Curriculum Vitae
Marin Litoiu, Ph. D., P. Eng.
Fellow of Canadian Academy of Engineering

Professor
Department of Electrical Engineering and
Computer Science
School of Information Technology York University

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PERSONAL INFORMATION:

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                416-736-2100 x 20987(work)
Email: mlitoiu@yorku.ca
Web page: http://marinlitoiu.info.yorku.ca
Research site: http://www.ceraslabs.com

DEGREES:

1995-1999   Ph.D., Systems and Computer Engineering, Carleton University, Ottawa, Canada

1992-1995   Doctorate, Automatic Control, Polytechnic University of Bucharest, Romania

1980-1985   M.Sc., Electrical and Computer Engineering, University of Craiova, Romania

EMPLOYMENT HISTORY:

Academic:

2019-to-date   Professor, *Electrical Engineering and Computer Science* **and** *School of Information Technology***, York University, Toronto, Canada.**

2008-2019	Associate Professor, *Electrical Engineering and Computer Science* and *School of Information Technology*, York University, Toronto, Canada.
2003-2010	Adjunct Associate Professor, University of Waterloo, Waterloo, Canada
1994–1995	Visiting Researcher, Departimento di Electronica et Informatica, Polytechnic of Turin, Turin, Italy
1994	Visiting Researcher, Technical University of Catalunya, Barcelona, Spain
1991–1995	Assistant Professor, Department of Computer and Control Systems, Polytechnic of Bucharest, Bucharest, Romania
1987-1991	Adjunct Professor, Polytechnic of Bucharest, Romania

Industry:

2016-to date	**Founder & Chief Scientist Officer, Bitnobi Inc.**
2000–2008	Senior Research Staff Member, Centre for Advanced Studies (CAS), IBM Toronto Lab, Markham, Ontario, Canada
1997–2000	Advisory Software Engineer, Distributed Application Development Group, IBM Toronto Lab, Toronto, Ontario, Canada
1987-1991	Scientist, National Research Institute, Bucharest, Romania
1985-1987	Computer Engineer, IIRUC, Bucharest, Romania

SCHOLARLY AND PROFESSIONAL ACTIVITIES:

Professional:

2022-2023	Member the IEEE Technical Council on Software Engineering (TCSE) Distinguished Service Award Committee
2021-2022	Chair of the IEEE Technical Council on Software Engineering (TCSE) Distinguished Service Award Committee
2015-2018	Vice Chair of the IEEE Technical Council on Software Engineering (TCSE)
2014-2020	Member at-large of IEEE Conference Advisory Committee (CAC), IEEE Computer Science Society
2014-to-date	Associate Editor, Big Data and Information Analytics Journal, American Institute for Mathematical Sciences
2017	Editor in Chief Search Committee, ACM Journal Transactions on Adaptive and Autonomous Systems

2016	Member of IEEE TCSE Synergy Award Committee, Technical Council on Software Engineering (TCSE), IEEE Computer Science Society
2015	Member of IEEE TCSE Service Award Committee, Technical Council on Software Engineering (TCSE), IEEE Computer Science Society
2014	Vice Chair of the European Union's Adaptive Machines in Complex Environment Evaluation Panel
2007-2009	Director of Research, Centre of Excellence for Research in Adaptive Systems (CERAS)
2003-2007	Chair of the Board of Directors for Consortium for Software Engineering Research (CSER) of Canada
2003-2008	Member of the IBM's Academy Affiliate, Canadian Technical Excellence Council (CTEC)
2009-present	Reviewer, "ACM Transactions on Software Engineering and Methodology"
2011-present	Reviewer, "ACM Transactions on Adaptive and Autonomous Systems"
2011-present	Reviewer, "Journal of Software and Systems Modeling"
2011-present	Reviewer, "Journal of Systems and Software"
2004-present	Reviewer, "IEEE Transactions on Software Engineering"
2005-present	Reviewer, "IEEE Software"
2008-present	Reviewer, "Performance Evaluation Journal"
2002-2004	Reviewer, "Fuzzy Sets and Systems"

Conferences, Steering Committee Member/Chair:

2015-present	Consortium for Software Engineering Research in Canada (CSER)
2017-present	Member, ACM/SPEC International Conference on Performance Engineering (ICPE)
2005-present	IEEE/ACM International Symposium on Software Engineering for Autonomic and Self-Adaptive Systems (SEAMS)
2012-present	International Conference on Software Engineering and Computer Science (CASCON)
2012-2016	IEEE Symposium on the Maintenance and Evolution of Service-Oriented Systems and Cloud-Based Environments (MESOCA)
2012-now	International Workshop on Load Testing of Large Software Systems (LT)

Selected Conferences, Chair:

2024	General Chair, ACM/SPEC International Conference on Performance Engineering (ICPE), Toronto, Canada, 2024
2023	General Chair, IEEE International Conferences of Autonomic Computing and Self-Organizing Systems (ACSOS), Toronto, Canada, 2023

2019	Program Co-Chair, ACM/SPEC International Conference on Performance Engineering (ICPE), Mumbai, India, 2019
2019	General Chair, ACM/IEEE Symposium on Software Engineering for Adaptive and Self – Managing Systems (SEAMS 2017), Montreal, Canada, May 2019
2018	Program Co-Chair, 10th CASCON Workshop on Cloud Computing, Toronto, Canada, November, 2018
2017	Program Co-Chair, 9th CASCON Workshop on Cloud Computing, Toronto, Canada, November, 2017
2017	Program Co-Chair, NII Shonan Seminar on Software Engineering and Networked Control for Smart Cyber Physical Systems (SENCPS), Shonan, Japan, August 2017
2016	Program Co-Chair, Models at Runtime & Networked Control for Cyber Physical Systems, Reston, VA, December, 2016
2016	Program Co-Chair, 8th CASCON Workshop on Cloud Computing, Toronto, Canada, November, 2016
2016	Program Co-Chair, CASCON Workshop on Cyberphysical Systems Security, Toronto, Canada, November, 2016
2015	Program Chair, International Conference on Computer Science and Software Engineering (CASCON), Nov 4-7, Toronto, Canada, 2015
2015	Chair, International ACM/IEEE/USENIX Conference on Autonomic Computing (ICAC), Poster Track, Grenoble, France, July 2015
2015	Program Co-Chair, 7th CASCON Workshop on Cloud Computing, Toronto, Canada, November, 2015
2015	Co-Chair, International Conference on Performance Engineering (ICPE), Workshops Track, Jan 29-Feb 3, Austin, Texas, USA, 2015
2014	Program Co-Chair, International Conference on Software Maintenance and Evolution (ICSME), Industry Track, Victoria, Canada, Sept 28-Oct 3 2014
2014	Program Co-Chair, International Workshop of Large Scale Testing, Dublin, Ireland, March 22, 2014
2013	Program Co-Chair, 2nd International Workshop on Load Testing of Large Software Systems (LT13), CASCON 2013, Toronto, Canada, November 2013
2013	Program Co-Chair, 3rd International Workshop on Smart Applications on Virtual Infrastructure (SAVI), Toronto, ON, Canada, November 2013
2013	General Chair, IEEE/ACM International Symposium on Software Engineering for Autonomic and Self-Adaptive Systems (SEAMS), San Francisco, California, USA, May 2013

2013	Program Co-Chair, IEEE MESOCA, Eindhoven, Netherlands, September 2013
2012	Program Co-Chair, IEEE MESOCA, Trento, Italy, September 2012
2012	Program Co-Chair, IEEE CCOPT, Ottawa, Canada, May 2012
2012	Program Co-Chair, IEEE CCGrid, Workshops, Ottawa, Canada, May 2012
2012	Program Co-Chair, First International Workshop on Load Testing of Large Software Systems, Montreal, Canada, 2012
2011	Program Co-Chair, 5th CASCON Workshop on Cloud Computing, Toronto, Canada, November, 2011
2011	Program Co-Chair, 1st CASCON Workshop on Smart Applications on Virtual Infrastructure, Toronto, Canada, November 2011
2011	Program Co-Chair, CASCON 2011, Toronto, Canada, November 2011
2010	Co-Chair, 4th CASCON Workshop on Cloud Computing, Toronto, Canada, November 2010
2009	Co-Chair, 3rd CASCON Workshop on Cloud Computing, Toronto, Canada, November 2009
2008	Co-Chair, 6th CASCON Workshop on Engineering Autonomic Systems, Toronto, Canada, October 2008
2008	Co-Chair, 2nd CASCON Workshop on Cloud Computing, Toronto, Canada, October 2008
2008	Co-Chair, ACM/IEEE SEAMS 2008, Leipzig, Germany, May 2008
2008	Co-Chair, ACM/IEEE SDSOA 2008, Leipzig, Germany, May 2008
2007	Co-Chair, ACM/IEEE SEAMS 2007, Minneapolis, USA, May 2007
2007	Co-Chair, ACM/IEEE SDSOA 2007, Minneapolis, USA, May 2007
2007	Co-Chair, 5th CASCON Workshop on Engineering Autonomic Systems, Toronto, Canada, October 2007
2007	Co-Chair, 5th CASCON Workshop on Self-Optimizing Systems, Toronto, Canada, October 2007
2007	Co-Chair, 1st CASCON Workshop on Adaptive Systems, Toronto, Canada, October 2007
2006	Co-Chair, 4th CASCON Workshop on Engineering of Autonomic Systems, Toronto, Canada, October 2006
2006	Co-Chair, 4th CASCON Workshop on Self-Optimizing Systems, Toronto, Canada, October 2006
2005	Co-Chair, ACM/IEEE Workshop on Design and Evolution of Autonomic Software (DEAS 2005), St Louis, USA, May 2005

2003	General Co-Chair, CASCON 2003 Workshops Organizing Committee, Toronto, Canada, October 2003
2002	General Co-Chair, CASCON 2002 Workshops Organizing Committee, Toronto, Canada, October 2002
2001	General Co-Chair, CASCON 2001 Workshops Organizing Committee, , Toronto, Canada, October 2002

Selected Program Committees, Member:

