B-Chemical, **176**, pp 692-697, DOI: 10.1016/j.snb.2012.09.100, Jan 2013

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J17. V.Veerasubramanian, G. Beaudin, A.Giguere, B. Le Drogoff, V. Aimez, **A.G.Kirk**, ' Design and Demonstration of Apodized Comb Filters on SOI' , IEEE Photonics Journal **4** (4), pp 133-1139, DOI: 10.1109/JPHOT.2012.2204971, 2012

J18. V.Veerasubramanian, G. Beaudin, A.Giguere, B. Le Drogoff, V. Aimez, **A.G.Kirk** , 'Waveguide-coupled drop filters on SOI using quarter-wave shifted sidewalled grating resonators', *OSA Optics Express,* **20** (14), pp 15983-15990, 2012

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J20. Z. Tian, P. Bianucci, P. J. R. Roche, M. H. T. Dastjerdi, Z. Mi, P. J. Poole, **A. G. Kirk**, and D. V. Plant, "Dynamical thermal effects in InGaAsP microtubes at telecom wavelengths," *Opt. Lett.* **37**, 2712-2714 (2012)

J21. M. I Cheema, S Mehrabani, A A. Hayat,Y-A Peter, A M. Armani, **A G Kirk**, 'Simultaneous measurement of quality factor and wavelength shift by phase shift microcavity ring down spectroscopy', *OSA Optics Express*, **20** (8), pp. 9090-9098, 2012 (also selected for the *Virtual Journal of Biomedical Optics*, **7** (6) May 2012*)*

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J23. A. Khorshidahmad, **A.G. Kirk** , 'Reflective Heterostructure Photonic Crystal Superprism Demultiplexer', *IEEE Photonics Technology Letters* , **4**, pp 303-305, 2012

J24. P.Roche, S. Filion-Cote, M. C-K Cheung, V. Chodavarapu and **A. G Kirk** 'A camera phone localised surface plasmon biosensing platform towards low cost label free diagnostic testing', *Journal of Sensors*, Article ID 406425, 7 pages, doi:10.1155/2011/406425, 2011

J25. 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

J26. 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

J27. A.Jafari**, A.G.Kirk**, 'Demonstration of Distributed Etched Diffraction Grating Demultiplexer', *IEEE Photonics Journal*, **3** (4), p. 651-657, 2011

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J39. X.D. Hoa, M. Tabrizian, **A. G. Kirk**, Enhanced SPR Response from Patterned Immobilization of Surface Bioreceptors on Nano-gratings, *J.Biosensors and Bioelectronics*, 24 (2009) 3043–3048, 2009.

J40. X.D. Hoa, M. Tabrizian, **A. G. Kirk**, 'Rigorous Coupled-Wave Analysis of Surface Plasmon Enhancement from Patterned Immobilization on Nano-Gratings', *J.Sensors*, doi:10.1155/2009/713641, 2009.

J41. W-Y Chien, M. Z. Khalid, X.D. Hoa, **A. G. Kirk**, 'Monolithically Integrated Surface Plasmon Resonance Sensor Based on Focusing Diffractive Optic Element for Optofluidic Platforms', *J.Sensors and Actuators B*, **138**, 441-445, 2009

J42. C.J. Alleyne, **A. G. Kirk**, P.G. Charette, 'Numerical method for high accuracy index of refraction estimation from surface plasmon photonic bandgap structures.', *OSA Optics Express* **16** (24) pp 493-503, 2008

J43. X.D. Hoa, M. Martin, A. Jimenez, J. Beauvais, P. Charette, **A. G. Kirk** and M.Tabrizian, 'Fabrication and Characterization of Patterned Immobilisation of Quantum dots on Metallic Nano-gratings', *Biosensors and Bioactuators* (available on-line doi:10.1016/j.bios.2008.07.069), 2008

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J45. M.Menard, **A.G.Kirk**, 'Assessment of Integration of Off-axis Fresnel Lenses into a Free-space Interconnect', *OSA Applied Optics* **46**, (30), pp. 7500-7505, 2007. [Impact factor 1.7]

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J47. X.D. Hoa, **A.G. Kirk**, M. Tabrizian, 'Towards integrated and sensitive surface plasmon resonance biosensors: A review of recent progress', *Biosensors and Bioelectronics*, **23**, pp 151–160, 2007.

