


## CURRICULUM VITAE

Nov. 2008

<b><u>NAME:</u></b>	<b>Nicolas D. GEORGANAS, O.C., OOnt, Dr.-Ing. (h.c.), FRSC, FCAE, FIEEE, FEIC</b> <b>Distinguished University Professor</b> University of Ottawa Ottawa, Ont., Canada K1N-6N5 Tel: (613) 562 5800 x 6225 Fax: (613) 562-5664 E-mail: georganas@discover.uottawa.ca Web: <a href="http://www.discover.uottawa.ca/">http://www.discover.uottawa.ca/</a>		
<b><u>DATE AND PLACE OF BIRTH:</u></b>	June 15, 1943 Athens, Greece		
<b><u>MARITAL STATUS:</u></b>	Married, 2 children		
<b><u>CITIZENSHIP:</u></b>	Canadian and Hellenic		
<b><u>ADDRESS:</u></b>	1915 Montereau Avenue Ottawa, Ontario, Canada K1C 5W9 Tel.: (613) 837-7966		

<b><u>DEGREES HELD</u></b>	<b><u>FIELD</u></b>	<b><u>INSTITUTION</u></b>	<b><u>DATE</u></b>
<i>Ph.D. (honoris causa)</i>	Electrical and Computer Engineering	National Technical Univ. of Athens, Greece	2007
<i>Dr.-Ing. (honoris causa)</i>	Electrical Engineering	Techn.Univ.Darmstadt, Germany	2004
Ph.D.	Electrical Engineering	Univ. of Ottawa	1970
Dipl. Ing.	Electrical Engineering	National Technical Univ. of Athens, Greece	1966

### POSITIONS HELD

<b><u>DATES</u></b>	<b><u>POSITION HELD</u></b>	<b><u>DEPARTMENT</u></b>	<b><u>INSTITUTION</u></b>
Sept. 2008-Aug. 2009	“Cátedra de Excelencia” (on Admin/Sabbatical leave)	Ingenería Telemática	Univ. Carlos III de Madrid (UC3M) and Inst. Madrilenio de Estudios Avanzados (IMDEA)
May 2005-Aug. 2008	Associate Vice-President Research (External)	Office of the Vice-President, Research	University of Ottawa
2004 (Apr.-May)	Visiting Professor	Computer Science and Business Informatics	University of Vienna, Austria
2004 (Jan.-Mar)	Visiting Professor	Research Institute of Informatics	University of Castilla-La Mancha, Albacete, Spain
2001- 2001-2005	Distinguished University Professor Canada Research Chair in Information Technology	SITE SITE	University of Ottawa University of Ottawa
1997	Visiting Professor (Sabbatical)	Network Systems	CRC (Industry Canada), Ottawa
1993-94	Visiting Professor (Administrative leave)	Broadband Networks Systems Engineering	Bell-Northern Research (BNR), Ottawa
1986-93	Founding Dean	Faculty of Engineering	University of Ottawa
1985-86	Chair	EE Grants Selection Comm.	NSERC
1984-85	Invited Professor (Sabbatical leave)	Advanced Studies	BULL Transac & INRIA <sup>1</sup> Paris, France
1981-84	Chair	Electrical Engineering	University of Ottawa
1980- 1977-78	Professor Visiting Professor (Sabbatical Leave)	Electrical Engineering Communication Networks Architecture	University of Ottawa IBM Centre d'Etudes et Recherches, La Gaude, France
1976-80	Associate Professor	Electrical Engineering	University of Ottawa
1971-76	Assistant Professor	Electrical Engineering	University of Ottawa
1970-71	Lecturer	Electrical Engineering	University of Ottawa

<sup>1</sup> INRIA: Institut National de Recherche en Informatique et en Automatique

**AWARDS and HONOURS**

37	<i>Secretary, Academy of Science, RSC</i>	2007	Elected <b>Secretary of the Academy of Science</b> , RSC: The Academies of Arts, Humanities and Science of Canada (Nov.2007-Nov.09)
36	<i>ORION Leadership Award</i>	2007	The <b>ORION</b> (Ontario Research and Innovation Optical Network) <b>Leadership Award</b> for “significant contributions to advancing research, education, science, or discovery through the development and/or application of innovative information and communications technologies”.(June 4, 2007)
35	<i>Honorary Doctorate</i>	2007	Awarded a <b>Honorary Doctorate</b> by the National Technical University of Athens , Greece (June 6, 2007)
34	<i>IEEE Canada Computer Medal</i>	2007	Received the <b>first IEEE Canada Computer Medal</b> "for outstanding contributions to computer engineering and science"
33	<i>Ottawa’s Top 50 People for 2007</i>	2007	Listed in the Ottawa’s Top 50 people for 2007 by the Ottawa Life Magazine
32	<i>Order of Canada</i>	2006	Awarded the highest honour for a Canadian (Oct. 5, 2006) and invested as <b>Officer of the Order of Canada</b> by the Governor General of Canada (Febr.22, 2008)
31	<i>Canadian Award in Telecommunications Research</i>	2006	Awarded the <b>2006 Canadian Award in Telecommunications Research</b> , at the 23 <sup>rd</sup> Biennial Symposium on Communications, Queen’s Univ., “for significant research contributions, scholarship and leadership in the field of multimedia communications and networks”
30	<i>Pioneer of Computing in Canada Award</i>	2005	Honoured by the IBM Centre for Advanced Studies as one of the <b>Pioneers of Computing in Canada</b> (Oct. 19, 2005)
29	<i>Best Paper Award</i>	2005	9th IEEE International Symposium on Distributed Simulation and Real-time Applications (DS-RT 2005), Montreal, Oct. 2005
28	<i>Honorary Doctorate</i>	2004	Awarded a <b>Dr.-Ing. Degree (Honoris Causa)</b> from the Technical University Darmstadt, Germany.
27	<i>Editor-in-Chief</i>	2004	Appointed founding <b>Editor-in-Chief</b> of the ACM Transactions on Multimedia Computing, Communications and Applications (TOMCCAP)
26	<i>Queen’s Golden Jubilee Medal</i>	2003	Awarded the <b>Queen Elisabeth II Golden Jubilee Medal</b> by Ontario Minister Brian Coburn (Jan. 18, 2003)
25	<i>Killam Prize</i>	2002	Laureate of the 2002 <b>Killam Prize for Engineering</b> , Canada Council for the Arts, the highest and most prestigious prize and honour for a Canadian Engineering professor.
24	<i>Ontario Distinguished Researcher Award</i>	2002	From the Ontario Innovation Trust, “for outstanding leadership in innovation in research and scientific discovery”.
23	<i>Order of Ontario</i>	2001	Invested in the <b>Order of Ontario</b> , the province’s highest and most prestigious honour, by the Lieutenant Governor of Ontario (Dec.4, 2001) in <i>recognition of the highest level of individual excellence</i> .
22	<i>Distinguished University Professor</i>	2001	Appointed <b>Distinguished University Professor</b> of the University of Ottawa, "in recognition of unusual scholarly achievement at the University and preeminence in a particular field of knowledge". This is an honor given to only up to 10 active professors (1%) at the University of Ottawa at any given point in time.
21	<i>Editor of the Year</i>	2001	Selected as Editor of the Year for 2001 of the <b>Computer Networks Journal</b> , published by Elsevier Science.
20	<i>Canada Research Chair</i>	2000-05	Awarded a <b>Tier I Canada Research Chair in Information Technology</b> , from the Canada Research Chairs Program (CRCP) (He resigned in 2005, in order to take his current position)
19	<i>Research Achievement Award</i>	2000	The 2000 <b>Research Achievement Award</b> from the TeleLearning Network of Centres of Excellence, in “recognition of contributions to the field of Telelearning”
18	<i>Bell Canada Forum Award</i>	2000	<b>2000 Bell Canada-Forum Award</b> from the Corporate- Higher Education Forum (C-HEF), for “collaborative industry - university research and development”
17	<i>Andrew G.L. McNaughton Gold Medal and Award</i>	2000	<b>A.G.L. McNaughton Gold Medal and Award</b> , the highest distinction of <b>IEEE Canada</b>

16	<b>OCRI President's Award</b>	2000	<b>President's Award, Ottawa Centre for Research and Innovation (OCRI)</b> , for the creation of the National Capital Institute of Telecommunications (NCIT)
15	<b>Julian C. Smith Medal</b>	2000	<b>Julian C. Smith Medal of the Engineering Institute of Canada</b> , awarded in recognition of "outstanding achievements in the development of Canada"
14	<b>Thomas W. Eadie Medal</b>	1999	<b>Thomas W. Eadie Medal of the Royal Society of Canada</b> , awarded in recognition of "outstanding contributions to Applied Science, and in particular Canadian and International Telecommunications "
13	<b>UofO 150<sup>th</sup> Anniversary Medal for Research</b>	1998	<b>University 150th Anniversary Medal for Research</b>
12	<b>UofO Researcher of the Year</b>	1998	<b>University of Ottawa Award for Excellence in Research</b>
11	<b>Fellow</b>	1997	<b>Royal Society of Canada</b>
10	<b>Fellow</b>	1997	<b>Canadian Academy of Engineering</b>
9	<b>Prize Paper Award</b>	1995	IEEE INFOCOM'95 Conference, Boston
8	<b>Fellow</b>	1994	<b>Engineering Institute of Canada</b> in recognition of excellence in engineering and for services rendered to his profession and to society"
7	<b>Governor</b>	1993-2004	International Council on Computer Communications (ICCC)
6	<b>Fellow</b>	1990	<b>Institute of Electrical and Electronic Engineers (IEEE)</b> for " <i>Leadership in university- industry research in, and performance evaluation of, multimedia communications networks and systems</i> "
5	<b>Industrial Feedback Award</b>	1990	Telecommunications Research Institute of Ontario (TRIO), for the IRIS Multimedia Medical Communications System, \$10,000
4	<b>Chair</b>	1985-86	Electrical Engineering Grants Selection Committee, Natural Sciences and Engineering Research Council of Canada (NSERC)
3	<b>Summa Cum Laude Honors</b>	1970	Ph.D. degree, University of Ottawa
2	<b>Postgraduate Scholarship</b>	1967-70	National Research Council of Canada
1	<b>State Scholarship</b>	1961	Institution of State Scholarships of Greece, for succeeding <i>first</i> (1st) in the entrance examinations of the Faculty of Electrical and Mechanical Engineering of the National Technical University of Athens (NTUA), among 1000 candidates competing for 80 positions .

### WHO'S WHO LISTINGS

- *Dictionary of International Biography*, International Biographical Centre, Cambridge, England (2008-)
- *Who'sWho in American Education*, , Marquis Who'sWho, New Providence, NJ (2003-)
- *Lexington Who's Who of Executives and Professionals*, Garden City , NY (2001-)
- *The International Directory of Distinguished Leadership*, American Biographical Institute, Raleigh, NC, (1996-)
- *Who's Who in the World*, Marquis Who'sWho, Wilmette, IL, USA (1992-)
- *Who'sWho in America*, Marquis Who'sWho, Wilmette, IL, USA (1987-)
- *Who'sWho in the East*, Marquis Who'sWho, Wilmette, IL, USA (1987-)
- *American Men and Women of Science*, R.R.Bowker Data Coll. Centre, Oldsmar, FL (1991-)
- *Who's Who in Science and Engineering*, Marquis Who'sWho, Wilmette, IL, USA (1993-)
- *Dictionary of International Biography*, Intern Biogr. Centre, Cambridge, England (1991-)
- *Canadian Who'sWho*, Univ. of Toronto Press Inc., Toronto, Ont. (1987-)
- *Who'sWho in Canadian Engineering*, Butterworth, Toronto, Ont. (1991-)
- *Hellenic Who'sWho*, METRON Publ., Athens, Greece (1992-)

### LANGUAGES

Fluently trilingual (French, English, Greek), functional in Spanish and some German.

**ADMINISTRATIVE EXPERIENCE****May 1, 2005- Aug.31, 2008****Associate Vice-President, Research (External)**

This is a new office, established in 2005, which was (summer 2008) responsible for four directorates (32 people):

- Research Grants and Ethics (10 persons)
- Strategic Development Initiatives (4 persons)
- Technology Transfer and Business Enterprise (TTBE) (15 persons)
- Office of International Research and Development (OIRD) (3 persons)

**Some highlights:**

- Contributed to uOttawa 5<sup>th</sup> position in Research Intensity among Canadian Universities;
- Business-Led NCE SEISMIC Leader (\$18M proposal, passed LOI stage) (2008)
- Initiator and driver of Commercialization NCE (CECR) "Photonics Applications Factory" (\$16.6M LOI proposal) (2008)
- Led the University mission to three Saudi Arabian Universities and their Ministry of Higher Education (May 2008)
- Led the University mission to Taiwan Universities and Academia Sinica (Sept. 2007)
- Led the University mission to Chile, to support the Univ. of Chile on IP Development and Transfer (Jan. 2007)
- Presentations of uOttawa Research Highlights to all visiting delegations from abroad and meetings with foreign Ambassadors to Canada and Science Based Government Departments and Agencies
- Principal mentor and organizer of many uOttawa major award winners (Killam Prizes, NSERC Gold Medal, NSERC Steacie Fellowships, SSHRC Gold Medal, Ontario Discovery Award, Can. Academy of Engineering,...)
- Developed a new university Policy #29 on Intellectual Property (pending Admin.Com. approval), plus a new pilot Intellectual Property Transfer Acceleration Program (IP-TAP) (2007);
- Major part in new Policy on International University Education and Research (Dec.2005) and new Strategic Areas of Development in Research (Dec. 2005)
- Represented the University President in the 11<sup>th</sup> Canada-India Science and Technology Summit in Delhi and Bangalore, and initiated collaborative research discussions with Indian Institutions and companies (Sept. 2005).

**1986-93****Founding Dean, Faculty of Engineering, University of Ottawa**

- Established the Faculty of Engineering (1986) as a new academic and administrative structure at the University of Ottawa: creation of academic structures, by-laws, faculty officers, administrative structures, dean's office administrative and academic personnel, faculty strategic evaluation and strategic planning. Established faculty awards for recognition of excellence in teaching (J.V. Marsh Award), research (G.S. Glinski Award) and administrative services (F. Giaccobi Award).
- Established the Faculty as one among the top 13 % of 285 ranked US and Canadian Engineering Schools (Gourman Report, US, 1990). Its research budget increased by 100% from 1986 to 1990. The number of Ph.D. students, a good indicator of high reputation, increased by 114% from 1986 to 1990. The scholastic average of the new undergraduates in 1992-93 was over 80%. The Faculty became participant in three Centres of Excellence. Four Industry / NSERC Research Chairs were awarded from 1986 to 1993. Responsible for writing, presenting and defending two of the successful Chair proposals.
- One of the founders of the Telecommunications Research Institute of Ontario (TRIO), an Ontario Center of Excellence, in 1987 and principal negotiator on behalf of the University of Ottawa. TRIO has brought to the University of Ottawa more than \$ 7 million for research over its first five years- Also one of the founders of the Canadian Institute for the Telecommunications Research (CITR), a Federal Network of Centres of Excellence. The three Industry / NSERC Research Chairs are in the area of Telecommunications. Obtained a \$1 million grant from CIDA for, and became Director of, a joint project aimed at establishing a Centre of Excellence in Telecommunications at the Jordan University of Science and Technology.