2022	The 20th International Conference on Service-Oriented Computing November 29th – December 2nd, 2022. Sevilla, Spain
2022	13th ACM/SPEC International Conference on Performance Engineering, Washington, April 2022
2022	ACM/IEEE Symposium on Software Engineering for Adaptive and Self – Managing Systems (SEAMS 2022), Pittsbufg, USA, May 2022
2022	28th Annual International Conference on Computer Science and Software Engineering (CASCON 2022), Toronto, Canada, November 2022
2021	12th ACM/SPEC International Conference on Performance Engineering, Rennes, France, April 2021
2021	ACM/IEEE Symposium on Software Engineering for Adaptive and Self – Managing Systems (SEAMS 2021), Madrid, Spain, May 2021
2021	28th Annual International Conference on Computer Science and Software Engineering (CASCON 2021), Toronto, Canada, November 2021
2020	11th ACM/SPEC International Conference on Performance Engineering, Edmonton, Canada, April 2020
2020	ACM/IEEE Symposium on Software Engineering for Adaptive and Self – Managing Systems (SEAMS 2020), Seul, South Korea, May 2020
2019	28th Annual International Conference on Computer Science and Software Engineering (CASCON 2019), Toronto, Canada, November 2019
2019	11th Asia-Pacific Symposium on Internetware, Japan, Oct 2019
2019	IEEE International Conference on Cloud Computing (IEEE Cloud), July 2019

2018	33rd International Conference on Software Maintenance and Evolution - Industry Track (ICSME 2018)
2018	28th Annual International Conference on Computer Science and Software Engineering (CASCON 2018), Toronto, Canada, November 2018.
2018	IEEE International Conference on Cloud Computing (IEEE Cloud), July 2018
2018	9th ACM/SPEC International Conference on Performance Engineering, Berlin, Germany, April 2018
2017	33rd International Conference on Software Maintenance and Evolution - Industry Track (ICSME 2017), Singapore, September 2017
2017	27th Annual International Conference on Computer Science and Software Engineering (CASCON 2017), Toronto, Canada, November 2017.
2017	IEEE International Conference on Cloud Computing (IEEE Cloud), Honolulu, Hawaii, USA, July 2017
2017	Usenix International Conference on Distributed Computing and Systems (ICDCS), Atlanta, Georgia, USA, June 2017
2017	IEEE International Conference on Autonomic Computing (ICAC), Columbus, Ohio, USA, July 2017
2017	ACM/IEEE Symposium on Software Engineering for Adaptive and Self – Managing Systems (SEAMS 2017), Buenos Aires, Argentina, May 2017
2017	3rd International Workshop on Quality Aware DevOps(QUDOS), Aquila, Italy, March 2017
2016	IEEE World Forum on Internet of Things, Reston, Virginia, USA, December 2016
2016	IEEE International Conference on Cloud Computing (IEEE Cloud), San Francisco, California, USA, July 2016
2016	IEEE International Conference on Software Maintenance and Evolution (ICSME 2016), Raleigh, North Carolina, USA, Industry Track, October 2016
2016	ACM/IEEE Symposium on Software Engineering for Adaptive and Self – Managing Systems (SEAMS 2016), Austin, Texas, USA, May 2016
2016	IBM International Conference on Software and Systems (CASCON), Toronto, Canada, October 2015
2016	IEEE International Conference on Autonomic Computing (ICAC), Wurzburg, Germany, July 2016
2016	International Conference on Software Engineering and Data Engineering (SEDE 2016), Denver, Colorado, USA, Sept 2016

2015	11th International ACM Sigsoft Conference on the Quality of Software Architectures (QoSA 2015), Montreal, Canada, May 2015
2015	10th International Conference on Testbeds and Research Infrastructures for the Development of Networks & Communities (TRIDENTCOM 2015), Vancouver, Canada, June 2015
2015	International ACM/IEEE/USENIX Conference on Autonomic Computing (ICAC 2015), Grenoble, France, July 2015
2015	The 35th IEEE International Conference on Distributed Computing Systems (ICDCS 2015), Columbus, Ohio, USA, July 2015
2015	ACM/IEEE Workshop on Principles of Engineering for Service Oriented Systems (PESOS 2015), Florence, Italy, May 2015
2014	IEEE International Conference on Software Maintenance and Evolution (ICSME), Industry Track, Victoria, British Columbia, Canada, Sept-Oct 2014
2014	ACM/IEEE Symposium on Software Engineering for Adaptive and Self – Managing Systems (SEAMS 2014), Hyderabad, India, June 2014
2013	ACM/IEEE Workshop on Principles of Engineering for Service Oriented Systems (PESOS 2013), San Francisco, California, USA, May 2013
2013	ACM/IEEE Symposium on Software Engineering for Adaptive and Self – Managing Systems (SEAMS 2013), San Francisco, California, USA, May 2013
2013	The First International Workshop on Advancement from Confluence of Emerging Technologies, Markham, Ontario, Canada, Sept. 2013
2013	ACM/IEEE International Conference on Autonomic Computing (ICAC)
2013	ACM, 9th International Sigsoft Conference on the Quality of Software Architectures (QoSA), San Jose, California, USA, June 2013
2012	ACM, 8th International Sigsoft Conference on the Quality of Software Architectures, Bertinoro, Italy, June 2012
2012	IEEE International Conference on Network and Service Management (CNSM 2012), Las Vegas, Nevada, USA, Oct 2012
2012	ACM/IEEE Workshop on Principles of Engineering for Service Oriented Systems (PESOS 2012), Zurich, Switzerland, June 1012
2012	ACM/IEEE Symposium on Web Site Evolution (WSE 2012), Trento, Italy, Sept 2012
2012	CASCON 2012, Toronto, Ontario, Canada, Oct 2012
2012	The 9th International Conference on Mobile Web Information Systems, Niagra Falls, Ontario, Canada, Aug 2012
2012	ACM/IEEE Symposium on Software Engineering for Adaptive and Self – Managing Systems (SEAMS 2012), Zurich, Switzerland, June 2012

2012	9th International Conference on Quantitative Evaluation of SysTems (QEST) 2012, London, UK, Sept 2012
2012	2nd International Conference on Cloud Computing and Services Science (CLOSER) 2012, Porto, Portugal, April 2012
2012	International Workshop on Cloud for Enterprises (C4E), Beijing, China, Sept. 2012
2011	IEEE International Conference on Network and Service Management (CNSM 2011), Paris, France, Oct 2011
2011	ACM/IEEE Workshop on Principles of Engineering for Service Oriented Systems (PESOS 2011), Honolulu, Hawaii, USA, May 2011
2011	ACM/IEEE Symposium on Web Site Evolution (WSE 2011), Williamsburg, Virginia, USA, Sept 2011
2011	IEEE International Workshop on the Maintenance and Evolution of Service-Oriented and Cloud-Based Systems, Williamsburg, Virginia, USA, Sept 2011
2011	CASCON 2011, Toronto, Ontario, Canada, Oct 2011
2011	International Workshop on Cloud for Enterprises (C4E), Luxemburg, Sept 2011
2011	Testing in Clouds, IGI Book, Editorial Board Member
2010	IEEE International Conference on Network and Service Management (CNSM 2010), Niagra Falls, Ontario, Canada, Oct 2010
2010	ACM/IEEE Symposium on Software Engineering for Adaptive and Self – Managing Systems (SEAMS 2010), Cape Town, South Africa, May 2010
2010	IEEE Working Conference on Reverse Engineering (WCRE 2010), Beverly, Massachusetts, USA, Oct 2010
2010	CASCON 2010, Toronto, Ontario, Canada, Oct 2010
2010	ACM/IEEE Workshop on Principles of Engineering for Service Oriented Systems (PESOS 2010), Cape Town, South Africa, May 2010
2010	ACM/IEEE Workshop on Web Site Evolution (WSE 2010), Timișoara, Rumânia, Sept 2010
2010	IEEE Workshop on Software Engineering for Adaptive Software Systems (SEASS 2010), Miami, Florida, USA, July 2010
2010	25th ACM Symposium on Applied Computing, Dependable and Adaptive Distributed Systems Track, Sierre, Switzerland, March 2010
2009	ACM/IEEE Symposium on Software Engineering for Adaptive and Self – Managing Systems, Vancouver, British Columbia, Canada, May 2009
2009	IEEE Working Conference on Reverse Engineering (WCRE 2009), Lille, France, Oct 2009
2009	CASCON 2009, Toronto, Ontario, Canada, Oct 2009

2009	ACM/IEEE Workshop on Principles of Engineering for Service Oriented Systems, Vancouver, British Columbia, May 2009
2009	IEEE International Conference of Program Comprehension (ICPC 2009). Hempstead, New York, USA, Oct 2009
2008	ACM/IEEE International Conference on Software Engineering, ICSE (Workshop PC Committee), Leipzig, Germany, May 2008
2008	IEEE International Conference on COTS-Based Software Systems (ICCBSS 2008), Madrid, Spain, Feb 2008
2008	IEEE Working Conference on Reverse Engineering (WCRE 2008). Antwerp, Belgium, June 2008
2008	CASCON 2008, Toronto, Ontario, Canada, Oct 2008
2007	IEEE Automated Software Engineering Conference, ASE, Atlanta, Georgia, USA, Nov 2007
2007	IEEE International Conference of Program Comprehension (ICPC 2007), Banff, Alberta, Canada, June 2007
2007	IEEE Working Conference on Reverse Engineering (WCRE 2007), Vancouver, British Columbia, Canada, Oct 2007
2007	International Conference on Virtual Computing Initiative, Research Triangle Park, North Carolina, USA, May 2007
2007	3rd Workshop on Middleware for Web Services
2007	The Sixth IEEE International Conference on COTS-Based Software Systems - ICCBSS 2007, Banff, Alberta, Canada, Feb-March 2007
2006	ACM ICSE 2006 Workshop on Software Engineering for Adaptive and Self-Managing Systems (SEAMS), Shanghai, China, May 2006
2006	2nd Workshop on Middleware for Web Services, in conduction with EDOC Hong Kong, China, Oct 2006
2006	Multiagent Systems and Software Architecture – MASSA 2006, Erfurt, Germany, Sept 2006
2005	CASCON 2005, Toronto, Ontario, Canada, Oct 2005
2005	Workshop on Middleware for Web Services, Enschede, Netherlands, 2005
2005	Reverse Engineering to Requirements Workshop, RETR 2005, Pittsburgh, Pennsylvania, USA, Nov 2005
2004	CASCON 2004, Toronto, Ontario, Canada, Oct 2004
2004	IEEE Workshop on Web-Site Evolution, Chicago, IL, USA, Sept 2004
2003	CASCON 2003, Toronto, Ontario, Canada, Oct 2003
2003	12th International Conference on Intelligent and Adaptive Systems and Software Engineering, 2003

2003   IEEE Workshop on Web-Site Evolution, Montreal, Quebec, Canada, Oct 2003

2002   CASCON 2002, Toronto, Ontario, Canada, Oct 2002

2002   CAISE 2002, Toronto, Ontario, Canada, May 2002

AWARDS and RECOGNITIONS

2022   **Most Influential Paper Award,** CASCON 2022, for "Partitioning Applications for Hybrid and Federated Clouds," published at *CASCON,* Toronto, Ontario, Canada, 2012