J48. R.Jafari and **A.G.Kirk**, 'Comparison of three ANSYS finite element tools for analysis of MEMS micromirrors', *Journal Of Micro-Nanolithography MEMS And MOEMS* **6** (4), 040311, 2007

J49. A.Bakhtazad and **A.G.Kirk**, 'First band S-vector photonic crystal superprism demultiplexer design and optimization'*, J.Lightwave Technol*., **25**, pp 1322-1333, 2007. [Impact factor 2.8]

J50. C.J. Alleyne, **A.G. Kirk**, R.C. McPhedran, N-A.P. Nicorovici, and D. Maystre, 'Enhanced SPR sensitivity using periodic metallic structures', *OSA Optics Express*, **15**, pp 8163-1869, 2007 [Impact factor 4.0]

J51. L.Malic, **A.G.Kirk** , 'Integrated miniaturized optical detection platform for fluorescence and absorption spectroscopy', *J.Sensors and Actuators A*, 135, pp 515-524, 2007. [Impact factor 1.4]

J52. J. E.Lugo, M.Ocampo, **A.G.Kirk**, D.V.Plant, P.M.Fauchet, 'Electrochemical sensing of DNA with porous silicon layers', *Journal of new materials for electrochemical systems*, **10** (2), pp 113-116, 2007.

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J54. E. Bisaillon, D. Tan, B. Faraji, **A.G. Kirk**, L. Chrowstowski, and D. V. Plant , 'High reflectivity air-bridge subwavelength grating reflector and Fabry-Perot cavity in AlGaAs/GaAs', *Optics Express*, **14** (7), pp. 2573-2582, 2006. [Impact factor 4.0]

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J62. C.J.Alleyne, **A G Kirk**,, 'Rigorous coupled wave analysis applied to transmission efficiency of diffractive beam array relays for free-space optical interconnects', *Applied Optics*, vol. 44, no. 7, pp. 1200-1206, Mar.2005. [Impact factor 1.7]

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J88. R. Buczynski, V. Baukens, T. Szoplik, A. Goulet, N. Debaes, **A. Kirk**, P. Heremans, R. Vounckx, I. Veretennicoff, H. Thienpont 'Fast optical thresholding with an array of optoelectronic transceiver elements', *IEEE Photonics Technology Letters,* **11** (3) pp 367-369, 1999. [Impact factor 2.3]

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J90. N.Nieuborg, **A. Kirk**, C. Van de Poel, H. Thienpont and I. Veretennicoff, 'Polarization-selective diffractive optical elements with an index-matching gap material', *Applied Optics*., **36** (20) pp 4681-4685, 1997.

J91. **A G Kirk**, A Goulet, H. Thienpont, N. McArdle and K-H Brenner, M Kuijk, P Heremans, I Veretennicoff, 'A compact optical imaging system for arrays of optical thyristors', *Applied Optics*., **36** (8) pp 3070-3078, 1997.

J92. **A G Kirk**, H. Thienpont, A. Goulet, P. Heremans, G. Borghs, M. Kuijk, R. Vounckx and I. Veretennicoff, 'Demonstration of optoelectronic logic operations with differential pairs of optical thyristors', *IEEE Photonics Technology Letters,* **8** (3) pp 467-469, 1996. [Impact factor 2.3]

J93. **A G Kirk**, H. Thienpont, A. Goulet, P. Heremans, G. Borghs, M. Kuijk, R. Vounckx and I. Veretennicoff, 'Parallel optoelectronic data transcription with fan-out between planes of PnpN optical thyristors.', *IEEE Photonics Technology Letters*, **8** (3) pp 464-466, 1996. [Impact factor 2.3]

J94. **A G Kirk**, T Tabata, M Ishikawa, 'Design of an optoelectronic cellular processing system with a reconfigurable holographic interconnect', *Applied Optics* **33** (8) pp 1629-1639, 1994. **(*Selected by the SPIE as a Critical Paper*)**

J95. **A G Kirk**, T Tabata, M Ishikawa, 'Programmable diffractive optical interconnects for cellular processing applications', *Optoelectonics* **9** (1) pp 13-23, 1994.

J96. **A G Kirk**, T Tabata, M Ishikwa, H Toyoda, 'Reconfigurable computer generated holograms', *Opt. Commun.* **105** pp 302-308, 1994. **(*Selected by the SPIE as a Critical Paper*)**

J97. M. A. Hands, W. Peiffer, H. Thienpont, **A. Kirk**, T. J. Hall, D. Pignon, and P. Parmiter, "Proposal for stochastic bit stream processing using optoelectronic smart pixels: A neural network architectural case study," *Journal of Parallel and Distributed Computin*g, **41**, no. 1, pp. 92-108, 1997

J98. **A G Kirk**, G D Kendall, M-Y Chan, T J Hall, 'Optoelectronic approaches to cellular processing architectures', *Optical Computing and Processing* **3** (1) pp 53-68, 1993.