**1992-93****Co-Chair, Univ. of Ottawa Strategic Planning Task Force on Finances and Space**

- Worked with Co-Chair C. Workman, Vice-Rector (Resources), to produce position paper towards a Strategic Plan on University of Ottawa Finances and Space. All academic and administrative sectors were examined and recommendations for restructuring were made.

**1992-93 Co-Chair, Univ. of Ottawa Strategic Planning Task Force on Computing and Communications**

- Worked with Co-Chair R. Goguen, Director Comp. and Comm. Service, to produce position paper towards a Strategic Plan on University of Ottawa Computing and Communications requirements.

**1981-84 Chair, Dept. of Electrical Engineering, University of Ottawa**

- Introduced the Computer Engineering option (1983), which led to the BAsC Program in Computer Engineering (1989);
- Increased the size of the professorial establishment from 13 to 18 professors;
- Upgraded technical positions and academic assistants; Reorganized space;
- Established, with his Carleton University homologues, the Ottawa-Carleton Institute for Electrical Engineering (1983), the first of the engineering Joint Graduate Studies Institutes between the two Ottawa Universities.

**1981-83 Member, University Budgetary Horizons Task Force**

- The objective of the task force was to make recommendations to the Board of Governors for cost savings over a period of five years, to avoid a projected multimillion dollar deficit. Under the chairmanship of the Assis. Vice-Rector (Academic), the taskforce examined all academic and support services sectors of the University of Ottawa. The report of the task force, submitted to the Board, had a major impact on resource reallocations among faculties and cost reductions in support services.

**INDUSTRIAL/ GOVERNMENT EXPERIENCE**

**1997 Visiting Professor, Network Systems Department, Communications Research Centre (CRC), Industry Canada, Ottawa**

- On half-sabbatical leave from the University of Ottawa, worked on Advanced Distributed Simulation and Distributed Virtual Environments, with applications to defense, telemedicine, training and telecollaboration.

**1993-94 Visiting Professor, Broadband Network Systems Engineering Dept., BNR, Ottawa**

- On Administrative leave from the University of Ottawa, worked in performance studies in ATM high-speed networks and systems. In particular, studied the performance of certain ATM switching architectures, the modelling and analysis of "self-similar" (fractal) traffic on ATM and the performance of MPEG coded video over an ATM network. Defined the U.ofO. MCRLab trials with BNR over OCRI net, the first trials on the first ATM research testbed in Canada, and provided support for those trials.

**1984-85 Invited Professor, Advanced Studies Dept., BULL, SA, France**

- On sabbatical leave from the University of Ottawa, worked in the office automation division of BULL, SA, the major computer manufacturer and service provider in France. Provided to BULL performance studies regarding one of their multimedia office communications products, under development at that time.

**1977-78 Visiting Professor, IBM Centre d' Etudes et Recherche, France**

- On sabbatical leave from the University of Ottawa, worked in the Communications Architecture Dept., one of three centers world-wide working on the development of SNA, a major IBM product now used in all IBM mainframes. Performed studies of flow control mechanisms in computer networks.

**OTHER MAJOR UNIVERSITY APPOINTMENTS AND COMMITTEES**

- Member, Senate, Univ. of Ottawa (1981-84, 1986-93, 2005-)
- Member, Academic Planning Committee of Senate (1986-93, 2005-)
- Member, Selection Committee for UofO Dean of the Faculty of Graduate and Postdoctoral Studies (2003-04)
- Member, Selection Committee for UofO Researcher of the Year (1998-00, 2001-02)
- Member, Selection Committee for Dean of Engineering (1997-98)
- Chair, Executive Committee, Faculty of Engineering (1986-93)

- Chair, Faculty Council, Faculty of Engineering (1986-93)
- Chair, Faculty Teaching Personnel Committee, Faculty of Engineering (1986-93)
- Chair, Faculty Development Fund Committee, Faculty of Engineering (1986-93)
- Member, Research Committee of the University (1985-86).
- Member, Board of Governors, Univ. of Ottawa, elected from the Senate (1982-83).
- Member, Joint Committee of the Board of Governors and Senate, Univ. of Ottawa (1982-84).
- Member, Board of Management, Ottawa-Carleton Institute of Electrical Engineering (1983-84).
- Member, Faculty Executive Committee, Faculty of Science and Engineering (1981-84).
- Member of the Faculty Five-year Planning Task Force, Science and Engineering (1980-1981).
- Member of the Council of the School of Graduate Studies and Research (1981), (1986- 93).
- Initiator and First Chair of the Coordinating Committee, Systems Science Master's Program (1974-76).

### EXTERNAL ACTIVITIES

#### a) **RSC: The Academies of Arts, Humanities and Science of Canada (formerly: Royal Society of Canada)**

- **Secretary, Academy of Science, 2007-2009**  
Fellows selection committee, Applied Science and Engineering Division, Academy of Science, (2001-04)

#### b) **Natural Science and Engineering Research Council (NSERC) Committees**

- Member, Gerhard Herzberg Gold Medal in Science and Engineering selection committee (2004, 2005, 2006)
- Member, Brockhouse Medal selection committee (2005, 2006)
- Chair, NSERC Site Visiting Committee, Research Chair proposal, École Polytechnique de Montréal, 2002
- Chair, NSERC Reallocations Steering Committee for ECE Grant Selection Committees 334 & 335 (2000-02) and author of Reallocations proposal that secured \$1 million additional grant money for ECE research in Canada.
- Member, NSERC Information and Communications Technology Review Panel (1999-2000)
- Chair, NSERC Site Visiting Comm., CRD grant proposal at U.Calgary, 1995
- Member, NSERC Advisory Committee on University-Industry Grants, 1991-94
- Chair, NSERC Site Visiting Comm., Research Chair proposal at Ecole Polytechnique, 1991
- Chair (1985-86) and Member (1983-86), NSERC Electrical Engineering Grants Selection Committee.

#### c) **Ontario Engineering Deans (CODE) and National Deans (NCDEAS) Committees**

- Chair, Council of Ontario Deans of Engineering (CODE), 1992-93
- Vice-Chair, Council of Ontario Deans of Engineering (CODE), 1991-92
- Chair, CODE Task Force on Engineering Supply and Demand, 1991-92
- Member, National Comm. of Deans of Eng. (NCDEAS) on Engineering Education by Satellite, 1991-93
- Chair, NCDEAS Liaison Committee with "Les Grandes Ecoles de France", 1990-93
- Member, CCPE / NCDEAS Committee on Engineering Education, 1990-92, and Implementation Committee, 1992-93

#### d) **Canadian Engineering Accreditation Board (CEAB) Committees**

- Vice-Chair, CEAB Accreditation team, Ecole de Technologie Supérieure, Montreal, Oct. 1989
- Member and Alternate Chair, Canadian Accreditation Board (CAB) Visiting team, Faculty of Engineering, University of Regina (1985).
- Member, CAB Visiting team, Faculty of Engineering, University of Waterloo (1983).
- Member, CAB Visiting team, Ecole Polytechnique, Université de Montréal (1982).

#### e) **Editorial Boards and Conference Program Committees**

- **Editor-in-Chief:**
  - Founding EiC, ACM Trans. on Multimedia Computing, Communications and Applications (TOMCCAP) (2004-2010)
- **Editorial Boards:**
  - Associate Editor for Multimedia, ACM Computing Surveys (2000-2003)
  - Associate Editor, ACM / Springer Multimedia Systems Journal (1997-2001)
  - Editor, Computer Networks Journal (1996-2003)
  - Associate Editor, IEEE Multimedia Magazine (1994-96)
  - Editor, J. of Multimedia Tools and Applications (1994-2004)
  - Editor, Performance Evaluation Journal (1991-2004)
  - Computer-Communications Journal (1989-2004)
- **Guest Editor:**
  - IEEE Journal of Selected Areas in Communications (JSAC), Synchronization Issues in Multimedia Communications (1994-95)

- IEEE Journal of Selected Areas in Communications (JSAC), issue on Multimedia Communications (1989-90)
- **General Chair of Major Conferences:**
  - ACM Multimedia 2001, Ottawa, Sept. 2001
  - IEEE Multimedia Systems'97 (ICMCS'97), Ottawa, June 1997
  - Canadian Conference on Electrical and Computer Engineering, Ottawa, Sept.1990
- **Conference Technical Program Committees:**
  - I2MTC 2008 – International Instrumentation & Measurement Technology Conference, Victoria, BC, Canada, May 12-15, 2008.
  - International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob'2005), Montreal, August 22-25, 2005
  - 16<sup>th</sup> International Conference on Computer Communication , Sept 15-17, 2004, Beijing, China
  - EPEW'2004- First European Performance Engineering Workshop, Toledo (Spain), Sept. 30- Oct.2, 2004
  - IADIS International Conference WWW/Internet 2004, Madrid, 2004
  - IEEE EUROMICRO 2004, Rennes, France, Aug.2004
  - VECIMS 2004 - IEEE International Conference on Virtual Environments, Human-Computer Interfaces, and Measurement Systems, July 2004, in Boston, MA, USA
  - SPECTS'2004, Jan Jose, July 2004
  - First International Working Conference on Performance Modelling and Evaluation of Heterogeneous Networks (HET-NETs '03), Ilkley, West Yorkshire, U.K, July 2003
  - IEEE International Symposium on Virtual Environments, Huma-Computer Interfaces and Measurement Systems (VECIMS2003), Lugano, Switzerland, 27-29 July 2003
  - 9th workshop on Multimedia Information Systems (MIS2003), Ischia (Italy), May, 2003
  - Track "Multimedia Telecommunications", EUROMICRO 2003, Antalya, Turkey, Sept. 2003
  - Global Services and Infrastructure for Next Generation Networking Symp., ICC 2003, 11-15 May 2003, Anchorage, Alaska
  - 2002 IFIP Workshop on Internet Technologies, Applications, and Societal Impact (WITASI 2002), Wroclaw Poland, October 10-11, 2002
  - IEEE IMTC/2002 Conference, Anchorage, AK, USA, 21-23 May 2002
  - 10th IEEE/ACM Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication (MASCOT'2002), Fort Worth, Texas , Oct 11-16, 2002
  - 11th International Web Conference (WWW2002), Honolulu, Hawaii, USA, May 7-11, 2002
  - 15<sup>th</sup> International Conference on Computer Communication, Mumbai, India, Aug. 2002
  - 10th International World Wide Web Conference (WWW10), Hong Kong, May 1-5, 2001
  - Sixth IEEE Symposium on Computers and Communications (ISCC'2001), Tunisia, June 26-28, 2001
  - International Forum cum Conference on Information Technology and Communication at the Dawn of the New Millennium, Bangkok, Thailand, 1-4 August 2000
  - PROMS2000, Protocols for Multimedia Systems, Cracow, Poland, October 22-25, 2000
  - ICON'2000, International Conference on Networks 2000, Singapore, Sept. 5-8,2000
  - MMNS'2000, 3d IFIP/IEEE International Conference on the Management of Multimedia Networks and Services, Fortaleza, Ceara, Brazil, Sept., 2000.
  - Ninth International World Wide Web Conference (WWW9), Amsterdam, May 15-19, 2000,
  - IFIP TC6 Networking 2000, Paris, May 15-19, 2000
  - Intern. Symposium on E-commerce, Beijing, May 17-20, 1999
  - ECOMAST'99, Madrid, Spain, May 1999
  - COMSEC'99, Washington, DC, Jan. 1999 (co-chair of TPC)
  - ACM Multimedia'98, Bristol, UK, Sept. 1998 (also Chair of Tutorials).
  - DIS'98 "Multimedia Information Systems", 26-28 September 1998, Istanbul Turkey.
  - PROMS'98 (Protocols for Multimedia Systems) conference, Paris, France
  - ECOMAST'98 (3rd European Conference on Multimedia Applications, Services and Techniques), May 1998, Berlin, Germany
  - PROMS'97 (Protocols for Multimedia Systems) conference, Nov. 1997, Santiago, Chile
  - 13th International Council on Computer Communications Conference, Cannes, France, Nov. 1997
  - Fifth IFIP Workshop on ATM Networks, July 1997, Ilkley, U.K.
  - Fourth IEEE Workshop on the Architecture and Implementation of High Performance Communication Subsystems (HPCS'97), Sani Beach, Chalkidiki, Greece, June 1997.

- 1997 Pacific Workshop on Distributed Multimedia Systems, Univ. of British Columbia, Vancouver, Canada, July 24-25, 1997
- European Workshop on Interactive Distributed Multimedia Systems and Telecommunication Services (IDMS'97), Darmstadt, Germany, Sept.1997.
- 1997 ACM SIGMETRICS Intern.Conf. on Measurement and Modeling of Computer Systems, Seattle, June 1997
- Fourth IFIP Workshop on ATM Networks, July 1996, Ilkley, U.K.
- 1996 International Conference on Network Protocols (ICNP-96), Columbus, Ohio, Oct. 1996,
- PROMS '95 (Second Workshop on Protocols for Multimedia Systems), Salzburg, Austria, Oct.1995
- IEEE Networked Realities Workshop, Boston , Oct.1995
- IEEE Synchronization Workshop, ICMCS'95, Washington, May 1995
- Vice-Chair, Intern.Council for Comp.Communic. Conf.'95, Seoul, Korea, Aug.1995
- Intelligent Networks'95 Workshop, Ottawa, May 1995
- Multimedia Computing and Networking'95 Conf., San Jose, Febr.1995
- 1994 Intern Conf. on Comp. Comm. and Networking (ICCCN), San Francisco, Sept. 1994
- 3d International Conference on Broadband Islands'94, Hamburg, Germany, June 1994
- 5th IEEE COMSOC International Multimedia Communications (Multimedia'94) Workshop, Kyoto, Japan, May 1994
- 1994 IEEE International Conference on Multimedia Computing and Systems, Boston, May 1994
- I F I P - W G 10.3 International Conference on Applications in Parallel and Distributed Computing, Caracas, Venezuela, April 1994
- Chair, ICCM Multimedia Communications Conf.'93, Banff, April 1993.
- 3d IEEE Comsoc International Multimedia Communications Workshop (MULTIMEDIA'90), Bordeaux, France, Nov. 1990
- 1st Intern. Workshop on Photonic Networks, Comp. & Applications, Montebello, Canada, Oct. 1990
- Chair, 2<sup>nd</sup> IEEE Comsoc International Multimedia Communications Workshop (MULTIMEDIA '89), Montebello, Canada, April 1989
- International Steering Committee, IEEE Comsoc International Multimedia Communications Workshops (MULTIMEDIA), 1987-92
- Organizer and panel chair, Videoconference Canada/Italy, IEEE INFOCOM'89, on the occasion of the 900th anniversary of the University of Bologna, Ottawa, April 1989

**f) Award Selection Panels**

- ACM Distinguished Service Award Subcommittee (2004-07) and Chair in 2005
- CATA (Can. Advanced Technology Asso.) Scholarships selection committee (1994, 1998)
- Member, Ontario Committee of experts, Ontario/Rhône-Alpes Grants, Lyon, France (1992)
- Member of the Jury, Telecommunications Research Award 1991, Telecom Canada (1991)
- Member of the Jury, 1985 Gold Medal, Professional Institute of the Public Service (1985).
- Member of the Jury, 1980 Special Gold Medal, Professional Institute of the Public Service (1981).