2022   York University Research Leadership Award

2021   Fellow, Canadian Academy of Engineering

2021   York University Research Leadership Award

2020   IBM Faculty of the Year Award

2020   York University Research Leadership Award

2019   York University Research Leadership Award

2019   **Most Influential Paper Award,** CASCON 2019, for "Resource Provisioning for Cloud Computing," published at *CASCON,* Toronto, Ontario, Canada, 2009

2016   **Best Paper Award**, "Enabling DevOps for Containerized Data-Intensive Applications: An Exploratory Study," *International Conference on Computer Science and Software Engineering (CASCON),* Toronto, Ontario, Canada, 2016

2016   **Best Demo Award**, "A DevOps Architecture for Continuous Delivery of Containerized Cloud Applications," *International Conference on Computer Science and Software Engineering(CASCON),* Toronto, Ontario, Canada, 2016

2016   **Best Paper Award**, "A Framework to Evaluate the Effectiveness of Different Load Testing Analysis Techniques," *IEEE International Conference on Software Testing (ICST),* Chicago, Illinois, 2016

2015   **Most Influential Paper Award,** CASCON 2015, for "Tracking Time-Varying Parameters in Software Systems with Extended Kalman Filters," published at *CASCON,* Toronto, Ontario, Canada, 2005

2013   **2nd Place Award at the Cloud Cup 2013** for "Pattern-Based Deployment Service (PDS)," *IEEE Cloud,* Santa Barbara, California, USA, 2013

2013   **3rd Place Award, at the Cloud Cup 2013**, "DaaSPatcher," *IEEE Cloud,* Santa Barbara, California, SUA, 2013

2012	**3rd Place Award, at the Cloud Cup 2012**, "CloudyMetrics," *IEEE Cloud,* Honolulu, Hawaii, USA, 2012
2012	**York University Merit Award**
2011	**York University Merit Award**
2010	**IBM Faculty Fellow of the Year Award**
2010	**Best Paper Award**, "A Business Driven Cloud Optimization Architecture," *ACM SAC* , Sierre, Switherland, 2010
2010	**York University Merit Award**
2009	**IBM CAS Project of the Year Award**
2009	**Dean Outstanding Research Award**
2009	**York University Merit Award**
2008	**York University Merit Award**
2007	**IBM Outstanding Technical Achievement Award**
2007	**IBM CAS Project of the Year Award**
2006	**NSERC Synergy Award for Innovation, Leo Derikx Award (for CAS team and 12 partner universities)**
2006	**IBM CAS Project of the Year Award**
2005	**IBM Ovation Award**
2005	**IBM Author Recognition Award**
2004	**IBM Author Recognition Award**
2003	**IBM Author Recognition Award**
2002	**IBM Author Recognition Award**
2002	**IBM Author Recognition Award**
2002	**IBM Bravo Award**
2002	**IBM Innovation Award**

STUDENT SUPERVISION since 2008

Student training has increased significantly and is outstanding after an initial growth period that naturally occurs for faculty making the transition from industry to academia. I had the privilege to supervise a large number of outstanding HQPs: Research Associates, Masters, PhDs and PDFs and undergraduates. In addition to research and technology skills, students in my Lab are encouraged and enabled to acquire professional and communication skills, and to understand the social and environment implications of their work. Their individual research projects are always part of larger projects, under the umbrella of national or provincial research networks such as NSERC-SNG:SAVI, ORF-RE: CVST or BRAIN, CREATE: DITA Collectively, the HQ graduate students and PDFs have co-authored 91

journal papers, refereed conference papers and book chapters, presented at and travelled to more than 30 international conferences, and contributed to the review process and organization of dozens of international conferences.

Post-doctoral fellows (11). PDFs have spent two years, in average, in my Lab. They improved their research proficiencies and output, expanded their professional network and acquired mentorship and leadership talents. Consequently, they secured faculty positions (Hamzeh Khazaei-Univ. of Alberta, Marios Fokaefs- Ecole Polytechnique, Mike Smit-Dalhousie Univ., Mark Shtern, Cornel Barna-Seneca), or jobs with high tech industry (Brad Simmons – SkyTree, Rizwan Mian- Hortonworks).

Master's and PhDs (22 and 8). All graduate students under my supervision got direct exposure to industry relevant research problems and many had industrial internships (Ghanbari, Barna, Beigi, Theodorou, Lu). They all wrote outstanding papers and theses. Hamoun Ghanbari (PhD 2014) thesis "Model-Based Dynamic Resource Management for Service Oriented Clouds" features many outstanding contributions to self-adaptive systems and cloud computing. He has published over 20 refereed publications and his h-index was 9 when he graduated. He is now at Scientist at Amazon, where he continues his research on cloud elasticity. Cornel Barna (PhD 2015) wrote a thesis on "Engineering Model Based Adaptive Software Systems" and published 15 papers during his studies and received many awards including a Best Paper Award. Many Master's theses were shaped by the NSERC Strategic Network, SAVI or the ORF-RE network BRAIN: adaptive requirements (Veleda, Zoghi), VMs migration in clouds(Lu), elastic big data infrastructures (Zareian, Sandel), cloud elasticity (Gergin, Theodorou). All Master's found jobs in their area of research with IT companies (IBM, Hwawei, Terapeak).

Undergraduate Students (15). Fifteen undergraduate students have undertaken research under my supervision. Six of them have been formally enrolled in an Undergraduate Research Project. Others have been involved as part summer research interns, integrated into my graduate research team and have completed research work on software modeling, distributed computing, adaptive computing, and cloud computing. They work with the networking and computing equipment available within my research laboratory. Many students who did their undergraduate projects under my supervision received their first jobs based on the sound engineering experience they gained while working in my research lab. Others have become Masters students under my supervision or in reputable US universities.

Research Associates (6). I supervised six research associates. They have worked on research oriented towards commercialization and funded through NSERC I2I programs. Their work was on big data, cloud computing, software engineering. Those who finished found highly qualified jobs in high tech companies.

	Supervised	Co-Supervised	Supervising	Co-supervising	Total
Postdoctoral	11				11
PhD	3	2	3		8
Masters	14	1	9	1	22
Undergraduate	15		3		15

Others (RA, Technicians, Visiting Students)	3		3		6
TOTAL	46	3	18	1	68

CURENT STUDENTS

Zakeya Namrud, Postdoctoral Fellow

Mohammadreza Rasolroveicy, Postdoctoral Fellow

Ghadeer Abuoda, Postdoctoral Fellow

Shaikh Quader, Ph.D., Computer Science, York University

Yar Rouf, Ph.D., Computer Science, York University

Farzin Zaker, Ph.D., Computer Science, York University

Komal Sarda, Ph.D., Computer Science, York University

Andrew Jaramillo, M.Sc, Computer Science, York University

Hoda Torabi, M.Sc, Computer Science, York University

Nazanin Akhtarian, M.Sc, Computer Science, York University

Harit Ahuja, MA, Information Technology, York University

Raphael Rouf, Information Technology, York University

Sara Fehresti, Information Technology, York University

Hamza Hussain, Information Technology, York University

CURRENT FULL TIME RESEARCH ASSOCIATES

Shabnam Nikfar, Program Manager for DITA CREATE (Sept 2018-to date)

Justin Le, Research Associate (May 2017-to date)

Paul Vytas, Senior Software Developer (Oct 2017-to date)

Yonis Abokar, Research Associate

SUMMER INTERNS

Raphael Rouf, May 2022

Ahnaf Baig, May 2022

PAST GRADUATE STUDENTS AND POSTOCTORAL FELLOWS

2020-2022	Kim Long Ngo, M.Sc, EECS, York University, **now Software Engineer with Scotiabank**
2020-2022	Alexandru Baluta, M.Sc, EECS, York University, **now with Amazon AWS**
2020-2022	Jaime Dantas, M.Sc, EECS, York University, **now Software Engineer with Rocket Fnancial**
2019-2021	Joydeep Mukherjee, Pos Doctoral Fellow, **now Assistant Professor, University of South California**
2019-2021	Sumona Mukhopadhyay, Posdoctoral Fellow, **now Assistant Professor, University of South California**
2019-2021	Mahima Chaudhary, M.Sc, Computer Science, **now Machine Learning Researcher at ClickPointCare**
2019-2021	Payal Goyal, MA, Information Technology, **now Senior Consultant at KPMG**
2017-2021	Adam Di Prospero, MA, Information Technology, **now IT specialist at York University**
2018-2021	Christianne Huber, MA, Information Technology
2014-2019	Nasim Beigi, Ph.D., EECS, York University**, now Postdoctoral Fellow, University of Toronto**
2017- 2018	Jeev Kiriella, Post Doctoral Fellow
2016-2018	Yar Rouf, MA, MAIST, Information Technology, York University**, now PhD student at York University**
2017-2017	Delcio Silva, PhD, Visiting Student, Brazil (2017)
2015-2017	Marios Fokaefs, Post Doctoral Fellow, **now Assistant Professor, Ecole Polytehnique de Montreal**
2015-2016	Hamzeh Khazaei, Post Doctoral Fellow, **now Assistant Professor, University of Alberta**
2015-2016	Cornel Barna, Post Doctoral Fellow, **now Assistant Professor, Seneca College**
2015-2016	Rodrigo Veleda, MAIST, Information Technology, York University, **now Researcher, Mount Sinai Hospital**
2014-2015	Saeed Zareian, MAIST, Information Technology, York University, **now Big Data Software Developer, Terapeak**
2009-2015	Cornel Barna, Ph.D., CSE, York University**, now Professor, Seneca College**
2009-2014	Hamoun Ghanbari, Ph.D., CSE, York University**, now Scientist with Amazon Inc.**
2012-2014	Mark Shtern, Post Doctoral Fellow, now **Professor**, **Seneca College, Toronto, Canada**

2013-2014   Roni Sandel, MAIST, Information Technology, York University, **now Consultant at IBM**

2012-2014   Parisa Zoghi, MAIST, Information Technology, York University, now **Business Analyst with TD Bank**

2013-2014   Rizwan Mian, Post Doctoral Fellow, **now Data Scientist with Hortonworks, Palo Alto, California, USA**

2013-2014   Hongbin Lu, M.Sc., Computer Science, York University, now **Software Engineer at Huawei**

2011-2013   Mike Smit, Post Doctoral Fellow, 2013, now **Assistant Professor, Dalhousie University**

2012-2013   Vasileios Theodorou, MAIST, Information Technology, York University, now **Ph.D. student**, **University of Barcelona**