J99. N C Roberts and **A G Kirk**, 'Binary phase gratings for hexagonal array generation',*Optics Communications* **94** (6) pp 501-505, 1992. **(*Selected by the SPIE for a 'Milestone' series Vol. 146*)**

J100. **A G Kirk**, S Jamieson, H Imam and T J Hall, 'Experimental implementation of an optoelectronic matrix-matrix multiplier which incorporates multiple imaging', *Optical Computing and Processing* **2** (4) pp 293-294, 1992.

J101. **A G Kirk**, A K Powell and T J Hall, 'Error diffusion and the representation problem in computer generated hologram design', *Optical Computing and Processing* **2** (3) pp 199-212, 1992.

J102. **A G Kirk** and T J Hall, 'Design of computer generated holograms by simulated annealing: observation of meta-stable states', *Journal of Modern Optics* **39** (12) pp 2531-2539, 1992.

J103. **A G Kirk** and T J Hall, 'Design of computer generated holograms by simulated annealing: coding density and reconstruction error', *Opt. Commun.* **94** (6) pp 491-496, 1992. **(*Selected by the SPIE for a 'Milestone' series Vol. 146*)**

J104. **A G Kirk**, A K Powell, T J Hall, 'A generalisation of the error diffusion method for binary computer generated hologram design', *Optics Communications* **92** pp 12-18, 1992.

2. Book Chapters

B1. **A.G.Kirk** , 'Free-space optical interconnects', in *Optical Interconnects: The Silicon Approach*, Pavesi, Lorenzo; Guillot, Gérard (Eds.), Springer Series in Optical Sciences, Springer (Berlin), 2006

B2. **A G Kirk** and T J Hall, 'Interconnects within optically thin elements', Chapter in *Perspectives for Parallel Optical Interconnects,* Ph Lalanne, P Chavel (Eds.), Springer-Verlag, Berlin, 1991.

B3. **A G Kirk**, A K Powell, T J Hall 'A new approach to the design of quantised computer generated holograms', Chapter in *Optical Information Technology*, S D Smith and R F Neale (Eds.), Springer-Verlag, Berlin, 1991.

3. Invited talks or lectures at meetings without conference proceedings

I1. **A.G.Kirk**, 'Photonic biosensing: opportunities and challenges', Department of Chemical Engineering and Materials Science, Stevens Institute, New Jersey, USA, November 2019

I2. **A.G.Kirk**, 'Photonic biosensing: opportunities and challenges', OSA and SPIE Student Chapter Seminar Series, University of Toronto, October 2019

I3. **A.G.Kirk**, 'Plasmonics for biosensing and medical diagnostics', Department of Chemistry, Universidad Politécnica de Valencia, Spain, June 2019

I4. **A.G.Kirk**, 'Photonic biosensing: opportunities and challenges', Nanophotonics centre, Catalan Institute of Nanoscience and Nanotechnology, Spain, June 2019

I5. **A.G.Kirk**, 'Photonic biosensing: opportunities and challenges', Nanobiotechnology for Diagnostics (Nb4D) group, Institute for Advanced Chemistry of Catalonia, Barcelona, Spain, May 2019

I6. **A.G.Kirk**, 'Photonic biosensing: opportunities and challenges', Nanophotonics centre, Universidad Politécnica de Valencia, Spain, September 2017

I7. **A.G.Kirk**, 'Integrated resonant photonic structures for biosensing and telecommunications', University of Toronto, Department of Electrical and Computer Engineering, August 2014

I8. **A.G.Kirk**, 'Nanophotonics for sensing', Neuroengineering Training Program, McGill University, October 2013

I9. **A.G.Kirk**, 'Nanophotonics for sensing', Integrated Sensor Systems Training Program, McGill University, September 2013

I10. **A.G.Kirk**, 'Photonic resonant microsensors', Riken Institute, Tokyo, April 2012

I11. **A.G.Kirk**, 'Resonant structures for integrated photonic sensors', Boston University, April 2012

I12. **A.G.Kirk**, 'The cloak of invisibility', *Classes without Quizzes (*public lecture), McGill University, October 2010

I13. **A.G.Kirk,** 'Biocapteur spectro-angulaire basé sur la résonance plasmonique de surface', *Association Francophone pour le Savoir*, Montreal, 2010

I14. **A.G.Kirk , '**Integrated photonic systems for applications in telecommunications and biosensing', seminar, University of St Andrews, UK, July 2010

I15. **A.G.Kirk , '**Integrated photonic systems for applications in telecommunications and biosensing', seminar, Ghent University, Belgium, July 2010

I16. **A.G.Kirk , '**Integrated photonic systems for applications in telecommunications and biosensing', seminar, Vrije Universiteit Brussel, Brussel , Belgium, July 2010

I17. **A.G.Kirk**, 'Integrated Photonic Biosensors', 2 hours of lectures at the *Erasmus Mundus Master in Photonics* summer program, Heriot-Watt University, Edinburgh UK), June 2010.