**g) Research committees/boards**

- Chair, International Adjudication Committee, International Research Chairs Initiative (IRCI) (2008-09)
- Member, International Adjudication Committee, IDRC International Research Chairs Initiative (2008)
- Chair, Board of Directors, Ontario Research Network on Electronic Commerce (ORNEC) (2007-08)
- Chair, OCRI Research Management Board, Ottawa Centre for Research and Innovation (OCRI) (2006-)
- UofO Canada Research Chairs Selection Committee (2005-)
- Technology Committee, National Capital Institute of Telecommunications (NCIT) (2000-05)
- IFIP Working Group 6.4 on Internet Applications Engineering (2002-)
- Executive Committee, ACM SIGMutimedia (2001-)
- UofO CFI/ORDCF Implementation Committee (1998-)
- NCIT CFI Regional Initiative Planning Sub-committee
- CITO Evaluation Panel on Digital Media and User Issues (1998-)
- CITR Area Program Committee on Electronic Commerce (1998-2002)
- External Advisory Board, GMD IPSI Institute, Darmstadt, Germany (1996-2002)
- Executive Committee, IEEE Comp.Soc. Tech. Comm. (TC) on Multimedia Computing and Systems (1993-97)
- Chair, Enabling Technologies sub-comm., IEEE Comp.Soc. TC on Multimedia Computing and Systems (1993-97)
- Task Force on Multimedia Computing, IEEE Computer Society (1992-93)

- Distance Learning Committee, Intern. Council on Computer Communications (ICCC) (1994-)
- Membre, Comité Consultatif en Télématic et Réseaux, Centre de Recherche Informatique de Montréal (CRIM), 1992-94
- Project Leader, Multimedia TeleLearning over ATM, TeleLearning NCE, a Federal Network of Centres of Excellence, 1995-
- Project Leader, Multimedia Services, Canadian Institute of Telecommunications Research(CITR), a Federal Network of Centres of Excellence, 1990-
- Project Leader, Multimedia Communications, Telecommunications Research Institute of Ontario (TRIO), an Ontario Centre of Excellence, 1988-1998
- Member, TRIO Program Committee, 1990-92
- Membre, Conseil de la Recherche, Purkinze, inc. ,Montreal,June-1990-
- Director, CIDA / JUST Telecommunications Project, 1989-1994
- One of the founders of TRIO (1987)
- Research Management Board, Ottawa-Carleton Research Institute (OCRI) (1986- 93 ).
- OCRI Research Chairs Sub-Committee (1987- 93 )
- Invited Professor, Faculty of Technology, University of Havana, Cuba, CUJAE Project (CIDA/CUSO) (1974).

**h) Other community service**

- Chair, Research Management Board of the Ottawa Centre for Research and Innovation (OCRI) (2006-)
- External consultant, Dept. of Computer Science Appraisal, Concordia Univ., Montreal (2003)
- Executive Committee, Simulation Interoperability Standards Organization (SISO-Canada) (2003-2004)
- Chair, External Evaluation Committee, Dept. of ECE, U. of Victoria, April 1998
- External Evaluator of OCGS for the MEng in Telecommunications, Univ. of Toronto, Jan. 1998
- Member, technical and applications committees of ATM testbed OCRI-net (1994-96)
- Chair, OCRI-med, the OCRI-net medical communications thrust (1994)
- Chair, IEEE/OCRI/TRIO Seminars committee on the 50th anniversary of IEEE Ottawa Chapter (1993-94)
- Faculty Review Committee and Academic sub-committee, Department of National Defense (1993-)
- Selection Committee for the President, Telecom Res. Inst. of Ontario (TRIO) (1989).
- Conseil avisier en math., science et techn. de l'Ecole Secondaire Charlebois,1990-93
- Appraisals Committee, Ontario Council of Graduate Studies (OCGS) (1985-86).
- External Evaluator, Master's Program on Resources and Systems, University of Quebec at Chicoutimi (1978).
- Trésorier du Colloque "Les Laboratoires: Nécessité au Luxe?", ASEE Section St-Laurent, Ottawa (1976).

**PROFESSIONAL ASSOCIATIONS**

- Fellow, Institute of Electrical and Electronic Engineers (IEEE).
- Fellow, Engineering Institute of Canada
- Member, Association for Computing Machinery (ACM)
- Member, IEEE Communications Society.
- Member, IEEE Computer Society.
- Member, Professional Engineers of Ontario.

**TEACHING ACTIVITIES**

**a) Undergraduate courses taught:**

- ELG 4210 Systems Engineering (4cr.) [1970-77, 78-80]
- ELG 2200 Electrical Engineering Science (4cr.) [1970-73]
- ELG 2220 Circuit Theory (4cr.) [1973-75]
- ELG 2620 Théorie des Circuits (6 cr.) [1975-77, 78-83, 85-86]
- ELG 4112 Systems Engineering II (2cr.) [1981-83]
- ELG 2180 Intro. to Computer Methods in Electrical Engineering (4cr.) [1982-83]
- ELG 4374 Computer Communications (3cr.) [1985-86]
- ELG 2134 Circuit Theory II (4cr.) [1994-2001]
- ELG2130B Circuit Theory (4cr.) [F2004]

**b) Graduate courses taught:**

- ELG 7270 Statistical Communication (4cr.) [1971-72]
- ELG 5158 Optimal Control of Systems with Time-Delay II (2cr.) [1972-73]

- ELG 5179 Statistical Communication: Kalman Filtering (2cr.) [1974-75]
- ELG 5212 Systems Engineering with Applications to Social and Life Sciences (4cr.) [1972-73,74-76]
- ELG 5354 Learning Control Systems (2cr.) [1973-74]
- ELG 5159 Cooperative and Conflicting Systems (2cr.) [1973-74]
- ELG 5378 Topics in Communications III: Large-Scale Communication Nets (2cr.) [1975-76]
- ELG 7171 Topics in Communications II: Optimal Design of Teleprocessing Networks (2cr.) [1976-77]
- ELG 7170 Topics in Communications I: Delay Analysis for Computer-Comm.Networks (2cr.) [1976-77]
- ELG 5374 Computer-Communication Networks (3cr.) [1978-83, 85-86]
- ELG 7170 Topics in Computer-Communication I: Commun. Arch. for Distr. Systems (2cr.) [1979-80]
- ELG 7177 Topics in Communications I: Multimedia Communications (3cr.) [1994-96]
- ELG 5121 Multimedia Communications (3cr.) [1996-2000]
- ELG 5121 Multimedia Communications (3cr.) [Fall 1998] ConGESE course given at NORTEL
- 406392/1 Selected Topics in Multimedia Communications 1, Univ. of Vienna, Austria [Spr.2004]

**c) Short courses taught:**

- Computer-Communication Networks , Univ. of Ottawa [June 1979, May 1981]
- Current Issues in Data Communications, Univ. of Ottawa [June 1980]
- Multimedia Communications, Pont.Univ. Catolica de Chile, Santiago, Chile [April 1995]
- Multimedia Communications, Newbridge Netw. Co., Ottawa, [Febr. 1996]
- Multimedia Communications, Univ. Tech. F. Santa Maria, Valparaiso, Chile [May 1996]
- Multimedia Communications, IEEE ICMCS'96, Hiroshima, Japan [June 1996]
- Multimedia Communications, ACM Multimedia'96, Boston, [Nov. 1996]
- Topics in Multimedia, INTRACOM, S.A., Athens [June 1997]
- Multimedia Communications, ACM Multimedia'97, Seattle [Nov. 1997]
- Multimedia Communications, ICC'97, Cannes, France [Nov. 1997]
- Hot Topics in Multimedia Communications, Stentor, Ottawa [Nov. 1997]
- Multimedia Enabling Technologies and Applications, CRC, Ottawa [Dec. 1997]
- Multimedia Enabling Technologies and Applications, ICT'98, Porto Carras, Greece [July 1998]
- Adv. Distr. Simulation and Collab. Virtual Environments, TU Darmstadt, Germany [Oct. 1998]
- Multimedia Enabling Technologies and Applications, IEEE ICC'99, Vancouver [June 1999]
- Multimedia Enabling Technologies and Applications, Networking 2000, Paris, France [May 2000]
- Multimedia Technologies and Applications in the New Internet World, ACM Multimedia2000,LA,[Oct.2000]
- Multimedia Technologies and Applications in the New Internet , ACM Multimedia2001, Ottawa [Oct.2001]
- Multimedia Technologies and Applications in the New Internet , Multimedia Info.Sys.2002, Arizona [Oct.2002]
- Multimedia Technologies and Applications in the New Internet , ACM Multimedia2002, France[Nov. 2002]
- Multimedia Technologies and Applications in the New Internet, SPECTS' 2003, Montreal [July 2003]
- Multimedia Technologies and Applications in the New Internet , ACM Multimedia2003, Berkeley , CA [Nov. 2003]

**RESEARCH ACTIVITIES**

**RESEARCH GRANTS AND CONTRACTS Career Total: \$61,481,521**

<u>Name(s)</u>	<u>Funding Agency-Title of Project</u>	<u>Amount/year</u>	<u>Year</u>
E.M.Petriu, N.D.Georganas etal	<u>MUSES SECRET(ORF-RE/Industry):</u> Multimodal Surveillance System for Security Related Research	\$413,000	2012-13
<b>Total</b>		<b>\$413,000</b>	
E.M.Petriu, N.D.Georganas etal	<u>MUSES SECRET(ORF-RE/Industry):</u> Multimodal Surveillance System for Security Related Research	\$413,000	2011-12
<b>Total</b>		<b>\$413,000</b>	
E.M.Petriu, N.D.Georganas etal	<u>MUSES SECRET(ORF-RE/Industry):</u> Multimodal Surveillance System for Security Related Research	\$413,000	2010-11
N.D.Georganas	<u>NSERC (DISCOV)</u> Ambient Multimedia Intelligent Systems (AMIS)	\$68,000	2010-11
<b>Total</b>		<b>\$481,000</b>	<b>2010-11</b>
E.M.Petriu, N.D.Georganas etal	<u>MUSES SECRET(ORF-RE/Industry):</u> Multimodal Surveillance System for Security Related Research	\$413,000	2009-10
A. El Saddik and N.D. Georganas	<u>HRSD Canada (Contr)"</u> Bridging the Gap: Integration of Skilled Immigrants into the Canadian Workplace"	\$179,080	2009-10
E.M.Petriu, N.D.Georganas	<u>NSERC Special Strategic/Industry</u> GEMINI: GEstural Multimodal INteraction for Intelligent networked building environments	\$99,999	2009-10
N.D.Georganas	<u>NSERC (DISCOV)</u> Ambient Multimedia Intelligent Systems (AMIS)	\$68,000	2009-10
<b>Total</b>		<b>\$760,079</b>	<b>2009-10</b>
E.M.Petriu, N.D.Georganas etal	<u>ORF-RE/Industry (Contract)</u> <u>MUSES SECRET:</u> Multimodal Surveillance System for Security Related Research	\$413,000	2008-09
A. El Saddik and N.D. Georganas	<u>HRSD Canada (Contr)"</u> Bridging the Gap: Integration of Skilled Immigrants into the Canadian Workplace"	\$179,080	2008-09
S. Shirmohammadi, A. El Saddik and N.D. Georganas	<u>NSERC (Strategic):</u> HARVEST: A framework for Haptic inteRactive Virtual EnvironmentS for Telepresence	\$155,500	2008-09
A. El Saddik, N.D. Georganas, E.Dubois, E.M.Petriu, S. Shirmohammadi	<u>NSERC (RTI)</u> Infrastructure for Collaborative Hapto-Visual environments	\$106,600	2008-09
E.M.Petriu, N.D.Georganas	<u>NSERC Special Strategic/Industry</u> GEMINI: GEstural Multimodal INteraction for Intelligent networked building environments	\$99,999	2008-09
N.D.Georganas	<u>NSERC (DISCOV)</u> Ambient Multimedia Intelligent Systems (AMIS)	\$68,000	2008-09
<b>Total</b>		<b>\$1,022,179</b>	<b>2008-09</b>
N.D. Georganas, A. Boukerche, A. El Saddik, E.M. Petriu, S. Shirmohammadi	<u>IBM Shared University Grant (Equip. and Software)</u>	\$3,381,899	2007-08