2010-2013   Bradley Simmons, Post Doctoral Fellow, now **Scientist at Skytree® – The Machine Learning Company, Palo Alto**

2011-2012   Tao Zheng, Post Doctoral Fellow, 2012, now **Software Architect**

2011-2012   Ian Gergin, MAIST, Information Technology, York University, now **Associate Director**, **Royal Bank of Canada**

2009-2011   Ivan Makarenka, M.Sc., Computer Science, York University, now **Software Engineer**, **IBM**

2009-2010   Andrei Solomon, M.Sc., Computer Science, York University, now **Software Engineer, IBM**

PAST FULL TIME RESEARCH ASSOCIATES:

Sept 2016-April 2017, Vincent Chu, Research Associate, **now Master student, York University**

Jan 2015-Sept 2016   Justin Cuaresma, Research Associate, **now Software Engineer at Ultimate Software**

Jan 2015 -May 2016   Ethan Nguyen, Research Associate, **now Software Engineer at Loyalty One**

PAST SUMMER/UNDERGRADUATE INTERN STUDENTS

2021   Yonis Abokar, Computer Science, York University

2021   Raphael Rouf, IST, York University

2021   Ahnaf Baig, CSE, Ryerson University

2019   Andrew Marin, UTS High School, Toronto

2018   Mahima Chaudhary, MITACS Scholar, India

2018   Wenbo Yu, York University

2017   Nojan Norouzi, School of IT, York University

2017   Kris Vaz, B.Sc., Department of EECS, York University

2016   Yar Raouf, BA, School of IT, York University

2016   John Gherassimou, BA, School of IT, York University

2016   Nusayba Moftah, B.Sc., Department of EECS, York University

2016   Soo Jung Bae, B.Sc., Department of EECS, York University

2016   Bingyu Shen, B.Sc., Global link MITACS intern, China

2015   Xi Zhang, B.Sc., Global link MITACS intern, China

2015   Purwa Gaikwad, B.Sc., Global link MITACS intern, India

2015   Steven Khouli, BA, School of IT, York University

2014   Manish Garg, B.Sc., Globallink MITACS intern, Indian Institute of Technology, Patna, India

2013   Stefan Coltescu, Schulich School of Business, York University

2011   Roderick Bernardo, BA, School of IT, York University

2011   Saurabh Sabat, BA, School of IT, York University

2011   Luca Corrente, BAS, School of IT, York University

GRADUATE STUDENT EXAMINATION COMMITTEES SERVED

2022   External Examiner, *Mohhamadreza Rasolroveicy*, Ph.D., Polytechnic of Montreal, supervisor Marios Fokaefs

2022   External Examiner, *Gomez Rosero*, Ph.D., University of Western Ontario, supervisor Miriam Capretz

2022   External Examiner, *Karim Jahed*, Ph.D., Queen's University, supervisor Juergen Dingel

2022   External Examiner, *Premathas Somasekaram*, Ph.D., University of York, UK, supervisor, Radu Calinescu

2021   External Examiner, *Shamar Akio Ward*, Ph.D., University of West Indies, supervisor Michelle Gittens

2021   External Examiner, *Premathas Somasekaram*, Ph.D., University of York, UK, supervisor Radu Calinescu

2021 External Examiner, *Cristian Gadea* Ph.D., University of Ottawa, supervisor Dan Ionescu

2020 External Examiner, *Arnamoy Bhattacharyya*, Ph.D., University of Toronto, supervisor Cristiana Amza

2018 External Examiner, *Mbarka Soualhia*, Ph.D., Concordia University, supervisor Sofiene Tarhar

2018 External Examiner, *Joydeep Mukherjee*, Ph.D., University of Calgary, supervisor Diwakar Krishnamurthy

2017 Examination Committee Member, *Bita Bahimashemi,* PhD., CSE, York University, supervisor Yves Lesperance

2016 External Examiner, *Simos Gherasimou*, Ph.D., University of York, UK, supervisor Radu Calinescu

2016 Examination Committee Member, *Rostislav Kitsis,* M.Sc., CSE, York University

2015 Chair of the Examination Committee, *Fatema Alabdulkareem*, M.Sc., CSE, York University

2015 Chair of the Examination Committee, *Anzira Rahman*, Masters, MAIST, York University

2014 External Examiner, *Michael Tighe*, Ph.D., CS, Western University

2014 Chair of the Examination Committee, *Saideh Hamidi*, Masters, MAIST, York University

2014 Examination Committee Member, *Nastaran Shafiei*, Ph.D., CSE, York University

2013 External Examiner, *Young Yoon*, Ph.D., ECE, University of Toronto

2013 External Examiner, *Haroon Malik*, Ph.D., CS, Queen's University

2013 External Examiner, *Rizwan Mian*, Ph.D., CS, Queen's University

2012 Dissertation Committee Member, *Alessio Gambi*, Ph.D., University of Lugano

2011 Chair of the Examination Committee, *Rina Jalban*, MAIST, School of Information Technology, York University

2011 Dean Representative, *Haneen Dabain,* M.Sc., Department of Computer Science and Engineering, York University (Supervisor: Vassilios Tzerpos)

2010 External Examiner, *Halina Kaminsky*, Ph.D., Department of Computer Science, University of Western Ontario (Supervisor: Mark Perry)

2010 External Examiner, *Scott Brousseau*, M.Sc., Department of Computer Science, University of Victoria (Supervisor: Hausi Muller)

2010 External Examiner, *Brad Simmons*, Ph.D., Department of Computer Science, University of Western Ontario (Supervisor: Hanan Lutfiyya)

2009 Chair of the Committee, *Miao Wen*, M.Sc., Department of Computer Science and Engineering, York University (Supervisor: Jimmy Huang)

2009   Committee Member, *Vivian Hu*, M.Sc., Department of Computer Science and Engineering, York University (Supervisor: Jimmy Huang)

2009   Committee Member, *Mohamad Munawar*, Ph.D., Department of Electrical and Computer Engineering, University of Waterloo, (Supervisor: Paul Ward)

2008   External Examiner, *Alex Duran*, Ph.D., Department of Computer Science, Universitat Politechnica de Calalunya (Supervisor: Eduard Ayguade)

2007   External Examiner, *Qian Zhao*, Ph.D. Defense, Department of Computer Science, University of Western Ontario (Supervisor: Mark Perry)

2007   External Examiner, *Sangeeta Neti*, M.Sc., Department of Computer Science, University of Victoria (Supervisor: Hausi Muller)

2007   Committee Member, *Kevin Quan*, M.Sc., Department of Electrical and Computer Engineering, University of Waterloo, (Supervisor: Paul Ward)

2006   External Examiner, *Qufei Wang*, Ph.D., Department of Computer Science, University of Western Ontario (Supervisor: Hanan Lutfiyya)

2006   Committee Member, *Ahmad Munawar*, Ph.D., Department of Electrical and Computer Engineering, University of Waterloo, (Supervisor: Paul Ward)

2004   Committee Member, *Vijay Dheep*, M.Sc., Department of Electrical and Computer Engineering, University of Waterloo, (Supervisor: Paul Ward)

2003   Committee Member, *Faryaaz Kasam*, M.Sc., Department of Electrical and Computer Engineering, University of Waterloo, (Supervisor: Kostas Kontogiannis)

AWARDS RECEIVED BY GRADUATE STUDENTS

NSERC Alexander Graham Bell Canada Graduate Scholarships-Doctoral, Nasim Beigi Mohammadi (**M. Litoiu**), 2016

Best Paper Award, at *CASCON* , Marios Fokaefs et al. (**M. Litoiu**), 2016

Best Demo Award, ar *CASCON*, Marios Fokaefs et al. (**M. Litoiu**), 2016

Best Paper Award at ICST, Cornel Barna et. al (**M. Litoiu**), 2016

Eshrat Arjomandi Thesis Award, Cornel Barna (**M. Litoiu**), 2016

1st place at SAVI Smart Cities Camp, Rodrigo Valeda, Marios Fokaefs (**M. Litoiu**), 2015

1st place at Juniper-Telus Hakathon, Nasim Beigi Mohammadi, Cornel Barna (**M. Litoiu**), 2015

CSE Master's Thesis Prize, Hongbin Lu (**M. Litoiu**), 2015

Ontario Graduate Scholarships, Nasim Beigi Mohammadi (**M. Litoiu**), 2015

2nd Place Award at the Cloud Cup 2013 for "Pattern-Based Deployment Service (PDS)," *IEEE Cloud,* Hongbin Lu et al, 2013

3rd Place Award, at the Cloud Cup 2013, "DaaSPatcher," *IEEE Cloud,* Mike Smit et. al, 2013

3rd Place Award, at the Cloud Cup 2012, "CloudyMetrics," *IEEE Cloud,* Smit et. al, 2012

Ontario Graduate Scholarships, Hamoun Ghanbari (**M. Litoiu**), 2012

Ontario Graduate Scholarships, Ian Gergin (**M. Litoiu**), 2011

IBM CAS Fellowship Award, Nasimi Beigi (**M. Litoiu**), 2016

IBM CAS Fellowship Award, Cornel Barna (**M. Litoiu**), 2013

IBM CAS Fellowship Award, Hamoun Ghanbari (**M. Litoiu**), 2010

GRANTS (since joining York University, 2008)

i. Total grant awarded value: $16,394,465

ii. Details

2022-2023	NSERC Ideas to Innovation(I2I), "SEAML: A Machine Learning Model Lineage Platform (Phase Ia)," **$125,000**.
2022-2026	NSERC Alliance, "ML Adaptation Models for Cloud-native Applications," **$204,000**.
2022-2024	IBM CAS Fellowship, "Automated Anomaly Remediation for Cloud-native Applications," **$102,000**.
2021-2024	York University Program Catalyzing Interdisciplinary Research Clusters, "AI Systems, Engineering, Governance & Society" **$450,000**, PI
2020-2025	NSERC CRD, "Machine Learning based optimization for database workloads" **$340,000**, PI
2020-2025	ORF-RE "CyPreSS: Software Techniques for the Engineering of Cyber-Physical Systems" Ontario Research Fund-Research Excellence, Round 10, **$3,700,000 (co-applicant and co-PI)**
2019-2022	IBM CAS Fellowship, "Auto-scaler as a Service for Private/Public Cloud Deployments," **$104,000**, PI
2019-2022	IBM CAS Fellowship, "Machine Learning based optimization for database workloads," **$170,000**, PI
2018-2023	NSERC Discovery Grant "Software Engineering for Internet of Things Applications," **$205,000**, PI.
2018-2024	NSERC CREATE "Dependable Internet of Things Applications," **$1,650,000**, PI.
2018-2020	OCE/SOCIP Talent Edge, "An Economics-Aware Autonomic Management System for Big Data Applications," **$115,000**, PI.
2017-2018	NSERC Research Tools and Instruments (RTI), "Operations and Maintenance Support for Smart Applications and Virtual Infrastructure Testbed," **$150,000**, co-PI