I18. **A.G.Kirk**, 'Nanophotonic integration strategies', 22nd Entretiens Jacques Cartier, Lyons and Grenoble (France), December 2009).

I19. **A.G.Kirk**, 'Integrated and Micro-optics', 8 hours of lectures at the *IIM UNAM Materials Science and Engineering summer course 2009* (Mexico City, Mexico), June 2009.

I20. **A.G.Kirk**, 'Nanophotonics', The Cutting Edge Lecture Series: Royal Society Lectures in Science (public lecture), McGill University, December 2008

I21. **A.G.Kirk**, 'The cloak of invisibility', *Classes without Quizzes (*public lecture), McGill University, October 2008

I22. **A.G.Kirk**, 'Free-space principles in integrated nanophotonics', seminar, Kyoto University, August 2008

I23. **A.G.Kirk**, 'Free-space principles in integrated nanophotonics', seminar, University of Tokyo, August 2008

I24. **A.G.Kirk**, 'Dispersion engineering in photonic and plasmonic crystals', seminar, University of Toronto, November 2007

I25. **A.G.Kirk,** 'Metamaterials and Negative Refraction: Is Harry Potter's Invisibility Coat Possible?', *Sigma Xi lecture series*, McGill University, October 2007

I26. **A.G.Kirk**, 'The integration of photonic nanostructures into surface plasmon resonance optical biosensors', in *Nanobiotechnology for analysis and energy conversion*, 19th Entretiens Jacques Cartier, Lyons and Grenoble (France), December 2006.

I27. **A.G.Kirk**, 'Optical Engineering: Learning by Design', in *Creative Teaching Methods for Photonics*, IEEE-LEOS Annual Meeting, Montreal, October 2006

I28. **A.G.Kirk**, 'Engineering wavefront dispersion in planar waveguides with photonic crystals', seminar, Cornell University, August 2006

I29. **A.G.Kirk**, 'Applications of optically resonant structures in telecommunications and bio-sensing', seminar, Swinburne University, January 2006

I30. **A.G.Kirk**, 'Applications of optically resonant structures in telecommunications and bio-sensing', seminar, Macquarie University, January 2006

I31. **A.G.Kirk**, 'Applications of optically resonant structures in telecommunications and bio-sensing', seminar, University of Sydney, January 2006

I32. **A.G.Kirk**, 'Dispersion Engineering', seminar, University of Toronto, October 2005

I33. **A.G.Kirk**, 'Free-space optics', 3 hours of lectures at the *Photonics Winter School on Silicon Photonics*, University of Trento (Italy), February 2005.

I34. **A.G.Kirk**, 'Free-space optical interconnect design', seminar, St Andrews University, November 2002

I35. **A.G.Kirk**, 'Free-space optical interconnect design', seminar, University of Glasgow, October 2002

I36. **A.G.Kirk**, 'Progress in Packaging Techniques for Free-Space Micro-optical systems', IEEE-LEOS workshop on integrated optics and passive micro-optics, Brugge, Belgium, 1998.

I37. **A.G.Kirk**, 'Parallel processing system with reconfigurable holographic interconnections', Japan Optics Society Spring Meeting, Nagaoka, Japan, 1993

4. Invited posters

IP 1. M.Trifiro, M. Paliouras, S.Trifiro and **A. G. Kirk**, 'Ultrafast, high throughput digital PCR platform: Redefining Point of Care diagnostics', Health Canada workshop on Antimicrobial Resistance, Ottawa, May 2016

5. Contributions to Conference Proceedings

C1. P.Mohammadyousef, G.Uchehara, M.Paliouras, M.Trifiro, **A.G.Kirk**, 'Ultrafast VCSEL-based Plasmonic Polymerase Chain Reaction with Real-time Label-free Amplicon Detection for Point-Of-Care Diagnostics', *SPIE BIOS 2020,* San Francisco, USA, February 2020

C2. P.Mohammadyousef, M.Paliouras, M.Trifiro, **A.G.Kirk**, 'Ultrafast plasmonic and real-time label-free polymerase chain reaction', *SPIE BIOS 2020,* San Francisco, USA, February 2020