A. El Saddik and N.D. Georganas	<u>HRSD Canada (Contr)</u> "Bridging the Gap: Integration of Skilled Immigrants into the Canadian Workplace"	\$179,080	2007-08
N.D.Georganas, S.Shirmohammadi and I.Kerr	<u>ORNEC (Grant)</u> Personalized Privacy Preserved Collaborative e-Commerce Environments	\$65,530	2007-08
N.D.Georganas, El Saddik et al	<u>LORNET (Oper.)</u> Creation, Search and Delivery of Advanced Multimedia Learning Objects	\$215,128	2007-08
S. Shirmohammadi, A. El Saddik and N.D. Georganas	<u>NSERC (Strategic):</u> HARVEST: A framework for Haptic inteRactive Virtual EnvironmentS for Telepresence	\$155,500	2007-08
N.D.Georganas	<u>NSERC (DISCOV)</u> Ambient Multimedia Intelligent Systems (AMIS)	\$68,000	2007-08
N.D.Georganas	<u>UofO:</u> AVPR Research Grant	\$20,000	2007-08
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	<b>Total</b>	<b>\$4,085,137</b>	<b>2007-08</b>
N.D.Georganas, S.Shirmohammadi and I.Kerr	<u>ORNEC (Grant)</u> Personalized Privacy Preserved Collaborative e-Commerce Environments	\$87,374	2006-07
A.Boukerche,A.El Saddik & N.D.Georganas	<u>CANARIE (Oper.)</u> FedGrid	\$242,642	2006-07
T.Hall, N.D.Georganas, G.v.Bochmann, D. Ionescu et al	<u>CANARIE (Oper.)</u> Hapto-Audio-Visual Environments for Collaborative Tele-Surgery Training over Photonic Networking	\$385,782	2006-07
N.D.Georganas, El Saddik et al	<u>LORNET (Oper.)</u> Creation, Search and Delivery of Advanced Multimedia Learning Objects	\$215,128	2006-07
S. Shirmohammadi, A. El Saddik and N.D. Georganas	<u>NSERC (Strategic):</u> HARVEST: A framework for Haptic inteRactive Virtual EnvironmentS for Telepresence	\$155,500	2006-07
N.D.Georganas	<u>NSERC (DISCOV)</u> Ambient Multimedia Intelligent Systems (AMIS)	\$68,000	2006-07
N.D.Georganas	<u>UofO:</u> AVPR Research Grant	\$20,000	2006-07
N.D.Georganas	<u>CASIC (China)</u> Research Grant	\$20,000	2006-07
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	<b>Total</b>	<b>\$1,174,427</b>	<b>2006-07</b>
N.D.Georganas, S.Shirmohammadi and I.Kerr	<u>ORNEC (Grant)</u> Personalized Privacy Preserved Collaborative e-Commerce Environments	\$21,843	2005-06
T.Hall, N.D.Georganas, G.v.Bochmann, D. Ionescu et al	<u>CANARIE (Oper.)</u> Hapto-Audio-Visual Environments for Collaborative Tele-Surgery Training over Photonic Networking	\$614,217	2005-06
N.D.Georganas et al	<u>NSERC (Strategic)</u> Tele-monitoring and Mobile Intelligent Sensor Agent Networks	\$130,000	2005-06
N.D.Georganas	<u>NSERC (Oper.)</u> ) Multimedia and Intelligent Internet Appliances	\$68,000	2005-06
N.D.Georganas	<u>UofO:</u> AVPR Research Grant	\$20,000	2005-06
N.D.Georganas	<u>UofO:</u> Distinguished Univ. Professor Grant	\$10,000	2005-06
N.D.Georganas et al	<u>LORNET (Oper.)</u> Creation, Search and Delivery of Advanced Multimedia Learning Objects	\$215,128	2005-06
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	<b>Total</b>	<b>\$1,079,188</b>	<b>2005-06</b>
S.Mahmoud and N.D.Georganas	<u>CFI/ORDCF/NORTEL/NEWBRIDGE/QNX/BELL</u> National Capital Institute of Telecommunications	\$300,000	2004-05
N.D.Georganas et al	<u>LORNET (Oper.)</u> Creation, Search and Delivery of Advanced Multimedia Learning Objects	\$192,128	2004-05
N.D.Georganas et al	<u>CAE (Grant)</u> LORNET	\$20,000	2004-05

N.D.Georganas et al	<u>NEPTEC (Grant) LORNET</u>	\$10,000	2004-05
N.D.Georganas et al	<u>SGI Canada (Grant) LORNET</u>	\$5,000	2004-05
N.D.Georganas	<u>CRCP</u> Canada Research Chair	\$200,000	2004-05
N.D.Georganas	<u>CRCP</u> (Operating) Canada Research Chair		2004-05
N.D.Georganas et al	<u>NCIT</u> (Grant) HARMONIE	\$54,167	2004-05
N.D.Georganas	<u>NSERC</u> (Oper.) Multimedia and Intelligent Internet Appliances	\$68,000	2004-05
N.D.Georganas	<u>UofO</u> : Distinguished Univ. Professor Grant	\$10,000	2004-05
N.D.Georganas	<u>CITO</u> : HAVENLI: Haptic Virtual Env. With Natural Laws Object Modeling	\$60,000	2004-05
N.D.Georganas et al	<u>NSERC</u> (Strategic) Tele-monitoring and Mobile Intelligent Sensor Agent Networks	\$130,000	2004-05
N.D.Georganas	<u>CITO</u> [Champions of Innovation] VERGINA: Virtual Environment Research in haptic-visual Gesture-recognition Interfaces	\$100,000	2004-05
N.D.Georganas et al	<u>ORNEC (Grant)</u> Enhancing e-Commerce with Intelligent Agents in Collaborative e-Communities	\$70,000	2004-05
E.M.Petriu and N.D.Georganas	<u>NCIT (IP Grant)</u> : Fingertip Tactile Human-Feedback Interface for Object Manipulation in Virtual Environments	\$83,000	2004-05
<b>Total</b>		<b>\$1,302,295</b>	<b>2004-05</b>
N.D.Georganas & P.Duchenes	<u>OIT: SITADEL</u>	<b>\$7,034,080</b>	<b>2000-2004</b>
N.D.Georganas	<u>ORDCF</u> National Capital Institute of Telecommunications	<b>\$6,700,000</b>	<b>2000-2004</b>
S.Mahmoud and N.D.Georganas	<u>CFI/ORDCF/NORTEL/NEWBRIDGE/QNX/BELL</u> National Capital Institute of Telecommunications	\$300,000	2003-04
N.D.Georganas et al	<u>NSERC</u> (Strategic) Tele-monitoring and Mobile Intelligent Sensor Agent Networks	\$130,000	2003-04
N.D.Georganas	<u>CITO</u> [Champions of Innovation] VERGINA: Virtual Environment Research in haptic-visual Gesture-recognition Interfaces	\$100,000	2003-04
N.D.Georganas et al	<u>CITO</u> : HAVENLI: Haptic Virtual Env. With Natural Laws Object Modeling	\$60,000	2003-04
N.D.Georganas et al	<u>LORNET (Oper.)</u> Creation, Search and Delivery of Advanced Multimedia Learning Objects	\$184,628	2003-04
N.D.Georganas et al	<u>NEPTEC (Grant) LORNET</u>	\$10,000	2003-04
N.D.Georganas et al	<u>SGI Canada (Grant) LORNET</u>	\$5,000	2003-04
N.D.Georganas et al	<u>Immersion Canada (Grant) LORNET</u>	\$7,500	2003-04
N.D.Georganas	<u>CRCP</u> Canada Research Chair	\$162,489	2003-04
N.D.Georganas	<u>CRCP</u> (Operating) Canada Research Chair	\$38,511	2003-04
N.D.Georganas et al	<u>NCIT</u> (Grant) HARMONIE	\$130,000	2003-04
N.D.Georganas	<u>NSERC</u> (Oper.) Multimedia and Intelligent Internet Appliances	\$68,000	2003-04
N.D.Georganas	<u>UofO</u> : Distinguished Univ. Professor Grant	\$10,000	2003-04
<b>Total</b>		<b>\$1,206,128</b>	<b>2003-04</b>
S.Mahmoud and N.D.Georganas	<u>CFI/ORDCF/NORTEL/NEWBRIDGE/QNX/BELL</u> National Capital Institute of Telecommunications	\$2,130,000	2002-03
N.D.Georganas & E.M. Petriu	<u>ORDCF</u> (Contract) VEHICLE	\$125,000	2002-03

N.D.Georganas et al	<u>NCIT (Grant) HARMONIE</u>	\$75,833	2002-03
N.D.Georganas et al	<u>NCIT (Equip.) HARMONIE</u>	\$397,494	2002-03
N.D.Georganas et al	<u>NCIT (Grant) DIVERTIONS</u>	\$52,083	2002-03
N.D.Georganas	<u>CRCP Canada Research Chair</u>	\$149,774	2002-03
N.D.Georganas	<u>CRCP (Operating) Canada Research Chair</u>	\$50,226	2002-03
N.D.Georganas	<u>NSERC (Oper.) Multimedia and Intelligent Internet Appliances</u>	\$68,000	2002-03
N.D.Georganas	<u>UofO: Distinguished Univ. Professor Grant</u>	\$10,000	2002-03
<b>Total</b>		<b>\$2,660,916</b>	<b>2002-03</b>
G.V.Bochmann, N.D.Georganas	<u>CFI/OIT: SAVANT: Software engineering And Visualization for Applications in the Next-generation internet</u>	\$5,015,372	2001-02
S.Mahmoud and N.D.Georganas	<u>CFI/ORDCF/NORTEL/NEWBRIDGE/QNX/BELL National Capital Institute of Telecommunications</u>	\$3,920,000	2001-02
N.D.Georganas	<u>CFI/OIT/UofO Canada Research Chair Collaborative Multimedia and User Interfaces (CULTURE) Research Facility</u>	\$312,500	2001-02
N.D.Georganas & E.M. Petriu	<u>ORDCF (Contract) VEHICLE</u>	\$125,000	2001-02
N.D.Georganas et al	<u>NCIT (Grant) DIVERTIONS</u>	\$175,000	2001-02
N.D.Georganas et al E.M.Petriu,	<u>NCIT (Equip.) DIVERTIONS</u>	\$168,380	2001-02
N.D.Georganas & D.Makrakis	<u>CITO (Contract) iSENSE</u>	\$100,000	2001-02
N.D.Georganas	<u>CRCP Canada Research Chair</u>	\$151,237	2001-02
N.D.Georganas	<u>CRCP (Operating) Canada Research Chair</u>	\$48,763	2001-02
N.D.Georganas	<u>NSERC (Oper.) ) Multimedia and Intelligent Internet Appliances</u>	\$68,000	2001-02
N.D.Georganas & T. Radhakrishnan	<u>CITR (Grant) User Interface and Intelligent Agents in Electronic Commerce</u>	\$130,000	2001-02
N.D.Georganas	<u>TL-NCE (Grant) Collaboration Spaces in Telelearning with QoS Management</u>	\$50,000	2001-02
N.D.Georganas	<u>UofO: Distinguished Univ. Professor Grant</u>	\$10,000	2001-02
<b>Total</b>		<b>\$10,274,252</b>	<b>2001-02</b>
S.Mahmoud and N.D.Georganas	<u>CFI/OIT/NORTEL/NEWBRIDGE/QNX/BELL National Capital Institute of Telecommunications</u>	\$4,800,000	2000-01
N.D.Georganas	<u>ORDCF (Contract) SITADEL</u>	\$1,307,095	2000-01
N.D.Georganas et al	<u>NCIT (Grant) DIVERTIONS: DVE in Training</u>	\$72,917	2000-01
N.D.Georganas et al	<u>NCIT DIVERTIONS Equipment</u>	\$238,470	2000-01
N.D.Georganas & E.M. Petriu	<u>ORDCF (Contract) VEHICLE: Virtual Environments for Human Interaction, Collaboration and Learning</u>	\$125,000	2000-01
N.D.Georganas & M.Bouchard	<u>CITO (Contract) DISCOVER: Distr.Inf. Sys. for Collaborative Virtual Environments Research</u>	\$110,000	2000-01
N.D.Georganas & T. Radhakrishnan	<u>CITR (Grant) User Interface and Intelligent Agents in Electronic Commerce</u>	\$130,000	2000-01
E.M.Petriu , N.D.Georganas and D. Makrakis	<u>CITO (Contract) iSENSE: Intelligent Sensor Environment for Pervasive Computing Real-Time Applications</u>	\$79,000	2000-01
N.D.Georganas	<u>TL-NCE (Grant) Collaboration Spaces in Telelearning with QoS Management</u>	\$50,000	2000-01
N.D. Georganas	<u>NSERC (Operating) Broadband Multimedia</u>	\$52,957	2000-01
N.D.Georganas&E.Petriu	<u>Newbridge (Grant) Internet Technologies and DVE for Training and Telecollaboration</u>	\$50,000	2000-01
N.D.Georganas	<u>CRCP (Operating) Canada Research Chair</u>	\$12,100	2000-01

		<b>Total</b>	<b>\$7,104,622</b>	<b>2000-01</b>
S.Mahmoud, N.D.Georganas	<u>CFI/OIT/NORTEL/NEWBRIDGE/QNX/BELL</u> National Capital Institute of Telecommunications		\$1,800,000	1999-2000
N.D.Georganas	<u>ORDCF (Contract) SITADEL</u>		\$1,477,897	1999-2000
N.D.Georganas & M.Bouchard	<u>CITO (Contract) DISCOVER: Distr.Inf. Sys. for Collaborative Virtual Environments Research</u>		\$110,000	1999-2000
N.D.Georganas & E.M. Petriu	<u>ORDCF (Contract) VEHICLE: Virtual Environments for Human Interaction, Collaboration and Learning</u>		\$100,000	1999-2000
N.D.Georganas&E.Petriu	<u>Stentor NMF(Grant) Virtual Theater</u>		\$75,000	1999-2000
N.D.Georganas&E.Petriu	<u>Newbridge (Grant) Internet Technologies and DVE for Training and Telecollaboration</u>		\$50,000	1999-2000
N.D.Georganas & T. Radhakrishnan	<u>CITR (Grant) User Interface and Intelligent Agents in Electronic Commerce</u>		\$80,000	1999-2000
N.D. Georganas	<u>NSERC (Operating) Broadband Multimedia</u>		\$52,957	1999-2000
N.D.Georganas	<u>TL-NCE (Grant) Collaboration Spaces in Telelearning with QoS Management</u>		\$50,000	1999-2000
		<b>Total</b>	<b>\$3,795,854</b>	<b>1999-2000</b>
N.D.Georganas	<u>ORDCF (Contract) SITADEL</u>		\$911,213	1998-99
N.D.Georganas, et al	<u>CITO (Contract) DISCOVER: Distr.Inf. Sys. for Collaborative Virtual Environments Research</u>		\$102,000	1998-99
N.D.Georganas&E.Petriu	<u>Stentor NMF(Grant) Virtual Theater</u>		\$75,000	1998-99
N.D.Georganas et al	<u>CANARIE (contract) Distributed Interactive Virtual Environment (DIVE) over CA*net II</u>		\$150,000	1998-99
N.D.Georganas&E.Petriu	<u>Newbridge (Grant) Internet Technologies and DVE for Training and Telecollaboration</u>		\$50,000	1998-99
N.D.Georganas&E.Petriu	<u>ONF (Grant) Virtual Reality for promoting Children's Pedestrian Safety</u>		\$50,000	1998-99
N.D.Georganas & T. Radhakrishnan	<u>CITR (Grant) User Interface and Intelligent Agents in Electronic Commerce</u>		\$90,000	1998-99
N.D.Georganas, E.Petriu, D.Ionescu, P.Ashton	<u>TL-RN (Grant) Multimedia TeleLearning over ATM Networks</u>		\$59,660	1998-99
G.Neufeld and N.D.Georganas	<u>NSERC (IOR Grant) Multimedia Network Support for Distance Learning over the CANARIE NTN</u>		\$50,000	1998-99
N.D. Georganas	<u>NSERC (Operating) Multimedia Broadband Communications</u>		\$50,435	1998-99
N.D. Georganas	<u>CRC (Contract)HLA/RTI for Open Virtual Reality Applications</u>		\$37,549	1998-99
N.D. Georganas	<u>TL-RN (Grant) Systems Architectures for Networked Multimedia</u>		\$ 6,150	1998-99
		<b>Total</b>	<b>\$ 1,632,007</b>	<b>1998-99</b>
N.D.Georganas	<u>ORDCF (Contract) SITADEL</u>		\$585,449	1997-98
N.D. Georganas, D.Ionescu, S.Panchanathan & L.Orozco Barbosa	<u>TRIO (Contract) DINAMIC: Distr.Netw. Arch. for Multimedia Interactive Communications</u>		\$150,000	1997-98
N.D.Georganas	<u>MITEL/TRIO ISRPVoice Quality Improvement in a Non-Guaranteed QoS LAN</u>		\$35,000	1997-98
N.D.Georganas	<u>CITR (Grant) Multimedia Synchronization</u>		\$80,000	1997-98
G.Neufeld and N.D.Georganas	<u>NSERC (IOR Grant) Multimedia Network Support for Distance Learning over the CANARIE NTN</u>		\$50,000	1997-98