2016-2019	NSERC CRD, "Multi goal self-adaptation for micro-service platforms," with IBM, **$272,000**, PI.
2016-2018	IBM CAS Fellowship Grant, "Multi goal driven micro-service platforms," **$90,000**, single PI.
2016-2017	NSERC Ideas to Innovation (I2I-B), "DaaSPatcher, A Secure Data Sharing Service," **$60,000,** single PI.
2015-2016	NSERC Ideas to Innovation (I2I), "DaaSPatcher, A Secure Data Sharing Service," **$125,000,** single PI.
2015-2020	Ontario Research Fund-Research Excellence, "Big Data Research, Analytics, and Information Network (BRAIN) Alliance," **$3,544, 220**, co-PI. (*PI Nick Cerkone*, York University).
2014-2019	NSERC CRD, "Intelligent computing - a platform for real time analytics," with Fuseforward Solutions Group, **$923,470**, PI (3 other co-PIs).
2014-2019	Fuseforward Inc. Grant, "Intelligent computing," **$450,000**, PI (with 3 other co-PIs).
2013-2017	NSERC Discovery Grant, "Adaptive Mechanisms for Large Scale Systems," **$125,000**, single PI.
2013	OCE Market Readiness, "CloudInsight Framework," **$25,000**, single PI
2013	MITACS and Juniper Accelerate Internship, "Software Defined Networks," **$15,000**, single PI
2012-2015	IBM CAS Fellowship Grant, "Cloud Enabled Web Services," **$108,000**, single PI.
2011-2016	NSERC Strategic Network Grant, "Smart Applications on Virtual Infrastructures (SAVI)," **$5,000,000**, with 10 other PIs. Leader of the "Extended Cloud" theme. (*Scientific Director Al –Leon Garcia*, University of Toronto).
2011-2016	Ontario Research Fund-Research Excellence, "Smart Infrastructures and Applications for Connected Vehicles and Transportation Systems," **$2,473,275**, with 3 other PIs. Leader of the "Cloud Computing" theme. (*lead PI: Al-Leon Garcia*, University of Toronto)
2011-2012	NSERC Engage Grant, "An IT Supply Chain Management Framework" **$25, 000**, single PI.
2011	Amazon AWS grant, "Cloud Optimization," **$7,500**, single PI.
2010-2013	NSERC CRD, "Model Predictive Provisioning for Cloud Computing," **$234,000**, single PI.
2009-2011	IBM CAS Fellowship Grant, "Management Services for Cloud Computing," **$108,000**, single PI.
2009-2011	IBM University Relationships Grant, "Real Time Monitoring and Simulation of Business Processes," **$45,000**, single PI.

2009-2012	Ontario Centers of Excellence Grant, "Desktop Virtualization," **$297,000**, single PI.
2008-2013	NSERC Discovery Grant, "Adaptive and Scalable Web Services," **$80,000**, single PI.
2008	IBM SUR grant," Ultra Large Scale Systems," **$170,000**, shared with 3 others.
2008-2011	York University start up grant, **$40,000**, single PI.

UNDERGRADUATE TEACHING

2021-2022

LS/EECS 4413 Building e-Commerce Systems

2020-2021

LS/EECS 4413 Building e-Commerce Systems

LS/EECS 4314 Advanced Software Engineering

2019-2020

LS/EECS 4413 Building e-Commerce Systems

2018-2019

LS/EECS 4413 Building e-Commerce Systems

2017-2018

LS/EECS 4413 Building e-Commerce Systems

2016-2017

LS/EECS 4413 Building e-Commerce Systems

2015-2016

LS/EECS 4413 Building e-Commerce Systems

2014-2015

ITEC 4010/5010 W, System Analysis and Design II

ITEC 4010F, System Analysis and Design II

2012-2013

ITEC 4010/5010 W, System Analysis and Design II

ITEC 4010/5010 F, System Analysis and Design II

2011-2012

ITEC 4010F,W, System Analysis and Design II

2010-2011

ITEC 4010F,W, System Analysis and Design II

ITEC 4020F,W, Internet Client Server Systems

2009-2010

ITEC 4010F,W, System Analysis and Design II

ITEC 4020F,W, Internet Client Server Systems

2008-2009

ITEC 4010, System Analysis and Design II (4th year course, ITEC, newly developed)

ITEC 4020, Internet Client Server Systems (4th year course, ITEC, newly developed)

GRADUATE TEACHING

2018-2019

GS/CSE 6434 Adaptive Software Systems

2016-2017

GS/ITEC 6130, Autonomic Service Oriented Computing, (graduate course, MAIST)

GS/ITEC 6330 Designing and Building E-Business Applications, (graduate course, MAIST)

GS/CSE 6434 Adaptive Software Systems (newly developed graduate course, CSE)

2015-2016

GS/ITEC 6130 Service Oriented Computing, (graduate course, MAIST)

GS/ITEC 6330 Designing and Building E-Business Applications, (graduate course, MAIST)

2014-2015

GS/ITEC 6130 Service Oriented Computing, (graduate course, MAIST)

GS/ITEC 6330 Designing and Building E-Business Applications, (graduate course, MAIST)

2012-2013

GS/ITEC 6130 Service Oriented Computing, (graduate course, MAIST)

GS/ITEC 6330 Designing and Building E-Business Applications, (graduate course, MAIST)

2011-2012

GS/ITEC 6130 Autonomic Service Oriented Computing, (graduate course, MAIST, newly developed)

2008-2009

GS/CSE 6002, Engineering Adaptive Systems (graduate course, Computer Science and Engineering, newly developed)

SERVICE TO YORK UNIVERSITY

Service to University

2020-	Member of Executive Committee, ORU IC@L.
2020-	Member of Executive Committee, CAIS ORU, Chair of the Markham Committee
2020-2021	Member of VP Research and Innovation Special Committee, SPORT. This committee adjudicate major grants at university level and advises VPR on major research decisions.
2012-2017	Member of the VP Research and Innovation Special Committee on Computing (Chair: Walter Tholen, Associate VPR). This committee advised the VPR on computing initiatives at York. Notable initiatives: provided input about York joininsg provincial and federal computing initiatives; I helped make the case for York to became member of the South Ontario Smart Computing for Innovation Platform (SOSCIP); provided input, on behalf of York, to Compute Ontario vision documents;

provided input for Compute Canada policy documents; reviewed and provided feedback for CI applications being prepared by York researchers.

2012-2015   Member of the Senate Honorary Degree Subcommittee (Chair: Stanley Tweyman): met regularly to discuss and recommend honorary degree recipients; reviewed applications submitted by Faculties, provided comments for these applications;

Service to Faculty

2021-to-date   Member of LAPS Major Awards Committee, MAC, (Chair: Ravi de Costa, ADR). The committee adjudicates major grant applications at Faculty level.

2017-2020   LAPS representative in MARS Talent Industry Advisory Board (Chair: Lekan Olawoye, MARS, lolawoye@marsdd.com). The advisory board is a group made up of leading companies, scaling ventures, academia, and government in the technology/innovation ecosystem in the GTA. The group had on-line discussions and web meetings. So far, we developed a public policy document: https://studioy.marsdd.com/wp-content/uploads/2018/01/Talent_Fuels_Tech_Report.pdf

2016-to date   Graduate Program Director, Master of Arts in Information and Systems Technology (LAPS Associate Dean Graduate Studies and Research: Sandra Withworth). Notable initiatives to increase the increase the quality and enrollment of MAIST program: Developed and submitted a new NSERC CREATE program proposal, "Dependable Internet of Things Applications," meant to create a certificate in IoT for the MAIST program. Initiated new MAIST specialization in Applied Artificial Intelligence and Cognitive Computing by creating the concept document and submitting it to VPA, currently under development. Initiated and guided the development of five new graduate courses in MAIST. Developed DLE for MAIST; Developed governance documents for MAIST; Created a new MAIST web presence.

2012-2014   Member of the Faculty of Graduate Studies Awards Committee (Chair: Jennifer S Mills). This committee met regularly, sometimes monthly, to evaluate the applications for graduate students awards. It involved reviewing a large number of files per meeting, approximately 30-40, ranking them, discussing them in the meeting and then re-ranking them.

Service to School and Department

2020-2021   Member of the FPC Committee for Hamzeh Khazaei, EECS, Lassonde Faculty of Engineering

2020-2021   Member of the FAC Committee for Manar Jamal, SIT, LAPS

2020-2021   Member of the FAC Committee for Emanuel Prince, SIT, LAPS

2017-2017   Member of the FPC Committee for Jack Ming, EECE, Lassonde Faculty of Engineering (Chair: Frank van Breugel). I was responsible with Professional Contributions and Standing portion of the file: select, contact, external referees, co-authors; collect and process the letters; prepare the report.

2017-to date   Member of the Industry Partnership Programs, EECS, Lassonde Faculty of Engineering (Chair: Bil Tzerpos). Industrial partnership is a new option for the Honours B.A. and Honours B.Sc. programs in computer science. Part of the education for students in this option (up to 24 credits) will be delivered through experiential learning at an industry partner's site. Participated in defining the program and drafting the proposal.

2017-2020   York Representative in MARS Talent Industry Advisory Board (Chair: Lekan Olawoye, MARS, lolawoye@marsdd.com). The advisory board is a group made up of leading companies, scaling ventures, academia, and government in the technology/innovation ecosystem in the GTA. The group had on-line discussions and web meetings. Created a public policy document: https://studioy.marsdd.com/wp-content/uploads/2018/01/Talent_Fuels_Tech_Report.pdf

2016-to date   Member of Strategic Committee (Chair: Sotirios Liaskos), Curriculum Committee (Chair: Sotirios Liaskos), Research and Teaching Committee (Chair: Sotirios Liaskos), Hiring Committee (Chair: Radu Campeanu), ITEC. Monthly meetings.