C3. G. Uchehara, **A.G. Kirk**, M.Trifiro, M.Paliouras, P.Mohammadyousef, 'Real time label-free monitoring of plasmonic polymerase chain reaction products', Proc. SPIE 10969, Nano-, Bio-, Info-Tech Sensors and 3D Systems III, 109690A, March 2019

C4. **A.G. Kirk**, R. Gamal, M. Najih, ´Do you need a tunable laser for resonant cavity optical sensors?´, *SPIE Optics and Optoelectronics Conference*, Prague, Czech Republic, April 2019

C5. N.Tran, P.Mohammadyousef, M.Paliouras, M.Trifiro, **A.Kirk**,`Real-time fluorophore-free optical monitoring of ultrafast DNA amplification for qPCR`, *2nd European Biosensor Symposium*, Florence, Italy February 2019

C6. A. Abumazwed, W. Kubo, T. Tanaka, and **A. G. Kirk**, 'Towards accurate LSPR biosensors based on the projection method: a direct measurement for refractive index', SPIE Photonics North, Ottawa, June 2017

C7. F. Soltani, M. Menard**, A.G.Kirk**, 'Integrated silicon photonic reflective modulator for passive optical networks', IEEE/OSA Conference on Lasers and Electro-optics (CLEO), JW2A.127, May 2017

C8. M. T. Boroojerdi, M. Menard**, A.G.Kirk,** Bandwidth Tunable SOI Add-Drop Filter, IEEE/OSA Conference on Lasers and Electro-optics (CLEO), JTh2A.111, May 2017

C9. M. T. Boroojerdi, M. Ménard, and **A. G. Kirk**, 'Bandwidth Tunable SOI Add-Drop Filter', IEEE International Photonics Conference, Waikoloa, Hawaii, USA, 2016

C10. F.Soltani, D.Patel, M.Ménard, D.V.Plant, A.G.Kirk, 'Low-power DPSK modulation at 10 Gbps using a silicon photonic loop mirror modulator', *IEEE International Photonics Conference*, Waikoloa, Hawaii, USA, 2016

C11. F.Soltani, M.Menard, **A.G.Kirk**, 'Low-power 20Gb/s Modulator with an Integrated Loop Mirror', *Proc. Asia Communications and Photonics Conference*. (OSA Publishing), paper ASu5B.3, Hong Kong, China, Nov. 2015

C12. MT Boroojerdi, M Menard, **A.G.Kirk**, 'Implementation of integrated bandwidth tunable optical add-drop filter using contra directional grating assisted couplers', *Proc. IEEE Photonics Conference*, pp 355-356, Reston VA, Oct. 2015

C13. S.Filion-Cote, M.Tabrizian, **A.G Kirk**, 'Surface plasmon resonance biosensor as a tool for the measurement of complex refractive indices', Proc. *IEEE Engineering in Medicine and Biology Society (EMBC), 2015 37th Annual International Conference*, pp 6413-6416, Milan (Italy), Aug 2015

C14. F.Soltani, M.Menard, **A.G.Kirk**, 'Optical Modulator with an Integrated Loop Mirror', *Proc. IEEE Optical Interconnects Conference*, April 20-22, San Diego, USA, 2015

C15. A. Abumazwed, W. Kubo, T. Tanaka, **A. G. Kirk,** 'Numerical and experimental investigation of plasmonic properties of silver nanocrescent structures for sensing applications', Proc. *Proc. SPIE 9371, Photonic and Phononic Properties of Engineered Nanostructures V*, 937127-937127-7, San Francisco, CA, Feb 2015

C16. S. Karami, **A. G. Kirk**, O. Liboiron-Ladouceur, 'Efficient method for Long Range Surface Plasmon (LRSPP) wave excitation with Si-based grating couplers', *IEEE International Photonics Conference 2014*, pp 554-555, October 2014.

C17. **A.G.Kirk** and M.I.Cheema, 'Optimally combining wavelength and quality factor information for sensing in whispering gallery mode optical microcavities', *Proc. SPIE Photonics North*, Montreal, May 2014 (**Invited**)

C18. A. Abumazwed, W. Kubo, T. Tanaka, **A. G. Kirk**, 'Design and fabrication of plasmonic nanostructures for optical biosensing by nanoimprint lithography', *Proc. SPIE Photonics North*, Montreal, May 2014 (**Invited**)

C19. A. Abumazwed **and A.G.Kirk**, 'Plasmonic properties of suspended nanodisc structures for enhancement of the local electric field distributions', *Proc. SPIE Photonics North*, Montreal, May 2014