N.D.Georganas, E.Petriu, D.Ionescu, P.Ashton N.D.Georganas	<u>TL-RN (Grant)</u> Multimedia TeleLearning over ATM Networks	\$59,660	1997-98
N.D. Georganas	<u>TL-RN (Grant)</u> Systems Architectures for Networked Multimedia	\$8,220	1997-98
N.D. Georganas	<u>NSERC (Operating)</u> Multimedia Broadband Communications	\$45,850	1997-98
N.D. Georganas	<u>NORTEL(Grant)</u> Traffic Characterization	\$25,000	1997-98
	<b>Total</b>	<b>\$1,039,179</b>	1997-98
N.D. Georganas, D.Ionescu, S.Panchanathan & L.Orozco Barbosa	<u>TRIO (Contract)</u> Multimedia Communications & <u>NSERC (IOR Grant)</u> Technology Issues for a Multimedia Distance learning Sys.over OCRInet	\$229,000 \$39,000	1996-97 1996-97
N.D.Georganas & D.Ionescu	<u>NEWBRIDGE / TRIO (ISRP)</u> An Open Signaling Environment over VIVID ATM Switches	\$35,000	1996-97
N.D.Georganas & D.Ionescu	<u>NORTEL / TRIO (ISRP)</u> Customer Network Management	\$35,000	1996-97
N.D.Georganas	<u>CITR (Grant)</u> Multimedia Synchronization	\$80,000	1996-97
N.D.Georganas, E.Petriu, D.Ionescu, P.Ashton N.D.Georganas	<u>TL-RN (Grant)</u> Multimedia TeleLearning over ATM Networks	\$59,660	1996-97
N.D.Georganas & L.Orozco-Barbosa	<u>TL-RN (Grant)</u> Systems Architectures for Networked Multimedia	\$8,220	1996-97
N.D.Georganas & L.Orozco-Barbosa	<u>URIF (Grant)</u> Architecture, Design and Performance Evaluation of a Data Collection and Distribution Unit for AIN	\$26,900	1996-97
N.D. Georganas	<u>NSERC (Operating)</u> Multimedia Broadband Communications	\$45,850	1996-97
N.D.Georganas	<u>NORTEL(Grant)</u> Self-Similar Traffic on ATM	\$20,000	1996-97
	<b>Total</b>	<b>\$ 578,630</b>	<b>1996-97</b>
N.D.Georganas N.D. Georganas, A.Karmouch, S.Panchanathan, L.Orozco Barbosa and J.-F.Rivest	<u>Newbridge(Equipment)</u> ATM Switches Donation <u>TRIO (Contract)</u> Multimedia Communications & <u>NSERC (IOR Grant)</u> Technology Issues for a Multimedia Distance learning Sys.over OCRInet	\$512,000 \$270,000 \$39,000	1995-96 1995-96 1995-96
N.D.Georganas & L.Orozco-Barbosa	<u>URIF (Grant)</u> Architecture, Design and Performance Evaluation of a Data Collection and Distribution Unit for AIN	\$74,100	1995-96
N.D.Georganas	<u>CITR (Grant)</u> Multimedia Synchronization	\$95,000	1995-96
N.D.Georganas	<u>CITR (Grant)</u> Equipment	\$15,000	1995-96
D.Ionescu, P.Ashton	<u>TL-RN (Grant)</u> Multimedia TeleLearning over ATM Networks	\$34,910	1995-96
N.D.Georganas & V.Cuperman	<u>TL-RN (Grant)</u> Systems Architectures for Networked Multimedia	\$11,810	1995-96
N.D. Georganas	<u>NSERC (Operating)</u> Multimedia Broadband Communications	\$38,800	1995-96
N.D.Georganas	<u>BNR(Grant)</u> Self-Similar Traffic on ATM	\$20,000	1995-96
N.D.Georganas & L.Orozco-Barbosa	<u>Bell Canada (Contract)</u> AIN Technological and Service Opportunities	\$22,470	1995-96
	<b>Total</b>	<b>\$ 1,132,300</b>	<b>1995-96</b>
N.D. Georganas,	<u>TRIO (Contract)</u> Multimedia	\$286,799	1994-95

A.Karmouch, S.Panchanathan, L.Orozco Barbosa and J.-F.Rivest	Communications & <u>NSERC (IOR Grant)</u> Technology Issues for a Multimedia Distance Learning Sys.over OCRInet	\$72,000	1994-95
N.D.Georganas& L.Orozco-Barbosa	<u>Bell Canada (Contract)</u> AIN Technological and Service Opportunities	\$195,778	1994-95
N.D.Georganas	<u>CITR (Grant)</u> Multimedia Synchronization	\$95,000	1994-95
N.D.Georganas	<u>CITR (Equipment)</u> IBM RS/2000 Workstations	\$33,407	1994-95
N.D.Georganas	<u>CITR (Equipment)</u> ATM Test Bed Equipment	\$19,000	1994-95
N.D. Georganas	<u>NSERC (Operating)</u> Multimedia Broadband Communications	\$38,800	1994-95
J.Chrostowski &	<u>CANARIE (Grant)</u> IEEE Can. Electronic Inf. Serv.	\$85,000	1994-95
N.D.Georganas			
N.D.Georganas	<u>BNR(Grant)</u> Self-Similar Traffic on ATM	\$20,000	1994-95
	<b>Total</b>	<b>\$ 845,784</b>	<b>1994-95</b>
N.D. Georganas, A.Karmouch, S.Panchanathan, L.Orozco Barbosa and J.-F.Rivest	<u>TRIO (Contract)</u> Multimedia Communications	\$301,500	1993-94
N.D.Georganas& L.Orozco-Barbosa	<u>Bell Canada (Contract)</u> AIN Technological and Service Opportunities	\$130,823	1993-94
N.D.Georganas	<u>CITR (Grant)</u> Multimedia Synchronization	\$75,000	1993-94
N.D. Georganas	<u>NSERC (Operating)</u> Multimedia Broadband Communications	\$ 38,800	1993-94
N.D.Georganas	<u>CRC(Contract)</u> Multimedia Mail over X.400	\$ 30,000	1993-94
N.D.Georganas	<u>U.of O.(Grant)</u> Coordination of the CIDA/JUST Project in Telecommunications	\$7,539	1993-94
	<b>Total</b>	<b>\$ 584,162</b>	<b>1993-94</b>
N.D. Georganas, A.Karmouch, S.Panchanathan, L.Orozco Barbosa and J.-F.Rivest	<u>TRIO (Contract)</u> Multimedia Communications	\$304,000	1992-93
N.D.Georganas	<u>CITR (Grant)</u> Multimedia Services	\$90,000	1992-93
N.D. Georganas	<u>NSERC (Operating)</u> Multimedia Broadband Communications	\$ 38,800	1992-93
N.D.Georganas	<u>U.of O.(Grant)</u> Coordination of the CIDA/JUST Project in Telecommunications	\$7,539	1992-93
	<b>Total</b>	<b>\$ 440,339</b>	<b>1992-93</b>
N.D. Georganas & M.Goldberg	<u>TRIO (Contract)</u> Multimedia Communications	\$343,000	1991-92
M.Goldberg & N.D.Georganas	<u>TRIO (contract)</u> Telepresence (equip.)	\$100,300	1991-92
M.Goldberg, S.Panchanathan & N.D.Georganas	<u>URIF(Grant)</u> Multimedia Communications Workstation for Cardiac Image Sequences	\$137,500	1991-92
N.D.Georganas	<u>CITR (Grant)</u> Multimedia Services	\$90,000	1991-92
N.D. Georganas	<u>NSERC (Operating)</u> Multimedia Broadband Communications	\$ 40,000	1991-92

N.D.Georganas	<u>BNR (Equip.)</u> SL-1ST PBX and Meridian Mail/SP	\$24,000	1991-92
N.D.Georganas	<u>U.of O.(Grant)</u> Coordination of the CIDA/JUST Project in Telecommunications	\$7,539	1991-92
	<b>Total</b>	----- <b>\$ 742,339</b>	<b>1991-92</b>
N.D. Georganas & M.Goldberg	<u>TRIO (Contract)</u> Multimedia Communications	\$414,006	1990-91
M.Goldberg, S.Panchanathan & N.D.Georganas	<u>URIF(Grant)</u> Multimedia Communications Workstation for Cardiac Image Sequences	\$137,500	1990-91
N.D.Georganas & M.Goldberg	<u>Bell Canada (Contract)</u> Design and Perform. Anal.of inter-LAN Multim.Comm.System	\$183,333	1990-91
N.D.Georganas	<u>CITR (Grant)</u> Multimedia Services	\$70,000	1990-91
N.D. Georganas O. Yang and A. Yongacoglu	<u>URIF (Grant)</u> Multimedia Satellite Wide Area Networking	\$ 55,750	1990-91
N.D. Georganas O. Yang and A. Yongacoglu	<u>TELESAT Canada (Contract)</u> Multimedia Satellite Wide Area Networking	\$ 19,763	1990-91
N.D. Georganas	<u>URIF (Grant)</u> Protocols & Performance Analysis of Networks of Integrated Data/Voice Systems	\$ 32,125	1990-91
N.D. Georganas & W. McGee	<u>URIF (Grant)</u> Multimedia Communications Via Terrestrial Frame Relay and ISDN Links	\$ 55,300	1990-91
N.D. Georganas	<u>NSERC (Operating)</u> Multimedia Broadband Communications	\$ 40,000	1990-91
N.D.Georganas	<u>U.of O.(Grant)</u> Coordination of the CIDA/JUST Project in Telecommunications	\$7,539	1990-91
	<b>Total</b>	----- <b>\$1,015,316</b>	<b>1990-91</b>
N.D. Georganas & M.Goldberg	<u>TRIO (Contract)</u> Multimedia Medical Communications	\$504,462	1989-90
N.D.Georganas & M.Goldberg	<u>Bell Canada (Contract)</u> Design and Perform. Anal.of inter-LAN Multim.Comm.System	\$91,667	1989-90
N.D.Georganas	<u>Bell Canada (Contract)</u> Local Area Network Performance Analysis	\$ 78,870	1989-90
N.D. Georganas, O. Yang and A. Yongacoglu	<u>URIF (Grant)</u> Multimedia Satellite Wide Area Networking	\$ 67,250	1989-90
N.D. Georganas, O. Yang and A. Yongacoglu	<u>TELESAT Canada (Contract)</u> Multimedia Satellite Wide Area Networking	\$ 49,163	1989-90
N.D. Georganas	<u>URIF (Grant)</u> Protocols & Performance Analysis of Networks of Integrated Data/Voice Systems	\$ 52,175	1989-90
N.D. Georganas & W. McGee	<u>URIF (Grant)</u> Multimedia Communications Via Terrestrial Frame Relay and ISDN Links	\$ 46,900	1989-90
N.D. Georganas	<u>NSERC (Operating)</u> Multimedia Broadband Communications	\$ 40,000	1989-90
N.D.Georganas	<u>Empl. and Immigr.Can.(Grant)</u> Challenge'89 Summer Empl.-Mult. Med.Communications	\$2,660	1989-90
N.D.Georganas	<u>U.of O.(Grant)</u> Coordination of the CIDA/JUST Project in Telecommunications	\$7,539	1989-90
	<b>Total</b>	----- <b>\$940,686</b>	<b>1989-90</b>