2009-to date   Member of the Graduate Executive Committee, MAIST, School of Information Technology (Chair: Zijiang Yang)

2011   Member of the T&P Committee, School of Information Technology

2009   Member of the Curriculum Committee, Atkinson Faculty

2009   Member of the T&P Committee, School of Information Technology

2008   Member of the Research Committee, Atkinson Faculty

Service to NSERC Canada

2011   Chair of NSERC Strategic Projects Committee, Information and Communication Technologies

2009-2011   Member of NSERC Strategic Projects Committee, Information and Communication Technologies

2008-2009   Member of NSERC Doctoral Prize Selection Committee, Information and Communication Technologies

2001-2004   Member, Research Management Council of Institute for Robotics and Intelligent Systems (IRIS)

2001-2004   Member of Canada's NSERC Grant Selection Committee, Computer and Information Sciences (GSC-330)

MOST IMPORTANT RESEARCH CONTRIBUTIONS (LAST 6 YEARS) AND EVIDENCE OF IMPACT

Synopsis

In the last six years, my research has made an impact on both industry and academia. In industry, my research has yielded five patents filed with industrial partners, technology transfer that has been incorporated into an industrial product, "IBM Smart Cloud Provisioning," and the creation of a start-up company, Bitnobi Inc. My research and my HQPs are in high demand in industry and many of the research outcomes are the result of collaboration with industrial partners. In academia, I am an internationally recognized leader in self-adaptive research for software engineering and the co-founder of Software Engineering for Adaptive and Self-Managing Systems (SEAMS) flagship conference. I have been the Chair of the Steering Committee of SEAMS (2014-2017), the General Chair (209, 2013) and PC Chair (2011). In the last six years, I co-authored 93 refereed publications. Most notably, the papers won: CASCON Best Paper Award (2016), ICST Best Paper Award (2016), CASCON Most Influential Paper Award (2015), 2nd and 3rd Places at the IEEE Service Cup (2013), 3rd Place at the IEEE Services Cup (2012). Since joining Academia, in 2008, my h-index has reached 32, with over 4900 citations.

The most important contributions to research in the last six years are highlighted below.

1.   **Software Engineering for Self-Adaptive Systems.**

My contributions in this emerging research area consist of design patterns and frameworks for self-adaptive systems, control theory based adaptive software and network aware adaptive systems. In "Designing Adaptive Applications Deployed on Cloud Environments" we present a systematic methodology for designing adaptive applications deployed in cloud environments. The proposed methodology consists of several phases that take high-level stakeholders' adaptation goals and transform them into lower-level MAPE-K loop control points. The MAPE-K loops are then activated at runtime using search-based algorithms. Our methodology includes the elicitation, ranking, and evaluation of control points, all meant to enable a runtime search-based adaptation. The *model-identification adaptive control* for software systems, developed initially for adaptive performance management, has been extended to adaptive testing and to denial of service attack mitigation and has been picked up by many researchers. As a recognized leader in the field, I have been invited to write or co-author chapters in several influential research books. This work has *resulted in three patents, filed with industrial partners, and has been integrated into "IBM Tivoli Intelligent Orchestrator" product*. It also contributed to two highly cited road map papers for self-adaptive systems (*over 2,000 Google citations* as of Oct 1, 2020).

2.   **Performance Modeling, Optimization and Testing.**

Contributions in this area consist of new methods for analysis and design of distributed software modules faced with multiple classes of users and many workload mixes and new runtime performance management frameworks. In "A Performance Evaluation Framework for Web Applications" we model the software system using a two-layer queuing model and use analytical techniques to find the workload mixes that change the bottlenecks in the system. This method has direct applications to performance testing. In "Autonomic Load-Testing Framework" we present a method that models the system under test, uses the model to find the software and hardware bottlenecks, and generate the workloads that saturate them. The model and workloads are determined during the performance test execution by measuring the system performance, fitting a performance model and by analytically computing the number and mix of users that will saturate the bottlenecks. Under non-asymptotic loads, worst-case metrics are computed using heuristic algorithms derived from exact asymptotic methods. This *work has resulted in a patent, a stand-alone product,*

Opera, and a **Best Paper Award** (2016) at *the International Conference on Software Testing*.

3.   Runtime self-tuning models and estimators.

We have developed and perfected new estimation/filtering techniques that, at runtime, *adapt* a software performance model. An estimator tracks the system at runtime by measuring a small number of performance metrics; by using modified control estimators, like Bayesian or particle filters, non-measureable or noisy parameters are estimated such that the model has an accurate representation of the system. In "Integrated Estimation and Tracking of Performance Model Parameters with Autoregressive Trends" we present an autoregressive model for trend prediction that is integrated with a parameter estimator, in a single Kalman Filter, using auxiliary states for the parameter evolution process. The paper describes how the trend model is constructed, and evaluates its effectiveness. This work has *resulted in a patent and contributed to a* highly cited road map paper *for self-adaptive systems* (*407 Google citations* in two years, as of May 1, 2017). The work in runtime model estimators was recognized with the **Most Influential Paper Award (CASCON 2015)**.

4.   Cloud and Big Data – Elasticity and Privacy.

In cloud computing, the contributions include models and controllers for elasticity, services and optimization algorithms for performance and cost, availability and privacy management.

4.1 Cloud Elasticity

In "Economics-Driven Resource Scalability on the Cloud," we recognize the business ecosystem of cloud computing as an economy of scale and explore the effect of this fact on decisions concerning scaling the infrastructure of web applications to account for fluctuations in demand. The goal is to reveal and formalize opportunities for economically optimal scaling decisions that take into account not only the cost of infrastructure, but also the revenue from service delivery and eventually the profit of the service provider. Being a recognized expert in the elasticity management, I have been invited to contribute a chapter for "Cloud Services, Networking and Management" book. A web service for the cloud metadata won the *3rd place in IEEE Services cup* 2012 and two other papers and services won **2nd and 3rd Places at the IEEE Service Cup (2013)**, the first place being awarded to Fujitsu Research. The work also won an industrial award *("IBM CAS Project of the Year)* and led to features in an *industrial product ("IBM Smart Cloud Provisioning")*.

4.2 Big Data Design and Privacy

In data intensive applications, the design of schema, the distribution of data on cloud VMs or containers, the size of the number of those VMs or containers are design choices of the software architect. The applicant developed the foundation for design and for data streaming and validated them on several application domains, including smart buildings and smart transportation. We contribute a data sharing and segmentation mechanism, with access control, anonymization and auto scaling. *The work led to two patents and a start-up company,* **Bitnobi Inc.**

The Nature of Collaborations with Other Researchers

I collaborate mainly with my Master and PhD students, Post-Doctoral Fellows and Research Associates. When publications are with students, their names appear first, ordered by seniority, with the most senior last. Second, I collaborate with industrial partners, namely IBM, CA, Juniper. I have a special collaboration history with IBM Centre for Advanced Studies(CAS), since it has been a model of collaboration industry-academia.

We just published a book "Collaboration and Innovation: Honouring 25 Years of IBM CAS and CASCON" that captures researcher and practitioner stories of how CAS/CASCON have impacted research, innovation, and technology exchange in Canada over the past 25 years. In 2017, IBM CAS received the IEEE CS TCSE Synergy Award for its collaboration model. The award acknowledges the above book as a chronicle of the lasting impact of CAS ecosystem. I also collaborate with world leaders in software engineering and adaptive systems. In general, we use Shonan and Dagstuhl seminars as collaboration places and the outcomes include books or joint papers that have been influential in our field. In this case, the authors appear in alphabetical order and the contribution is even.

The Nature of Conferences

Since my research is at the intersection of software engineering, adaptive systems, cloud and software management, I choose to publish in first tier topical conferences in these areas: software engineering (**ACM/IEEE ICSE**), adaptive systems (**ACM/IEEE SEAMS**), autonomic systems (**IEEE ICAC**), performance engineering (**IEEE ICPE**) system management (**IFIP/IEEE CNSM, IFIP/IEEE IM**), and cloud computing (**IEEE Cloud**). I also publish in top tier journals on the above topics, **IEEE Tr. on Cloud**, **IEEE Tr. on Distr. Systems**, **ACM Tr. On Autonomous and Adaptive Systems**.

I am a proponent of bringing people together in conferences to generate synergy. I am a cofounder of the ACM/IEEE International Symposium on Software Engineering for Self-Adaptive and Self-Managing Systems (SEAMS) and I will be the General Chair for SEAMS 2019. I co-initiated a new workshop, Models at Runtime & Networked Control for Cyber Physical Systems, Reston, VA, December, 2016, and NII Shonan Seminar on Software Engineering and Networked Control for Smart Cyber Physical Systems (SENCPS), Shonan, Japan, August 2017.

IMPACT ON SOFTWARE ENGIEERING PRACTICE

I believe in using industrial use cases and frameworks to validate my research at scale. I also consider that we have a responsibility to contribute to the economic cycle by helping companies innovate and generate jobs in Canada and therefore generating more research funds. By products of my research include open source software, open frameworks, patents and technology transfer. The impact is visible through

- **eight awarded patents** filed with IBM. Those patents have improved IBM software development tools, autonomic management platforms and IBM computing initiative.
- many awards recognizing the impact on IBM products and people such as:
  - **IBM Outstanding Technical Achievement Award**
  - **IBM Project of the Year Award**
  - **NSERC Synergy Award for Innovation, Leo Derikx Award (for CAS team and 12 partner universities)**
  - **IBM Faculty of the Year Award**

- The founding of a company, **Bitnobi Inc.** (http://bitnobi.com). Based on **technology transfer** and three patents created in Litoiu Lab., **Bitnobi** is a fast growing standalone company, with a flagship product, *bitnobi*, for data sharing and data access control. Bitnobi was awarded the "Top security innovators award" in 2019 and has the Department and National Defense and La Roche corporation among its customers.
- Leadership roles in industry and academic-industrial consortiums
  - Chair of the Board for Consortium for Software Engineering Research in Canada
  - Director of the Centre for Research in Adaptive Systems (CERAS)

PUBLICATIONS:

i.   Life-time Summary:
(in Information Technology and Computer Science fields, the main publication venues are conferences)

*Scholarly books (authored; edited): **18***

*Chapters in books: **16***

*Patents: **18** (7 published, 11 filed/awarded)*

*Papers in refereed journals: **27***

*Papers in refereed conference proceedings: **132***

*Major invited contributions and/or technical reports: **11***

*Other publications (posters, presentations, invited talks): **57***

iii.   Details: Research Contributions and Practical Applications

Articles in Refereed Journals

[1]   *S. Quader*, M. Papagelis, M. Litoiu, "LearnedWMP: Database Workload Memory Prediction Using Distribution of Query Templates, " VLDB Journal, 2022 (submitted)

[2]   D. Wayns, M. Litoiu et al., "Self-Adaptation in Industry, a Survey," *ACM Trans. On Auton. and Adapt. Syst.,* 2022 (submitted)

[3]   *F. Zaker,* **M. Litoiu**, *"Formally Verified Scalable Look Ahead Planning For Cloud Resource Management,"* *ACM Trans. On Auton. and Adapt. Syst.,* 2022 (impact factor 2.6)

[4]   *M. Chaudhari, S. Mukhopadhyay,* M. Adams, **M. Litoiu,** L. Sergio*,* "Sabotage Detection Using Deep Learning Models On EEG Data From a Cognitive-Motor Integration Task," *Frontiers in Human Neuroscience*, July 2021 (impact factor 3.2)

[5]   *A. Baluta, J. Mukherjee,* Z. M. Jiang, **M. Litoiu**, "Machine Learning based Interference Detection in Cloud-Native Applications,"Submitted to IEEE Transactions on Cloud Computing, 2021

[6]   *M. Chaudhari, S. Mukhopadhyay,* M. Adams, L. Sergio*, **M. Litoiu** "Transfer Learning and Experimental Evaluation with IoT Architecture for Real-Time Cognitive Load Classification Using Wearable EEG," *IEEE Internet of Things Journal*, under review, July 2021 (impact factor 12.3)

[7]   *K. L. Ngo, J. Mukherjee,* Z. M. Jiang, **M. Litoiu**, "Has Your FaaS Application Been Decommissioned Yet? - A Case Study on the Idle Timeout in Serverless Infrastructure," IEEE Software, under review, 2021

[8]   *H. Khazaei*, **M. Litoiu**. *"Performance Modeling for Microservice Platforms," IEEE Tr. on Cloud Computing, accepted,* 2020 (impact factor 4.7).