C20. A. Abumazwed, W. Kubo, T. Tanaka, **A. G. Kirk**, 'Study and measurement of plasmonic properties of gold double nanotube structure arrayed on a polymer substrate', *Proc. IEEE Photonics Conference 2013*, TuH1.3, Seattle, WA, September 8-12 2013

C21. A. Abumazwed, W. Kubo, T. Tanaka, **A. G. Kirk**, 'Simulation and experimental studies on plasmonic properties associated with gold nanofin array on a polymer film', *Proc. IEEE Photonics Conference 2013*, TuH1.6, Seattle, WA, September 8-12 2013

C22. M.Taghi Boroojerdi, **A.G.Kirk**, 'Wavelength and Bandwidth Tunable SOI Switch Using Integrated Gratings', , *Proc. IEEE Photonics Conference 2013*, WD2.4, Seattle, WA, September 8-12 2013

C23. Z Mi, MHT Dastjerdi, P Bianucci, Z Tian, Q Zhong, V Veerasubramanian, PJ Poole**, AG Kirk**, DV Plant, 'Rolled-up 1.5 µm InAs quantum dot tube lasers and integrated nanophotonic circuits on Si', *IEEE Photonics Society Summer Topical Meeting Series*, p. 34-35, 2013

C24. M.I. Cheema, U.A. Khan, A.M. Armani, **A.G. Kirk**, 'Application of phase shift ring down spectroscopy to microcavities for biosensing', SPIE BIOS 2013, ***Invited Keynote talk***

C25. S. Filion Côté, P. J. R. Roche, **A. G. Kirk**, 'Spectro-angular optical biosensor based on surface plasmon resonance operating in the visible spectrum', *Proc. SPIE 8597, Plasmonics in Biology and Medicine X*, 859711 (February 21, 2013); doi:10.1117/12.2004583, 2013

C26. V Veerasubramanian, G Beaudin, A Giguere, B Le Drogoff, V Aimez, **A G Kirk**, 'Apodized comb filters on SOI using sidewalled sampled gratings'*, OSA Integrated Photonics Research, Silicon and Nano-Photonics (IPR) Topical Meeting*, Colorado Springs, June 2012

C27. Philip J. R. Roche, Kevin Greig, Yucai Wang, Maurice C. K. Cheung, **Andrew G. Kirk**, Vamsy P. Chodavarapu, 'Design of a gel electrophoresis device with an integrated transmitter/receiver system for power delivery and data communication: toward a wireless lab-on-chip', *SPIE Photonics West*, paper 8212-23 of Conference 8212, January 2012

C28. Philip J. Roche, Maurice Cheung, V. Chodavarapu, Brian Ward, Momar Ndao, **Andrew Kirk**, 'A study of a self diagnostic platform for the detection of A2 biomarker for Leishmania donovani', *SPIE Photonics West,* Paper 8229A-11 of Conference 8229A, January 2012

C29. Philip J. R. Roche, Songzhe Wang, Maurice Cheung, Vamsy Chodavarapu, **Andrew G. Kirk**, 'A nanorod polymer micro-array formed by microcontact printing', *SPIE Photonics West*, Paper 8231-20 of Conference 8231, January 2012

C30. Philip J. R. Roche, Maurice C. Cheung, Lenore Beitel, Mark A. Trifiro, **Andrew G. Kirk**, Vamsy P. Chodavarapu, 'Optical mapping by low-cost instrumentation and disposable chemically induced nanochannels', *SPIE Photonics West*, Paper 8231-16 of Conference 8231, January 2012

C31. 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 µm Self-organized InAs Quantum Dot Microtube Lasers on Silicon', *Proc. IEEE Photonics Conference 2011*, Arlington, VA, p. 535-536, 2011

C32. Z. Tian, V. Veerasubramanian, P. Bianucci, Z. Mi , **A. G. Kirk**, and D. V. Plant, , 'Characterization of InGaAs/GaAs microtubes at transparent wavelengths', , *Proc. IEEE Photonics Conference 2011*, Arlington, VA, p. 745-746, 2011

C33. V. Veerasubramanian; G. Beaudin; A. Giguere; B. LeDrogoff; V. Aimez; **A.G.Kirk** , 'Demonstration of waveguide-coupled sidewalled grating filters on SOI', *Proc. IEEE Photonics Conference 2011*, Arlington, VA, p. 597-598, 2011

C34. 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.

C35. **A.G.Kirk**, 'Integration strategies for planar photonic devices', *Proc. Intl. Topical Meeting on Information Photonics*, Ottawa, ON, May 2011, ***Invited***

C36. 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.