N.D. Georganas O. Yang and A. Yongacoglu	<u>URIF (Grant)</u> Multimedia Satellite Wide Area Networking	\$ 33,667	1988-89
N.D. Georganas O. Yang and A. Yongacoglu	<u>TELESAT Canada (Contract)</u> Multimedia Satellite Wide Area Networking	\$ 23,000	1988-89
N.D. Georganas	<u>URIF (Grant)</u> Protocols & Performance Analysis of Networks of Integrated Data/ Voice Systems	\$ 94,000	1988-89
N.D. Georganas & W. McGee	<u>URIF (Grant)</u> Multimedia Communications Via Terrestrial Frame Relay and ISDN Links	\$ 87,800	1988-89
N.D. Georganas	<u>BNR (Grant)</u> Equipment for Multimedia Medical Communications	\$ 70,000	1988-89
N.D. Georganas & M. Goldberg	<u>TRIO (Grant)</u> Multimedia Medical Communications	\$465,000	1988-89
N.D. Georganas & M. Goldberg	<u>Bell Canada (Grant)</u> Multimedia Radiology Communications	\$ 95,000	1988-89
N.D. Georganas	<u>NSERC (Operating)</u> Integrated Services Computer-Communications	\$ 38,700	1988-89
N.D. Georganas & M. Goldberg	<u>BNR (Grant)</u> Multimedia Medical Communications	\$ 35,000	1988-89
	<b>Total</b>	<b>\$942,167</b>	<b>1988-89</b>
N.D. Georganas	<u>NSERC (Operating)</u> Integrated Services Computer-Communications	\$ 38,700	1987-88
N.D. Georganas & M. Goldberg	<u>Bell Canada (Grant)</u> Multimedia Radiology Communication	\$ 95,000	1987-88
N.D. Georganas & M. Goldberg	<u>TRIO (Grant)</u> Multimedia Medical Communications	\$160,000	1987-88
N.D. Georganas & M. Goldberg	<u>Ontario Excellence Fund</u> Equipment for Multimedia Communications	\$ 70,000	1987-88
N.D. Georganas & M. Goldberg	<u>BNR (Grant)</u> Multimedia Medical Communications	\$ 35,000	1987-88
	<b>Total</b>	<b>\$398,700</b>	<b>1987-88</b>
N.D. Georganas	<u>NSERC (Operating)</u> Integrated Services Computer-Communications	\$ 38,700	1986-87
N.D. Georganas & M. Goldberg	<u>NSERC (Strategic)</u> Integrated Data/Voice/Image Communications Over Local Area Networks	\$ 90,000	1986-87
N.D. Georganas	<u>Bell Canada (Contract)</u> Modelling and Performance Evaluation of the DNC/DV-1 Integrated LAN	\$190,000	1986-87
N.D. Georganas & M. Goldberg	<u>BNR (Grant)</u> Integrated Data/ Voice/Image Communications Over Local Area Networks	\$ 35,000	1986-87
	<b>Total</b>	<b>\$353,700</b>	<b>1986-87</b>
N.D. Georganas	<u>NSERC(Operating)</u> Large Scale Voice and Data Networks and Systems	\$ 33,167	1985-86
N.D. Georganas & M. Goldberg	<u>NSERC(Strategic)</u> Integrated Data/ Voice/Image Communic. over Local Area Networks	\$ 90,000	1985-86
N.D. Georganas & M. Goldberg	<u>BNR(Grant)</u> Integrated Data/Voice/ Image Communication Over Local Area Networks	\$ 25,000	1985-86
	<b>Total</b>	<b>\$148,167</b>	<b>1985-86</b>

N.D. Georganas	<u>NSERC(Operating)</u> Large Scale Voice and Data Networks and Systems	\$ 33,167	1984-85
N.D. Georganas & M. Goldberg	<u>NSERC (Strategic)</u> Integrated Data/Voice/Image Communic. over Local Area Networks	\$ 90,000	1984-85
N.D. Georganas & M. Goldberg	<u>NSERC(Strategic Equipment)</u> Test Bed Facility for Integr. Communic.	\$ 41,620	1984-85
N.D. Georganas et al.	<u>NSERC(Equipment)</u> Multi-purpose Microprocessor Devel. System	\$ 78,268	1984-85
N.D. Georganas & M. Goldberg	<u>BNR(Grant)</u> Integrated Data/Voice/Image Messaging on LAN	\$ 25,000	1984-85
N.D. Georganas	<u>NATO(Fellowship)</u> Office Info. Systems and Local Area Networks	\$ 5,000	1984-85
N.D. Georganas	<u>Canada/France Exchange (Grant)</u> Local Area Networks	\$ 2,500	1984-85
N.D. Georganas	<u>NSERC(Travel)</u> Sabbatical	\$ 2,100	1984-85
	<b>Total</b>	----- <b>\$277,655</b>	<b>1984-85</b>
N.D.Georganas	<u>NSERC(Grant)</u> Large Scale Data Netw. and Systems	\$31,588	1983-84
	<u>NSERC (Strategic)</u> Packet Voice On LANs	\$27,140	1983-84
	<u>BNR(Grant)</u> Broadband LAN	\$15,000	1983-84
	<u>BILD (Grant)</u> Local Area Networks	\$4,000	1983-84
	<u>Ont/Quebec (Grant)</u> Protocols for LAN	\$1,000	1983-84
	<b>Total</b>	----- <b>\$78,728</b>	<b>1983-84</b>
N.D.Georganas	<u>NSERC(Grant)</u> Large Scale Data Netw. and Systems	\$28,000	1982-83
	<u>NSERC (Strategic)</u> Packet Voice On LANs	\$25,604	1982-83
	<u>DOC(Contact)</u> Etudes des Sys. Cellul. pour les Commun. Terrestre-Mobiles: Phase V	\$17,500	1982-83
	<u>SCS Consultants (Contract)</u> Comp.Engineering	\$10,000	1982-83
	<u>DY-4(Contract)</u> Design of DY-net Tranceiver	\$4,000	1982-83
	<u>UofO(Grant).</u> Short Course on Comp.Comm.Netw.	\$2,731	1982-83
	<u>Ont/Quebec (Grant)</u> Protocols for LAN	\$1,000	1982-83
	<b>Total</b>	----- <b>\$88,835</b>	<b>1982-83</b>
N.D.Georganas	<u>NSERC(Grant)</u> Large Scale Data Netw. and Systems	\$23,000	1981-82
	<u>NSERC (Strategic)</u> Packet Voice On LANs	\$22,840	1981-82
	<u>NSERC(Equip.)</u> Develop. of Comp.Comm.Lab	\$34,764	1981-82
	<u>DOC(Contact)</u> Etudes des Sys. Cellul. pour les Commun. Terrestre-Mobiles: PhaseIV	\$41,000	1981-82
	<b>Total</b>	----- <b>\$121,604</b>	<b>1981-82</b>
N.D.Georganas	<u>NSERC(Grant)</u> Large Scale Data Netw. and Systems	\$18,000	1980-81
	<u>NSERC(Equip)</u> Deptl. Computing Facility	28,339	1980-81
	<u>DOC(Contact)</u> Etudes des Sys. Cellul. pour les Commun. Terrestre-Mobiles: Phase III	\$28,000	1980-81
	<u>UofO(Grant).</u> Short Course on Comp.Comm.Netw.	\$7,000	1980-81

	<b>Total</b>	----- <b>\$81,339</b>	<b>1980-81</b>
N.D.Georganas	<u>NSERC(Grant)</u> Large Scale Data Netw. and Systems	\$15,200	1979-80
	<u>Bell Canada (Contract)</u> Congestion Control in Packet-Switched Networks	\$9,500	1979-80
	<u>DOC(Contact)</u> Etudes des Sys. Cellul. pour les Commun. Terrestre-Mobiles	\$18,890	1979-80
	<u>NSERC(Equipment)</u> Interface Equip. for a LAN	\$7,815	1979-80
	<u>UofO(Grant)</u> . Short Course on Comp.Comm.Netw.	\$4,200	1979-80
	<b>Total</b>	----- <b>\$55,505</b>	<b>1979-80</b>
N.D.Georganas	<u>NSERC(Grant)</u> Large Scale Data Netw. and Systems	\$12,527	1978-79
	<u>DOC(Contact)</u> Etudes des Sys. Cellul. pour les Commun. Terrestre-Mobiles	\$11,566	1978-79
N.D.Georganas & M.Goldberg	<u>UofO(Grant)</u> Interactive Colour Graphics System	\$7,500	1978-79
	<b>Total</b>	----- <b>\$31,593</b>	<b>1978-79</b>
N.D.Georganas	<u>NRC(Grant)</u> Large Scale Data Netw. and Systems	\$9,500	1977-78
	<u>NRC(Travel Grant)</u>	\$900	1977-78
	<u>IBM (Fellowship)</u>	\$7,600	1977-78
	<b>Total</b>	----- <b>\$18,000</b>	<b>1977-78</b>
N.D.Georganas	<u>NRC(Grant)</u> Large Scale Data Netw. and Systems	\$6,900	1976-77
N.D.Georganas & S.G.S.Shiva	<u>Bell Canada(Contract)</u> Synchronization, Mean Error-Free Interval in Data Transm.Channel	\$6,000	1976-77
	<b>Total</b>	----- <b>\$12,900</b>	<b>1976-77</b>
N.D.Georganas	<u>NRC(Grant)</u> Applic.Sys.Theory and Tech. to Urban Prob.; Opt. of Queueing Systems; Satellite Cont.Prob.	\$6,535	1975-76
	<b>Total</b>	----- <b>\$6,535</b>	<b>1975-76</b>
N.D.Georganas	<u>NRC(Grant)</u> Applic.Sys.Theory and Tech. to Urban Prob.;Opt.Feedb.Contr.by Invar.Tech; Opt. Control of Queueing Systems	\$5,700	1974-75
	<b>Total</b>	----- <b>\$5,700</b>	<b>1974-75</b>
N.D.Georganas	<u>NRC(Grant)</u> Applic.Sys.Theory and Tech. to Ecol. and Urban Prob; Optimal Control of Hereditary Sys.; Optimal Dynamic feedback Control	\$3,500	1973-74
	<b>Total</b>	----- <b>\$3,500</b>	<b>1973-74</b>

N.D.Georganas	<u>NRC(Grant)</u> Sys.Eng.Applic. to Social and Life Sciences, Optimal Control of hereditary Systems	\$1,900	1972-73
<b>Total</b>		<b>\$1,900</b>	<b>1972-73</b>

### TECHNOLOGY TRANSFER

TECHNOLOGY	DESCRIPTION	LICENSEES
<b>jStreaming</b> J.C. de Oliveira S. Shirmohammadi N.D. Georganas	A Java H.263 network video decoder capable of playing video streamed over the Internet. <ul style="list-style-type: none"> <li>❖ Third Prize 1997 ACM/IBM Quest for Java contest</li> <li>❖ sponsored by Sun Microsystems in the "100% Pure Java" program</li> <li>❖ sponsored by Novell Networks in the "YES" program</li> </ul>	1. Viztera Co. 2. ATVideo Inc. 3. Innovation Institute Inc. 4. eLive! Inc. 5. Precise Creations Co. 6. *** (confidential) 7. VueCasino.tv 8. Nearly There Network Tech. 9. Grey Matter India Ent. 10. Industrial Lightspeed L.L.C. 11. Espre Solutions Inc.
<b>JETS</b> S. Shirmohammadi J.C. de Oliveira N.D. Georganas	<u>Java Enabled Telecollaboration System</u> : an API-based framework that allows users to share Java multimedia applets in real-time over the Internet. <ul style="list-style-type: none"> <li>❖ <b>First Prize</b> 1998 ACM/IBM Quest for Java</li> <li>❖ featured at the IEEE Canada Digital Library</li> <li>❖ sponsored by Sun Microsystems in the "100% Pure Java" program</li> <li>❖ sponsored by Novell Networks in the "YES" program</li> </ul>	12. Morningstar Systems Inc. 13. Technologies Cogigraph Inc. 14. NetPCS Networks Inc.
<b>JASMINE</b> A. El Saddik S. Shirmohammadi N.D. Georganas R. Steinmetz	<u>Java Application Sharing in Multiuser Interactive Environments</u> : a collaboration toolkit that allows transparent sharing of Java applets or applications in real-time, without the need to change the source code of the shared objects.	15. University of Ulm, Germany 16. University of Vienna, Austria

### RESEARCH SUPERVISORSHIPS (CAREER)

		<u>Completed</u>	<u>In Progress</u>
• Postdoctoral	<b>22</b>	21	1
• Ph.D.	<b>38</b>	27	11
• Master's	<b>74</b>	74	0
• Research Engineers	<b>17</b>	16	1
• Visiting Scholars/Engin./Scientists	<b>14</b>	14	
• Co-op students	<b>33</b>	33	
<b>Total</b>	<b>198</b>	185	13

**GRADUATE STUDENTS CURRENTLY SUPERVISED**

<u>Student</u>	<u>Degree</u>	<u>Institute</u>	<u>Topic or Area</u>
1. Shafiq Hashmi	PhD P/T	OCIECEs2002	Sensor Networks (co-sup: H.Mouftah)
2. Jilin Zhou	PhD	OCIECEj2005	Distributed Virtual Environments (co-sup: E.M.Petriu)
3. Susan Zhao	PhD	OCICs2005	Ambient Multimedia Intelligent Systems
4. Nizar Sakr	PhD	OCIECEj2006	Affective Computing (co-sup: J.Zhao)
5. Xin Wang	PhD	OCIECEj2006	e-commerce
6. Chi Wa Leong	PhD	OCIECEs2006	Ambient Multimedia Intelligent Systems
7. Albino Cordeiro Jr.	PhD	LNCC Brazil	Gesture Recognition (Co-sup: J. Oliveira)
8. Abdelwahab Hamam	PhD	OCIECEj2007	Distributed Virtual Environments and Haptics
9. Nasser Dardas	PhD	OCIECEj2008	Distributed Virtual Environments and Haptics
10. Muhammad Abid	PhD	OCICs2008	Gesture Recognition Interfaces
11. Feng Shi	PhD	OCIECEs2008	Multimedia Security
<u>New (Jan., 2009):</u> Pujara Chirag	PhD	OCIECEs2008	Multimedia communications

**PDFs AND RESEARCH ENGINEERS CURRENTLY SUPERVISED**

<u>Name</u>	<u>Title</u>	<u>Topic or Area</u>
12 David Qing Chen	PDF	Context-based Dynamic Gesture Recognition (co-sup: E. M. Petriu)
13 Albino Cordeiro Jr.	Senior Res. Associate	Multimodal Surveillance Systems (co-sup: E. M. Petriu)

**BASc & CO-OP STUDENTS CURRENTLY SUPERVISED**

<u>Name</u>	<u>Research Area</u>	<u>Year</u>	<u>Institution</u>
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**VISITING RESEARCH SCIENTISTS**

<u>Name</u>	<u>Research Area</u>	<u>Year</u>	<u>Institution</u>
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**GRADUATE SUPERVISIONS COMPLETED**

<u>NAME</u>	<u>DEGREE</u>	<u>THESIS TITLE</u>	<u>YEAR</u>	<u>EMPLOYER</u>
T101 Saeid Nourian	PhD	“AVRA: An Architecture for VR-Based Applications”	2008	Runiter
T100 Francois Malric	MSc	“Artificial Neural Network Based Optical Hand Posture Recognition using a Color-coded Glove”	2008	UofO
T99 Naim El-Far	PhD	“Haptic Rendering of Highly Detailed Point-Based Virtual Models”	2008	
T98 David Qing Chen	PhD	“Real-Time Vision-Based Hand Tracking and Gesture Recognition” (co-sup: E.M. Petriu)	2008	UofO
T97 Ayman El Sawah	PhD	“Towards Context-Aware Gesture Enabled User Interfaces” (co-sup: E.M. Petriu)	2008	
T96 Christopher Desmarais	MSc	“Pluto: A Proposed Protocol for Privacy Management In Electronic Communities” (co-sup: S. Shirmohammadi)	2008	
T95 Yue Xing	MASc	“Towards a 3D Immersive Teleconferencing System- Design and Implementation”	2007	
T94 Ke Liu	MASc	“HLA/RTI Based Emergency Preparedness and Response Training Simulation”	2007	NORTEL