[9]   C Quinn, AZ Shabestari, T Misic, S Gilani, M Litoiu, JJ McArthur "Building automation system-BIM integration using a linked data structure" in *Automation in Construction* 118, 103257, 2020 (impact factor 1.83)

[10]   *N. Beigi,* M. Litoiu,"Run-time Network and Compute Management in Cloud Applications to Optimize Performance and Cost," IEEE Transaction on Network and Service Management, 2019 (impact factor 4.68).

[11]   N. Vlajic, M. Chowdhury, M. Litoiu, "IP Spoofing IN and OUT of the Public Cloud: From Policy to Practice," MDPI Computers, 2019 (impact factor 2.69)

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[249]   **M. Litoiu**, M. Shtern, B. Simmons, M. Smit, "Method and Apparatus for Precision Sharing of Segmented Big Data," filed, 2014; rights transferred to **Bitnobi** Inc.

[250]   **M. Litoiu**, M. Shtern, "Method and Apparatus for Privacy Protection in Big Data," filed, 2015; rights transferred to **Bitnobi** Inc.

[251]   **M. Litoiu**, M. Shtern, "Method and Apparatus for Access Auditing in Big Data," 2018; rights transferred to **Bitnobi** Inc.

[252]   *Y. Rouf*, **M. Litoiu**, J. Wiglessworth, R. Mateescu, "AI-Enabled Predictive Auto-Scaler as a Service for Hybrid Cloud Deployments," 2020; rights transferred to **IBM**.

[253]   *S. Qauder*, M**. Litoiu** et al., "Learning-based Workload Resource Prediction for Autonomous Database Management Systems," 2020; rights transferred to **IBM**.

[254]   *Y. Rouf*, J. Mukherjee, **M. Litoiu**, I. Watts, J. Wiglessworth, R. Mateescu, E. Postea" A Method and Apparatus for Quantifying the Impact of Container Deployments," 2021; file pending.

Disclosures-Published

[255] **M. Litoiu**, "Management of Generated Classes," published

[256] **M. Litoiu**, "System and Method for Balancing the Load," published

[257] **M. Litoiu**, "System and Method for Setting the Replication Levels for Software Entities," published

[258] **M. Litoiu**, "System and Method for Computing the Maximum Response Time of a Distributed Application," published

[259] **M. Litoiu**, B. Cornel, B. Simmons, "Multi-Model Adaptive Cloud Environment," published, 2012

[260] **M. Litoiu**, H. Ghanbari, B. Simmons, "Model Predictive Provisioning of Cloud Infrastructure," published, 2012

[261] I. Makarenka, **M. Litoiu**, "Improving Response Time of Roll Forward Recovery in Database Configurations," published, 2012.

[262] J.Ng (IBM), M. Litoiu, M. Smit, B. Simmons, Cornel Barna, "Method and Apparatus for Application Partitioning in Hybrid Clouds," subbitted in 2013.

[263] J. Ng (IBM), Iacob M.(IBM), Walid R.(IBM), M. Litoiu, "Method and Apparatus for Data Anonymization", submitted in 2013

Invited Talks and Presentations

[264] M. Litoiu, "Software Performance Engineering at Runtime", invited talk to Huawei virtual roundtable "Software Performance Engineering," Dec 8, 2021

[265] M. Litoiu, "Engineering Adaptive IoT Software," Keynote, The 3rd Workshop on Cyber-Physical Social Systems, Hakone, Japan, Dec 21-22, 2018

[266] **M. Litoiu,** "Analytics and Models for IoT, "Invited talk at *International Conference on Big Data and Information Analytics*, Toronto, Sept 18-22, 2017

[267] **M. Litoiu**, "SE for CPS: Feedback Control and Prediction," Invited talk at *NII Shonan Seminar on Software Engineering and Networked Control for Smart Cyber Physical Systems (SENCPS)*, Shonan, Japan, Aug. 2017

[268] **M. Litoiu**, "Control Theory Models for Cyber-Physical Systems," Invited talk at *NII Shonan Seminar on Software Engineering and Networked Control for Smart Cyber Physical Systems (SENCPS)*, Shonan, Japan, Aug. 2017

[269] Jen McArthur, **Marin Litoiu, "**Building Automation System Integration into a Cloud-based BIM-FM Model," Invited Talk at BRAIN Alliance Meeting, Toronto, Feb 2017

[270] **M. Litoiu**, "Smart Transportation - Distributing Data and Computation" Invited Talk at *Models at Runtime & Networked Control for Cyber Physical Systems,* Reston, VA, Dec 2016

[271] **M. Litoiu**, "On DoS Attack Mitigation- A Self-Adaptive System View," CASCON Workshop on Cyber-physical Systems Security, Toronto, Canada, November, 2016

[272] **M. Litoiu**, "Engineering Model Based Adaptive Software," Keynote, SEDE 2016, Denver, Colorado, USA, Sept. 2016

[273] **M. Litoiu**, "Model Based Adaptive Software in Cloud" Invited talk, University Politehnica of Bucharest, Bucharest, Nov. 2016

[274] **M. Litoiu**, "Smart Applications in Cloud," Invited Talk, Summer School, ICESI University, Cali, Colombia, July 2015

[275] **M. Litoiu**, "Big Data Analytics on SAVI Cloud," Invited Talk, SAVI Annual Meeting, Toronto, July 2015

[276] **M. Litoiu**, "Performance, Cost and Efficiency for Applications in Cloud," Invited Talk, IBM, Sept 2015

[277] **M. Litoiu**, *M. Fokaefs*, "Autoscaling Microservices in Cloud," CASCON Workshop on Cloud Computing, Toronto, Canada, November, 2015

[278] **M. Litoiu**, "Adaptive Cloud Applications, A Multi-Goal Perspective," Invited Talk, ICSME, Sept 2014

[279] **M. Litoiu**, *C. Barna*, "Application Efficiency in Cloud," CASCON Workshop on Cloud Computing, Toronto, Canada, November, 2014

[280] **M. Litoiu**, "Elasticity, A Multi-Goal Perspective," Invited Talk, IBM, May 2014

[281] **M. Litoiu**, *M.Smit, B. Simmons, M. Shtern,* "Managing Applications on Software Defined Infrastructures," CASCON Workshop on Cloud Computing, Toronto, Canada, November, 2013

[282] **M. Litoiu**, *M. Shtern*, "DDoS Mitigation on Software Defined Infrastructure," CASCON Workshop on Cloud Computing, Toronto, Canada, November, 2013

[283] **M. Litoiu**, "Resilient Feedback Loops for Non Functional Requirements," Invited Talk, *Dugstuhl Seminar*, Dugstuhl, Germany, December 2013

[284] **M. Litoiu**, "Enabling Adaptive Applications for Extended Clouds," Invited Talk, *Queen's University*, Kingston, Canada, October 2013

[285] **M. Litoiu**, "Application Partitioning for Hybrid Clouds," Invited Talk, *Shonan Meeting*, Japan, September 6-9, 2013

[286] **M. Litoiu**, "Enabling Enterprise Applications for Hybrid Clouds," Invited Talk, *IBM Toronto Lab*, July 2013

[287] **M. Litoiu**,, "Application Partitioning for Hybrid Clouds," Invited Talk, *IBM*, May 2013

[288] **M. Litoiu**, "Smart Applications on Cloud Infrastructure," Invited Talk, *IEEE MESOCA 2012*, La Guarda, Italy, Sept. 2012

[289] **M. Litoiu,** "Requirements for Distributed Clouds and Smart Applications," CASCON Workshop on Cloud Computing, Toronto, Canada, November, 2012

[290] **M. Litoiu,** *M. Smit*, "Partitioning for Applications on Two-tier Clouds," CASCON Workshop on Cloud Computing, Toronto, Canada, November, 2012

[291] **M. Litoiu,** "Extended Cloud Computing," CASCON Workshop on Cloud Computing, Toronto, Canada, November, 2011

Posters/demos

[292] *N. Beigi,* **M. Litoiu**, "A Machine Learning Based Application Autonomic Management System on Software Defined Networks," *International Conference on Software Engineering and Computer Scienc*e, Toronto, Ontario, Canada, Nov. 2017. *B. Ramprasad,*

[293] **M. Litoiu**, "A Scalable Architecture for IoT," *International Conference on Software Engineering and Computer Scienc*e, Toronto, Ontario, Canada, Nov. 2017.

[294] *A. de Prospero,* **M. Litoiu**, "Cognitive Agents with Bluemix," *International Conference on Software Engineering and Computer Scienc*e, Toronto, Ontario, Canada, Nov. 2017.

[295] *Y. Raouf,* **M. Litoiu**, "A Hierarchical and Dynamic Security Control System for Large Scale Systems," *International Conference on Software Engineering and Computer Scienc*e, Toronto, Ontario, Canada, Nov. 2017.