C37. Y-P Zhang, V P. Chodavarapua, **A G. Kirk**, M P. Andrews, M Carluer and Gilles Picard, 'Origin of iridescence in chiral nematic phase nanocrystalline cellulose for encryption and enhanced color', *Proc. SPIE Photonics West*, San Francisco, CA, 2011.

C38. 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

C39. 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

C40. Philip J. R. Roche, Maurice Cheung , Songzhe Wang, Behnam Banan, Vamsy Chodavarapu, **Andrew G. Kirk**, 'Demonstration of a reusable plasmonic polymer microarray sensing platform'*, Proc. SPIE Conference on Nanoscale Imaging, Sensing, and Actuation for Biomedical Applications VIII*, San Francisco, CA, DOI: 10.1117/12.878848 , January 2011

C41. A.Jafari and **A.G.Kirk**, 'Demonstration of a distributed etched diffraction grating demultiplexer', *Proc. IEEE Photonics Society Annual Meeting* (Denver CO), November 2010.

C42. A.Khorshidahmad, **A.G.Kirk** , 'Multi-wavelength Generation via a Heterostructure Cavity Embedded in a Photonic Crystal Ring', , *Proc. IEEE Photonics Society Annual Meeting* (Denver CO), November 2010.

C43. V. Veerasubramanian, G. Beaudin, A. Giguère, B. LeDrogoff, V. Aimez, and **A. G. Kirk**, 'Waveguide coupled drop filters on SOI using vertical sidewalled grating resonators', *Proc. IEEE Photonics Society Annual Meeting* (Denver CO), November 2010.

C44. M.Cheema and **A.G.Kirk**, 'Implementation of the Perfectly Matched Layer to Determine the Quality Factor of Axisymmetric Resonators in COMSOL', *COMSOL Conference 2010*, Boston MA 2010.

C45. A.Khorshidahmad, **A.G.Kirk**, 'Optical Frequency Comb Generation via a Heterostructure Cavity Embedded within a Photonic Crystal Ring Resonator', *Proc. OSA Frontiers in Optics*, Rochester NY, FTH15, 2010

C46. P.J.R. Roche, M. Cheung, **A.G. Kirk**, V. Chodavarapu, 'Enhancement of luminescent quenching oxygen sensing by gold nanoparticles: a comparison between luminophore:matrix:nanoparticle thin film on glass and gold coated substrates', *SPIE Proceedings* (Photonics North, Niagara Falls, Canada), June 1st-3rd, 2010

C47. M.Menard and **A.G.Kirk** , 'Integrated Fabry-Perot Comb Switches: Transmission Experiments', *Proc. IEEE-Photonics Society Annual Meeting*, WV3, Antalya, Turkey, 2009

C48. C.Alleyne, P.Roche, **A.G.Kirk**, 'Spectro-angular surface plasmon biosensor applied to drug binding assays', *Proc. IEEE-Photonics Society Annual Meeting*, WR3, Antalya, Turkey, 2009

C49. A.Khorshidahmad, **A.G.Kirk** , 'Wavelength Conversion by Interband Transition in a Nested Photonic Crystal Cavity', *Proc. IEEE-Photonics Society Annual Meeting*, MD4, Antalya, Turkey, 2009

C50. A.Khorshidahmad, **A.G.Kirk** , 'Analysis of the Composite Superprism Demultiplexer', *Proc. IEEE-Photonics Society Annual Meeting*, ThL3, Antalya, Turkey, 2009

C51. A.Khorshidahmad, **A.G.Kirk,** 'Wavelength Conversion by Interband Transition in a Double Heterostructure Photonic Crystal Cavity', *Proc. OSA Topical Meeting on Integrated Photonics and Nanophotonics Research Applications (IPNRA)* 2009

C52. A.Khorshidahmad, **A.G.Kirk** 'Nested Photonic Crystal Cavity for On-chip Wavelength Conversion', *Proc. IEEE-LEOS Topical Meeting in Nanophotonics*, Innsbruck, Austria, 2009

C53. A. Khorshidahmad and **A. G. Kirk**, "Scheme for in-plane pumping of a photonic crystal heterostructure cavity," *Proc. IEEE-LEOS Annual Meeting 2008*, Newport Beach, CA, 2008

C54. A.Jafari and **A.G.Kirk**, 'Distributed Etched Diffraction Grating Demultiplexer with Engineered Response', *Proc. IEEE-LEOS Annual Meeting 2008*, Newport Beach, CA, 2008

C55. A.Khorshidahmad, **A.G.Kirk**, Stratified Photonic Crystal Demultiplexer, *Proc. Integrated Photonics and Nanophotonics Research and Applications (IPNRA) 2008 Technical Digest.* (Optical Society of America, Ed.), 2008.