T93	Abdelwahab Hamam	MASc	“A 3D Haptic Cataract Tele-Surgery Simulation”	2007	(UofO PhD)
T92	Jamal Abdo	MASc	“Hardware/Software Implementation of a Test-bed for Management of Sensor Networks”	2006	NORTEL
T91	Jijun Zhang	PhD	“Multimedia Adaptation and Media Conversion for Universal Multimedia Access” (co-sup: A. Perkins, Norwegian University of Science and Technology)	2006	
T90	Peiran Liu	PhD	“Progressive Transmission and Local Refinement of Polygonal Meshes for Exact Collision Detection in Distributed Virtual Environments”, (co-sup: G. Roth, NRC)	2006	XtraNormal Inc
T89	Xing Wang	MASc	“A Fuzzy Logic Based Intelligent Negotiation Agent”	2006	(UofO PhD)
T88	Thierry Métais	MSc	“A Dynamic Gesture Recognition Interface”	2005	Macadamian
T87	Lijun Chen	PhD	“Efficient 3D Multi-resolution Modeling, Segmentation, and Segmentation-based Mesh Compression:	2005	NORTEL
T86	Ziad Sakr	PhD	“Designed System for the Composition and Protection of MPEG-4 and SMIL Scenes and their Multimedia Content”	2005	
T85	Di (Candy) Tian	PhD	“Node activity Scheduling Schemes in Large-Scale Wireless Sensor Networks”	2005	
T84	Naim El Far	MSc	« Unison: A Generic framework for haptic-visual application development”	2005	(UofO PhD)
T83	Jilin Zhou	MASc	"Collaborative Tele-Haptic Surgery Simulation"	2005	(UofO PhD)
T82	Tao He	MEng	“QoS in 802.11 networks to support VoIP over WLAN”	2004	Nokia (China)
T81	Yan Li	MEng	“Haptic Virtual Environments and their Applications”	2004	
T80	Mojtaba Hosseini	PhD	“An End System Multicast Protocol for Multi-party Videoconferencing Applications”	2004	Atsana
T79	Stephane Dodeller	MASc	“Transport Layer Protocols for Haptic Virtual Environments”	2004	PSA Peugeot-Citroën, France
T78	Nawel Chefai	PhD	"Dynamically Adaptive Bandwidth Allocation Protocols in Multi-Stream Networking Environments",. , co-sup: G.V. Bochmann	2004	
T77	Saeid Nourian	MSc	xPheve: An Extensible Physics Engine for Virtual Environments	2004	(UofO PhD)
T76	ZhiJun Lei	PhD	“Video Transcoding Techniques for Wireless Video Communications”	2003	ATI
T76	Tatsuya Hayashi	MS		2003	(Japan)
T74	Matthew Ho	MEng	“Video-on-Demand Network Architecture and Technologies”	2003	(Toronto start-up)
T73	Huiping Guo	PhD	“Digital Image Watermarking for ownerships verification”	2003	California. State U at LA
T72	Xiaojun Shen	PhD	“MAP: A Mobile-Agent based Platform for Collaborative Virtual Environments”	2002	(UofO PDF)
T71	Dongsheng Yang	MASc	“Effective Tools for Transparent Synchronous Collaborative Environment” (co-sup: Abed El Saddik)	2002	(China)
T70	Xiaowei Zhong	MASc	“Mobile Collaborative Augmented Reality: A Prototype for Industrial Training” (co-sup: P.Boulanger)	2002	(UofO PhD)
T69	Peiran Liu	MASc	“Designing Real-Time Vision Based Augmented Reality Environments for Mobile Applications” (co-sup: P.Boulanger)	2002	(UofO PhD)

T68	Spencer Leung	MASc	“Design and Implementation of a Java H.263/G.72x Decoder”	2002	
T67	Hui Zhao	PhD	« HLA Streaming and Real-Time Extension »	2002	NORTEL
T66	Jauvane .Cavalcante de Oliveira	PhD	« Issues in Large Scale Collaborative Virtual Environments »	2001	LNCC (Brasil)
T65	Mojtaba Hosseini	MASc	« An Architecture for Recording and Playing Collaborative Virtual Environments”	2001	(UofO PhD)
T64	Wayne Robbins	PhD	« Facilitating Intelligent Media Space Collaboration via RASCAL-the Reflectively Adaptive Synchronous Coordination Architectural Framework »	2001	DRDC-Ottawa
T63	Wenbiao Zhu	MASc	“jQoS: a QoS-based Internet Videoconferencing using the Java Media Framework”	2001	
T62	Shervin Shirmohammadi	PhD	“Synchronous Collaboration in Virtual Environments: Architecture, Design and Implementation”	2000	OE/One Can.
T61	Li Ding	MSc	“Design and Implementation of an Advanced Telecollaboration System”	2000	IBM Canada
T60	Miguel Rios	PhD	"Broadband Networks Design Models and Admission Control Algorithms"	2000	Pont.Univ. Cat. de Chile
T59	Vasilis Darlagiannis	MASc	"COSMOS: COLlaborative System based on MPEG-4 Objects and Streams"	1999	Tech.Univ. Darmstadt
T58	Mercy George	MASc	"Spread Spectrum Watermarking for Images and Video"	1999	NORTEL
T57	Ramsee Hage	MASc	"Voice Enabled Interactive E-Commerce"	1999	LUCENT (US)
T56	Mejdi Eraslan	MASc	"VESIR-6:Virtual Environment Supporting Multi-user Interaction over IPv6"	1999	NORTEL
T55	Tie Xu	MASc	"Packet -Voice over non-QoS Networks"	1999	NORTEL
T54	Li Zhang	MASc	“An Open Signaling System over VIVID Switches”	1998	NORTEL
T53	Murat Daami	MASc	"Synchronization Control of Coded Video Streams: Algorithms and Implementation"	1997	
T52	Russ Pretty	MASc	"ATM RendezView: Decentralized Architecture for Multipoint Conferencing"	1997	NORTEL
T51	Keith Smith	MASc	"ATM RendezView: Enabling Real-time Multimedia Delivery to-the-Desktop"	1997	NORTEL
T50	Jerzy Jarmasz	MASc	"Design and Implementation of a distributed synchronization scheduler for a multimedia news-on-demand application."	1997	Carleton U.
T49	Shervin Shirmohammadi	MASc	"Design and Implementation of JETS: A Java-Enabled Telecollaboration System"	1996	UofO
T48	Hua Yang	MASc	“Advanced Intelligent Network Services"	1996	NORTEL
T47	Renaud Brimont	MASc	“Implementation and Performance Analysis of a Multimedia Synchronizer”	1995	(France)
T46	Sanjiv Patel	MASc	"Multimedia Fax-MIME Interworking"	1994	Newbridge
T45	Sylvain Carrier	MASc	"Multimedia Electronic Mail on the X.400 Message Handling System"	1994	DND
T44	Ming (Alan) Chen	PhD	"Efficient Commun. Protocols for High-Bandwidth Multichannel Networks: Design and Performance Analysis"	1994	NORTEL
T43.	Ibrahim Makhamreh	PhD	"Modeling and Analysis of Packet Switching Architectures for B-ISDN" (co-sup: Dr D. McDonald)	1994	Jordan Univ.S.T.
T42	Lian Li	MASc	"Design and Implementation of a Real-Time Multimedia Synchronization Control System Over High-Speed Communic. Networks"	1994	NORTEL
T41.	Li Li	PhD	"Multimedia Synchronization Protocols" (co-sup: Dr M.Karmouch)	1993	NORTEL
T40.	Ganti Sudhakar	PhD	"Access Protocols and Netw. Architectures for Very High-Speed Optical Fiber LANs" (co-sup: Dr M.Kavehrad)	1993	Newbridge

T39.	Anil Gupta	PhD	"Analysis of Novel High-Performance Switch Architectures for B-ISDN	1992	Nanyang Univ.
T38.	Man Li	PhD	"Applying Decomposition and Aggregation Theory to the Analysis of Stochastic Petri N Queueing Networks "	1991	Nokia (USA)
T37.	Wade Williams	MASc	IEEE 802.6 DQDB MAN Supporting Different Communities of Interest"	1991	DND
T36.	Zhengyu Liu	MASc	"Interconnections of LANs through ISDN" (co-sup. :W.McGee)	1991	NORTEL
T35.	Bilal Awada	MASc	"Performance Analysis of Office Communications Applications over LANs Interconnected via Frame Relaying "	1990	CRC
T34.	Gautam Shaw	MASc	"A Natural Language-based Expert System for a Multimedia Database"	1990	NORTEL
T33.	Anil Chandan	MASc	"Performance Evaluation of an ATM Multiplexer"	1990	DND
T32.	Richard Vallée	MASc	"Performance Evaluation of Multimedia Communications Systems Supported by IEEE 802.6 DQDB MAN"	1989	NORTEL
T31.	Pierre Gross	MASc	"A Document Architecture and Conferencing System for a Network of Multimedia Medical Workstations"	1989	(France)
T30.	Periklis Tsingotjidis	MASc	"Performance Evaluation of a Multimedia Communications System"	1989	Concordia U.
T29.	Man Li	MASc	"Colored Generalized Stochastic Petri Nets for Integrated Systems Protocol Modelling"	1988	GTE (USA)
T28.	Claude Lefebvre	MASc	"An Investigation of the Use of an Auditory Model in an Autom. Speech Recognition System"	1986	NRC
T27.	Adrian E. Conway	PhD	"Decomposition Methods and Computational Algorithms for Multiple-Chain Closed Queueing Networks"	1985	GTE (USA)
T26.	Foud Karam	MASc	"Optimal Slot Assignments in Multibeam Satellite Communicatin Systems"	1985	TELESAT
T25.	Eng H. Teo	MASc	"A Transport Layer Design for Local Area Networks"	1984	(Singapore)
T24.	Pavlos Kariotellis	MEng	"Contention Protocols for the Multiple Access of a Broadcast Channel"	1984	(Greece)
T23.	Kevin Wong	MASc	"Strategies for Optimal Satellite Capacity Allocation"	1983	CDC
T22.	Phillip Mui	MASc	"An 8086-Based Packet-Voice Simulator for Local Area Networks"	1983	(Hong Kong)
T21.	James Kozlowski	MASc	"Analytical Modelling of Packet-Switching Networks with Nodal Buffer Management and End-to-End Flow Control"	1983	NORTEL
T20.	Esper Bitar	MASc	"Handoff Strategies in Cellular Mobile Communication Systems"	1983	TELESAT
T19.	Miguel Rios	MASc	"HYMAP - A New Hybrid Multiple Access Protocol for Local Area Networks"	1983	PUC (Chile)
T18.	John Zachariah	MEng	"A Review of the ISO Reference Model, SNA, X.25 and SNA-X.25 Interfacing"	1982	BELL
T17.	Michael McDonnell	MASc	"Simulation Study of a Signalling Protocol for Mobile Radio Systems"	1982	NORTEL
T16.	Harvey Tremblay	M.Eng	"A Study of Certain Design Parameters of an Emergency Locator Transmitter (ELT) for SARSAT"	1981	DND
T15.	Georges Nehme	MASc	"A Simulation Study of High-Capacity, Cellular, Land-Mobile Radio Communication Systems with Erlang-B Service"	1981	DOC
T14.	H.W. Wong	MASc	"DCA- A Distributed Communic. Architecture" (co-sup: Dr M. Goldberg).	1981	

T13.	Lindley Baxter	MEng	"Network Management in Computer-Communic. Networks"	1980	DND
T12.	Rama Mwikalo	MEng	"Design of a Microprocessor-Based Ethernet Interface Processor"	1980	Virata Co.
T11.	Jackson Y.-K. Chan	MASc	"Dimensioning of Message-Switched Computer-Communication Networks"	1979	NORTEL
T10.	John K. Sin	MASc	"A Hybrid Channel Assignment Scheme for Cellular High Capacity Land-Mobile Radio Communications Systems with Erlang-C Service"	1979	NORTEL
T9.	Jastinder S. Jawanda	MASc	"Two Aspects of Data Transmission" (co-sup: Prof. S.G.S. Shiva)	1979	NORTEL
T8.	Amalendu Chatterjee	PhD	"Analysis of Packet-Switched Computer-Communic. Networks with Congestion Control"	1977	FUJITSU (USA)
T7.	Tom J. Kahwa	MASc	"A Hybrid Channel Assignment Scheme in Cellular Structured Mobile Communication Networks"	1977	CRC
T6.	Kurshid Ahmad	MEng	"Protocols in Computer-Communic. Networks"	1977	NORTEL
T5.	Ray Vilis	MASc	"A New Clustering Algorithm for the Topological Design of Multilevel Data Networks"	1977	NORTEL
T4.	Hugh Dysart	MASc	"Topological Design of Two-Level Multidrop Teleprocessing Networks"	1976	NORTEL
T3.	Peter Cheng	MASc	"Kalman Estimation and Control of the Attitude of Dual-Spin Geostationary Satellites"	1975	NORTEL
T2.	H.Bang Nguyen	MASc	"Design of an Optimal Feedback Controller for a Signalised Traffic Intersection"	1975	(Québec)
T1.	Amalendu Chatterjee	MASc	"Imbedding Methods and the Numerical Solution of Optimization Problems"	1974	FUJITSU (USA)