[296] **Marin Litoiu**, Mark Shtern, Hassan Jaferi, *Ethan Nguyen*, *Justin Cuaresma*, "Bitnobi - A Big Data Platform for Distributed Clouds," SAVI AGM, July 2016, Toronto, Canada

[297] *Marios Fokaefs, Cornel Barna, Rodrigo Veleda,* **Marin Litoiu,** "LEGIS on Scale with Docker Containers," SAVI AGM, July 2016, Toronto, Canada

[298] *Nasim Beigi-Mohammadi, Hamzeh Khazaei, Mark Shtern, Cornel Barna,* **Marin Litoiu**, "On Efficiency and Scalability of Software-Defined Infrastructure for Adaptive Applications," SAVI AGM, July 2016, Toronto, Canada

[299] *Hamzeh Khazaei, Rodrigo Veleda,* **Marin Litoiu**, "Real-time Detection and Identification of Events on Ontario Highways," SAVI AGM, July 2016, Toronto, Canada

[300] *Marios Fokaefs, Cornel Barna,* **Marin Litoiu**, "An Adaptive Pricing Model for Scalable Cloud Applications," SAVI AGM, July, 2016, Toronto, Canada

[301] *Hamzeh Khazaei, Cornel Barna, Nasim Beigi-Mohammadi* and **Marin Litoiu**, "Provisioning Performance of Cloud Microservices," SAVI AGM, July 2016, Toronto, Canada

[302] *Cornel Barna, Marios Fokaefs, Hamzeh Khazaei* and **Marin Litoiu**, "Hogna as a DevOps Framework for Containerized Cloud Applications," SAVI AGM, July 2016, Toronto, Canada

[303] *Nasim Beigi-Mohammadi, Hamzeh Khazaei, Mark Shtern, Cornel Barna*, **Marin Litoiu**, "Overload Management for Busy Multi-tier Web Applications Using Software Defined Networking," SAVI AGM, July 2016, Toronto, Canada

[304] *Nasim Beigi-Mohammadi, Cornel Barna, Hamzeh Khazei*, **Marin Litoiu**, "OpenFlow-enabled DDoS Attack Mitigation on Hybrid Cloud," SAVI AGM, July 2015, Toronto, Canada

[305] *Hamzeh Khazaei, Marios Fokaefs, Purwa Gaikwad*, **Marin Litoiu**, "Apache Spark on SAVI with OpenStack Sahara," SAVI AGM, July 2015, Toronto, Canada

[306] *Roni Sandel, Marios Fokaefs, Mark Shtern,* **Marin Litoiu**, "Evaluating Cluster Configurations for Big Data Processing: An Exploratory Study," SAVI AGM, July 2015, Toronto, Canada

[307] *Marios Fokaefs*, **Marin Litoiu**, "Engineering Economics of Everything-as-a-Service (XaaS)," SAVI AGM, July 2015, Toronto, Canada

[308] *Saeed Zareian, Rodrigo Veleda, Hamzeh Khazei*, **Marin Litoiu**, "K-Feed, A Data-Oriented Approach to Application Performance Management in Cloud," SAVI AGM, July 2015, Toronto, Canada

[309] *Justin Cuaresma, Ethan Nguyen, Mark Shtern*, **Marin Litoiu**, "Enabling an Enhanced Data-as-a-Service Ecosystem," SAVI AGM, July 2015, Toronto, Canada

[310] *Cornel Barna*, **Marin Litoiu**, "Hogna: A Platform for Developing Self-Adaptive Applications in Cloud," SAVI AGM, July 2015, Toronto, Canada

[311] *Hamoun Ghanbari, Przemyslaw Pawluk, Cornel Barna,* **Marin Litoiu**, "Optimal Service Replica Placement via Predictive Model Control," *SAVI AGM Workshop*, University of Toronto July 8th, 2014

[312] *Mark Shtern, Roni Sandel, Vasileios Theodorou*, **Marin Litoiu**, Chris Bachalo, "An Architecture for Mitigation Low and Slow Application DDoS Attacks," *SAVI AGM Workshop*, University of Toronto, July 8th, 2014

[313] *Cornel Barna, Mark Shtern, Hamoun Ghanbari, Michael Smit*, **Marin Litoiu**, "Model-driven Elasticity and DoS Attack Mitigation in Cloud Environments," *SAVI AGM Workshop*, University of Toronto, July 8th, 2014

[314] *Rizwan Mian, Mark Shtern, Saeed Zareian*, **Marin Litoiu**, "Cloud bursting for MapReduce jobs: A dream or a reality?" *SAVI AGM Workshop*, University of Toronto, July 8th, 2014

[315] *Saeed Zareian, Manish Garg, Mark Shtern, Rizwan Mian,* **Marin Litoiu**, "Crowd-sourcing Sensor Data," *SAVI AGM Workshop*, University of Toronto, July 8th, 2014

[316] *Cornel Barna, Mark Shtern*, **Marin Litoiu**, "Mitigation of Low and Slow Application DDoS Attacks with SDI," *SAVI AGM Workshop*, University of Toronto, July 8th, 2014

[317] *Hongbin Lu, Brad Simmons, Mike Smit, Mark Shtern*, **Marin Litoiu**- York University, "Pattern-based Deployment Service for Next Generation Clouds," Demo, *SAVI AGM, June 5-6, 2013*

[318] *Cornel Barna, Mark Shtern*, **Marin Litoiu**, "Towards SAVI Cloud-Aware Multi Class Adaptive Models," *SAVI AGM, June 5-6, 2013*

[319] *Mike Smit, Brad Simmons, Mark Shtern*, **Marin Litoiu**, "Supporting Application Development with Structured Queries in the Cloud," *SAVI AGM, June 5-6, 2013*

[320] *Hamoun Ghanbari, Brad Simmons*, **Marin Litoiu**, "Model Predictive Resource Management for Cloud," *SAVI AGM, June 5-6, 2013*

[321] *Brad Simmons, Mike Smit, Mark Shtern, Hongbin Lu*, **Marin Litoiu**, "Toward an Autonomic Systems Platform for SAVI Cloud, XCAMP," *SAVI AGM, June 5-6, 2013*

[322] *Mark Shtern, Brad Simmons, Mike Smit*, **Marin Litoiu**, "Enabling an Enhanced Data-as-a-Service Ecosystem," *SAVI AGM, June 5-6, 2013*

Grad Student Theses/Major Projects

[323] Jaime Dantas, "On Performance Tuning of Serverless Applications," Master Thesis, 2022

[324] Alexandru Baluta, "Machine Learning Interference Modelling for Cloud-native Applications," Master Thesis, 2021

[325] Kim Long Ng, " Performance Characteristics of Function as a Service Platforms," Master Thesis, 2021

[326] Mahima Chaudhari, "An Efficient Machine Learning Software Architecture for Internet of Things," Master Thesis, 2021

[327] Payal Goyal, "Privacy-Preserving Edge-Cloud Architecture for IoT Healthcare Systems," Master Thesis, 2021

[328] Adam Di Prospero, "Chatbots: A Framework for Multipurpose Development," Major Research Project, 2020

[329] Christine Huber, "PrivateMe: Managing Privacy in Multiple Applications and Devices" Master Thesis, 2020

[330] Nasim Beigi, "Engineering Self-adaptive Applications on Software Defined Infrastructure," PhD Thesis, 2018

[331] Cornel Barna, "Engineering Model Based Software Systems," Ph.D. Thesis, 2015

[332] Rodrigo Veleda, "Towards an Ontology-Based Approach for Reusing Non Functional Requirements Knowledge," Masters Thesis (2016), co-supervised

[333] Saeed Zareian, "Toward Autonomic Data-Oriented Scalability in Cloud Computing Environments," Masters Thesis, 2015

[334] *Ruoyu Gao*, "Deriving Models to Evaluate the Performance of Software Systems, Masters Project," York University, 2015

[335] *Boyuan Chen,* "Building an Evolutionary Extractor Capable of Conducting Fine-Grained Mining Software Repository (MSR) Studies," Masters Project, York University, 2015

[336] *Hamoun Ghanbari,* "Model-Based Dynamic Resource Management for Service Oriented Clouds," PhD Thesis, York University, 2014

[337] *Roni Sandel,* "An Approach to Designing Topologies for Large Data Processing," Masters Thesis, York University, 2014

[338] *Parisa Zoghi, "*A Methodology for Eliciting and Ranking Control Points for Adaptive Systems," Masters Thesis, York University, 2014

[339] *Hongbin Lu, "*Achieving Adaptation Through Live Virtual Machine Migration in Two-Tier Clouds," Masters Thesis, York University, 2014

[340] *Vasileios Theodorou, "*Adaptive Mechanisms for Mobile Spatio-Temporal Applications," Masters Thesis, York University, 2013

[341] *Ian Gergin, "*Controlling Performance and Cost of Clustered Applications in Large Shared Virtual Environments," Masters Thesis, York University, 2012

[342] *Ivan Makarenka,* "Improving Response Time of Roll Forward Recovery in Databases Configured with Tape Storage System," Major Research Project, York University, 2011

[343] *Andrei Solomon,* "Business Process Adaptation on a Tracked Simulation Model, Masters Thesis," York University, Dec. 2010

Undergraduate Student Projects

[344] Nojan Norouzi, MA, School of IT, York University, "Personality Modeling for Cognitive Agents," May-Aug 2017

[345] Yar Raouf, BA, School of IT, York University, "Queuing Models for Cloud Computing," May – August 2016

[346] John Gherassimou, BA, School of IT, York University, "Cassandra Scalability for Internet of Things Workloads," May – August 2016

[347] Nusayba Moftah, B.Sc., Department of EECS, York University, "DaaSPatcher: Improving Robustness," May – August 2016

[348] Bingyu Shen, B.Sc., Global link MITACS intern, China, "Deep Learning Models for Road Traffic Data," May – August 2016

[349] Xi Zhang, B.Sc., Global link MITACS intern, China, "A Performance Monitoring Framework for Big Data," May – August 2015

[350] Purwa Gaikwad, B.Sc., Global link MITACS intern, India, "Big Data Benchmarking," May – August 2015

[351] Steven Khouli, BA, School of IT, York University, "Business Models for Cloud," May – August 2015

[352] Manish Garg, B.Sc., Globallink MITACS intern, Indian Institute of Technology, Patna, India, "Connected Vehicles and Smart Transportation," May-August 2014

[353] Stefan Coltescu, Schulich School of Business, York University, "Business Models for Big Data," May-August 2013

[354] Roderick Bernardo, BA, School of IT, York University, "Performance Testing of Web Applications," Jan-May 2011

[355]   Saurabh Sabat, BA, School of IT, York University, "A Cost Model for Cloud Resources," Jan-May 2011

[356]   Luca Corrente, "Crowd Sourcing for Small Scale Projects," May-August 2010