C56. **A.G.Kirk**, 'A comparison of beam deflection electro-optic switches', *Proc. IEICE Photonics in Switching International Topical Meeting*, Sapporo, Japan, August 2008. ***Invited***

C57. M.Menard and **A.G.Kirk**, 'Broadband integrated Fabry-Perot electro-optic switch', *Proc. IEICE Photonics in Switching International Topical Meeting*, Sapporo, Japan, August 2008

C58. C.Alleyne, **A.G.Kirk**, P.Charette, 'High accuracy numerical method for index of refraction estimation with surface plasmon bandgap structures', *IEEE Conference on Lasers and Electro-optics*, San Jose, CA, 2008

C59. X.D. Hoa, M. Martin, A. Jimenez, J. Beauvais, P. Charette, M. Tabrizian and **A. G. Kirk**, 'Patterned Immobilisation of Quantum Dots for Enhanced SPR', *IEEE LEOS Annual Meeting 2007* (Buena Vista, FL), October 2007.

C60. Z.Khalid, C.Alleyne, X.Hoa, M.Tabrizian, J.Beauvais, P.Charette, N.A.Nicorovici, R.C.McPhedran, **A.G.Kirk**, 'Integrated surface plasmon resonance sensor with periodic nanostructures for sensitivity enhancement', *SPIE Photonics West* (San Jose CA), in 'Plasmonics in Biology and Medicine IV', 6450-20, 2007.

C61. E. Bisaillon, D. T. H. Tan, M.-C. Nadeau, L. Chrostowski and **A. G. Kirk**, 'Distributed-Grating Wavelength Demultiplexer in SOI', *IEEE-LEOS Annual Meeting*, (Montreal, QC), 2006

C62. A.Bakhtazad and **A.G. Kirk**, 'Stratified Photonic Crystal Demultiplexer', *IEEE-LEOS Annual Meeting*, (Montreal, QC), 2006

C63. A.Bakhtazad, A.Khorshidahmad, A.S.Jugessur and **A.G. Kirk**, '1-D Photonic Crystal as an Anti-Reflection Layer for First Band Photonic Crystals', *IEEE-LEOS Annual Meeting*, (Montreal, QC), 2006

C64. N-A Nicorovici, L.Botten, R.McPhedran, X.Hoa, **A.G.Kirk**, 'Rigorous modal method for the analysis of lamellar metallic gratings for surface plasmon resonance sensing', *IEEE-LEOS Annual Meeting*, (Montreal, QC), 2006.

C65. C. J. Alleyne, **A.G. Kirk**, R.C. McPhedran and N.A. Nicorovici, D. Maystre, 'Enhanced SPR Sensitivity Using Sinusoidal Gratings', *IEEE-LEOS Annual Meeting*, (Montreal, QC), 2006.

C66. G.Sun, **A.G. Kirk**, 'Pseudo-interference and its application in determining averaged phase refractive index of photonic crystals', *Proc. IEEE-LEOS Annual Meeting* (Montreal, QC), p. 841-842, 2006.

C67. G.Sun, A.S.Jugessur, **A.G.Kirk**, 'Saturated Super-Resolution Imaging of Photonic Crystal with Negative Refraction; Proc IEEE Optical Data Storage Topical Meeting, 2006, pp 73-75, 2006

C68. X. D. Hoa, **A.G. Kirk** and M. Tabrizian, 'Modelling and Implementation of a Novel SPR Biointerface for Time-Effective Detection of Sepsis Biomarkers', *Proc. IEEE Workshop on Computer Architecture for Perception and Sensing (CAMPS 2006)*, Montreal, 2006.

C69. M. Ménard and **A. G. Kirk**, "On the Application of the Transfer Matrix Method to Integrated Optics Simulations," in *Integrated Photonics Research and Applications (IPRA) 2006 Technical Digest.* (Optical Society of America, Ed. 2006.) W. D. 2 April 24-26, 2006.

C70. E. Bisaillon, D. T. H. Tan, J. Laniel, A. Jugessur, L. Chrostowski, **A. G. Kirk**, "A Shallow-Etched Distributed-Grating Wavelength Demultiplexer in SOI", in *Integrated Photonics Research and Applications (IPRA) 2006 Technical Digest.* (Optical Society of America, Ed. 2006), IWA2, April 24-26, 2006.

C71. E. Bisaillon, J. Laniel, A. S. Jugessur, and **A. G. Kirk**, "A Shallow-Etched Multilayer Grating-based Wavelength Demultiplexer in SOI," in *Proceedings of the IEEE LEOS Annual Meeting* IEEE, 2005, pp. 596-597.

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