**COMPLETED SUPERVISIONS OF POSTDOCTORAL RESEARCH ASSOCIATES AND ENGINEERS**

<u>Name</u>	<u>Research Area</u>	<u>Year</u>	<u>Employer</u>
<u>Post Doctoral Research Associates</u>			
21. Dr. Xiaojun Shen	Collaborative Virtual environments	2003-08	Consulting
20. Dr. Chris Joslin	Dynamic Gesture Recognition	2004-05	Carleton U. (Prof)
19 Dr. Shervin Shirmohammadi	Multimedia Communications	2003	UofO (Prof.)
18. Dr Seok Jong Yu	Distributed Virtual Environments	2001-02	(Prof. In Korea)
17. Dr Maojun Zhang	Distributed Virtual Environments	2002	(China)
16. Dr Peng Liu	Pervasive Computing	2001-02	(Canada)
15. Dr Yiyiing Zhang	DVE Multimedia Communications	1999-00	IBM Canada
14. Dr Quansheng Wu	DVE Communications	1997-98	Newbridge
13. Dr Yussef Atamna	Multimedia Synchronization	1995-96	SRI International
12. Dr Alex Lam	Advanced Intelligent Networks	1995-96	Glenayre
11. Dr Yanhe Fan	Self-Similar Traffic on ATM Netw	1994-95	NORTEL
10. Dr Dimitrios Makrakis	Advanced Intelligent Networks	1994-95	U.ofO. (Prof.)
9. Dr Sanzheng Guo	Multimedia Communications	1994-95	CRC (Industry Canada)
8. Dr Bala Madaparathi	Multimedia Synchronization	1994	NORTEL
7. Dr Kun Qian	Multimedia Bandwidth Needs	1992-93	NORTEL
6. Dr Michel Soto	Broadband Communications	1991-92	U. de Paris IV (Prof.)
5 Dr Ahned Karmouch	Multimedia Databases	1988-91	U. of O. (Prof.)
4. Dr Luis Orozco-Barbosa	Multimedia Communications	1986-91	U. of O. (Prof.)
3. Dr Dimitrios Makrakis	Integrated Communications	1989	UofO . (Prof.)
2. Dr Rungroj Kositpaiboon	Multimedia Communications	1985-88	NORTEL
1. Dr C.V.Chakravarthy	Packet-Voice Communications	1980-81	Stevens IT (Prof.)
<u>Research Engineers</u>			

20.	Yue Xing	3D Immersive Teleconferencing	2008	CPAC TV
15.	Jeff Brisnkelle	Multimedia Synchronization	1994-97	Entrust
14.	Susanna Yi Zheng	Multimedia Communications	1995-97	Newbridge
13.	S.Wang	Multimedia Communications	1996-97	
12.	Steve Caron	Multimedia Communications	1996	NORTEL
11.	Keith Smith	Multimedia Communications	1995	NORTEL
10.	Tarun. Shah	Multimedia Communications	1995	NORTEL
9.	Louise Lamont	Multimedia Synchronization	1990-95	CRC
8.	GrantHenderson	Multimedia Communications	1992-94	StarVision Multimedia
7.	Jean-Francois Thivierge	Multimedia Fax	1994	PGI (Montreal)
6.	Dominique Dubois	Multimedia High-Speed Protocols	1992-93	U.de Paris VI (PhD st.)
5.	Eng (Jacob) H.Teo	Satellite Wide-Area Networking	1989-91	ISS, Singapore
4.	Dominique Verdejo	Multimedia Synchronization	1989-91	(France)
3.	P .Hebrard	Multimedia Conferencing Protoc.	1989-91	(France)
2.	Hiroshi Matsuyama	Broadband ISDN	1988-89	Mitsubishi Elec. Co. (Japan)
1.	B. Poyet	Object-Oriented Databases	1989	(France)

### **COMPLETED SUPERVISIONS OF CO-OP STUDENTS (1992-)**

<b><u>Name</u></b>	<b><u>Research Area</u></b>	<b><u>Year</u></b>	<b><u>Institution</u></b>
32. Yang Xu	Haptic tele-Surgery	<u>2005</u>	UofO
33. X. Huang	E-commerce	<u>2004</u>	UofO
31. Joe Huang	Virtual environments	2003	Univ. of Ottawa
30. Mintao Shi	Virtual environments	2003	Univ. of Ottawa
29. Jie Liu	Virtual environments	2003	Univ. of Ottawa
28. Jilin Zhou	Virtual environments	2002-03	UofO
27. Hanna Farah	Virtual environments&Haptics	2002	UofO
26. Yan Zheng	Virtual environments&Haptics	2002	UofO
25. Saied Nourian	Multimedia	1999-02	UofO
24. Isabelle Hertanto	Virtual environments	2001-02	UofO
23. Abdel Wahab Hamam	Virtual environments	2002	UofO
22. Tobias Kraft	JQoS Distance Learning	2001	U. Karlsruhe, Germany
21. Mohammed El Badri	Virtual environments	2001	UofOttawa
20. Elmala Hamid	Virtual environments	2001	UofOttawa
19. Pierre Desmarais	Web Telecollaboration	1997-99	UofOttawa
18. Chris Bucur	Web Telecollaboration	1999	UofOttawa
17. Francois. Chéné	Virtual Environments	1999	UofOttawa
16. T. Bui	Optimizing JETS	1998	UofOttawa
15. Bernard Nahas	Java Shared data Toolokit	1998	UofOttawa
14. Dahir Osman	VRML Interfaces	1998	UofOttawa
13. Laurent Gardès	Multimedia Synchronization	1997	Telecom Paris, France
12. Mark Parkhill	MHEG Editing	1997	UofOttawa
11. G. Goncalves	JETS and H263 applet	1997	UofOttawa
10. N. Rao	Multimedia TeleLearning	1997	UofOttawa
9. S. Mukherjee	Multimedia TeleLearning	1995	UofOttawa
8. S. Larocque	Multimedia TeleLearning	1996	UofOttawa
7. Roxanna Dzafarzadeh	Multimedia Communications	1995	UofOttawa
6. Tuni Tran	Multimedia Communications	1995	UofOttawa
5. S. Jeté	Multimedia Communications	1995	UofOttawa
4. F. Desserre	Multimedia Synchronization	1994-95	Telecom Paris, France
3. A. Wang	Multimedia Synchronization	1993	UofOttawa
2. Isabelle. Tourneux	Multimedia Synchronization	1992	Telecom Paris, France
1. Alexis. Barrot	Multimedia Synchronization	1992	Telecom Paris, France

### **INTERNATIONAL RESEARCH SCIENTISTS HOSTED**

<b><u>Name</u></b>	<b><u>Research Area</u></b>	<b><u>Year</u></b>	<b><u>Institution</u></b>
Prof. Ziad Sakr	Multimedia Communications	2007	Univ. of Trinidad and Tobago

Andrea Kanneh	Haptics	2007	Univ. of Trinidad and Tobago
Prof.Miguel Rios	Networks	2003	Univ. Catolica de Santiago, Chile
Prof. Jizhou Sun	Virtual Environments	2001	Tianjin University
Prof. Takeshi Inoue	ATM Traffic	1998-99	Kobe Univ. of Mercant. Marine
Prof. B.Tsybakov	Self-Similar Traffic Studies	1994-98	Russian Academy of Science
Dr N.Likhanov	Self-Similar Traffic Studies	1995,94	Russian Academy of Science
Prof. Debao Xiao	Metropolitan Area Networks	1993	Wuhan Polytechnic
Prof. Eric Horlait	ATM Networking	1992	Univ. of Paris XI
Prof. Huang Zhong Cheng	Local Area Networking	1983-84	Nortwestern Polytechnic Univ., Xian

**RESEARCH PUBLICATIONS**

a) In Refereed Journals:	123
b) In Refereed Conference Proceedings:	272
c) Research Reports:	24
Book :	1
Chapters in books:	3
	-----
<b>TOTAL</b>	<b>423</b>

**Book:**

A.E. Conway and N.D. Georganas, "Queueing Networks: Exact Computational Algorithms, A Unified Theory Based on Decomposition and Aggregation", MIT Press, Cambridge, July 1989 (200 pp.)

**Chapters in books:**

- Cb3 D. Tian and N.D. Georganas, "Node Activity Scheduling Algorithms in Wireless Sensors Networks", in "Algorithms and Protocols for Wireless and Mobile Networks" (A. Boukerche, editor), Taylor and Francis Books, Inc., 2005
- Cb2 L. Guo and N.D. Georganas, "Towards Agent-based Collaborative and Interactive Virtual Environments", Chapter 6 in "Virtual Reality Technologies for Future Telecommunications Systems" (A. Pakstas and R. Komiya, editors), Willey, 2002
- Cb1 J.C. Oliveira, X. Shen and N.D. Georganas, "Collaborative Virtual Environments for Industrial Training and e-Commerce", Chapter 7 in "Virtual Reality Technologies for Future Telecommunications Systems" (A. Pakstas and R. Komiya, editors), Willey, 2002

**a) In Refereed Journals:**

- J123 N.Sakr, J.Zhou, J.Zhao and N.D. Georganas, "Prediction-based Haptic Data Reduction and Transmission in Telementoring Systems", IEEE Transactions on Instrumentation & Measurement (to appear)
- J122 A. El-Sawah, N.D. Georganas and E.M. Petriu, "A prototype for 3D Hand Tracking and Posture Estimation", IEEE Transactions on Instrumentation & Measurement, vol. 57, no. 8, 2008, pp. 1627-1635
- J121 Q. Chen, N. D. Georganas and E.M. Petriu, "Hand Gesture Recognition Using Haar-Like Features and a Stochastic Context-Free Grammar", IEEE Trans. on Instrumentation and Measurement vol. 57, no. 8, 2008, pp. 1562-1571
- J120 L. Chen and N.D. Georganas, "Region-based 3D Mesh Compression Using an Efficient Neighborhood-based Segmentation", Transactions of the Society for Modeling and Simulation International, special issue on Distributed Simulation, Virtual Environments and Real Time Applications, vol. 84, May 2008, pp. 185 – 195
- J119 X. Shen, J. Zhou, A. Hamam, , S. Nourian, N. R. El-Far, F. Malric and N. D. Georganas, "Haptic-enabled, Tele-mentoring Surgery Simulation: design, implementation and evaluation", IEEE Multimedia, Vol.15., No.1, Jan.-Mar. 2008, pp.64-76
- J118 Q. Chen, ASMM. Rahman, X. Shen, A. El Saddik and N. D. Georganas, "Navigating a 3D Virtual Environment of Learning Objects by Hand Gestures", Int. J. Advanced Media and Communication, Vol. 1, No.4, 2007
- J117 N. D. Georganas, D. Ahmed, M. Hosseini, S. Shirmohammadi "A Survey of Application-Layer Multicast Protocols," IEEE Communications Surveys and Tutorials, Vol. 9, Issue. 3, 2007, pp. 58 – 74
- J116 Z. Sakr and N.D. Georganas, "A Novel Algorithm for MPEG-4 XMT Scene Structure Authentication and Multimedia Content Location", ACM Trans. on Multimedia Comp. Communic. and Applic. (TOMCCAP), Vol. 3, No.3, Aug. 2007, pp.18.1-18.23
- J115 D. Tian, Z.Lei and N.D. Georganas, "Configuring Node Status in A Two-Phase Tightly Integrated Mode for Wireless Sensor Networks", International Journal of Ad Hoc and Ubiquitous Computing, Vol.2, No.3, 2007, pp.175-185
- J114 A. El Saddik, D. Yang and N. D. Georganas, "Tools for Transparent Synchronous Collaborative Environments", J. Multimedia Tools and Applications, Vol. 33, No.2, May 2007, pp. 217-240
- J113 L. Chen and N. D. Georganas, "An Efficient and Robust Algorithm for 3D Mesh Segmentation", J. Multimedia Tools and Applications, Vol. 29, No.2, June 2006, pp. 109-125
- J112 P. Liu, G. Roth, N. D. Georganas, "Handling Rapid Interference Detection of Progressive Meshes Using Active Bounding Trees" Journal of Graphics Tools, Vol. 11, No.4, 2006, pp. 17-37
- J111 M. Hosseini and N.D. Georganas, "End System Multicast Routing for Multi-party Videoconferencing Applications", Computer Communications, Vol 29/11, 2006, pp 2046-2065

- J110 H. Guo and N. D. Georganas, "Jointly Verifying Ownership of an Image Using Digital Watermarking", J. Multimedia Tools and Applications, Vol. 27, No. 3, Dec. 2005, pp.323-349
- J109 D. Tian, N. D. Georganas. "Connectivity Maintenance and Coverage Preservation in Wireless Sensor Networks", AdHoc Networks Journal (Elsevier Science), Vo. 3, Issue 6, Nov. 2005, Pages 744-761
- J108 Z. Lei and N. D. Georganas, "Adaptive Video Transcoding and Streaming over Wireless Channels", Journal of Systems and Software, Special Issue on Adaptive Multimedia Computing , Vol. 75, No. 3, March 2005, pp. 253-270,
- J107 H. Zhao and N.D. Georganas, "HLA Real-time Extension", Concurrency and Computation: Practice and Experience, (Special Issue: Distributed Simulation and Real-Time Applications), Vol. 16, Issue 15, Dec .2004, pp 1503-1525
- J106 G.Cao, Z.Lei, J.Li, N.D.Georganas, Z.Zhu. "A Novel DCT Domain Transcoder for Transcoding Video Streams with Half-pixel Motion Vectors", Real-Time Imaging J. (Elsevier Science), Vol. 10, No. 5, October 2004, pp. 331-337
- J105 M.Hosseini and N.D. Georganas, "End System Multicast Protocol for Collaborative Virtual Environments", J. PRESENCE: Teleoperators and Virtual Environments, (Special Issue on Advances in Collaborative Virtual Environments), MIT Press, Vol. 13, Issue. 3, June 2004, pp. 263-278
- J104 J.C.Oliveira, J.Yu and N.D. Georganas "Enabling Embedded Worlds in Very Large Virtual Environments," IEEE Computer Graphics and Applications , Vol.24, No.4, May/June 2004, pp.73-83
- J103 M. Zhang and N. D. Georganas, "An Orientation Update Message Filtering Algorithm in Collaborative Virtual Environments", Journal of Computer Science and Technology May 2004, Vol. 19, No.3 pp.243-inside back cover
- J102 M. Zhang and N. D. Georganas, "Fast Color Correction Using Principal Regions Mapping in Different Color Spaces", Real-Time Imaging J., Vol. 10, Issue 1 , Feb. 2004, pp 23-30
- J101 D.Tian and N.D.Georganas, "Location and Calculation Free Node-Scheduling Schemes in Large Wireless Sensor Networks", AdHoc Networks Journal, Elsevier Science, Vol.2, Issue 1, Jan. 2004, pp. 65-85
- J100 J.C.Oliveira and N.D. Georganas , "VELVET: An Adaptive Hybrid Architecture for VErY Large Virtual EnvironmenTs." , J. PRESENCE: Teleoperators and Virtual Environments, MIT Press , Vol. 12, Issue 6 – Dec. 2003, pp.555-580
- J99 Z.Lei and N.D.Georganas, "A Rate Adaptation Transcoding Scheme for Real-time Video Transmission over Wireless Channels", Signal Processing: Image Communication Journal, (Special issue on Multimedia Adaptation, Vol. 18, Issue 8, Sept. 2003, pp. 641-658
- J98 H.Guo and N.D.Georganas, "A Novel approach to Digital Image Watermarking Based on a Generalized Secret Sharing Scheme.", ACM/Springer Multimedia Systems J. Vol.9 No.3, 2003, , pp. 249-260
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