Protected when completed

Dr. Marc Moreno Maza

Correspondence language: English
Sex: Male
Date of Birth: 5/28

Contact Information

The primary information is denoted by (*)

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Primary Affiliation (*)

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Dr. Marc Moreno Maza

Language Skills

Language	Read	Write	Speak	Understand	Peer Review
English	Yes	Yes	Yes	Yes	Yes
French	Yes	Yes	Yes	Yes	Yes
Spanish; Castilian	Yes	Yes	Yes	Yes	Yes

Degrees

Master's Thesis, Computer Science, Université de Paris VI (P & M Curie)

Master's Thesis, Mathematics, Université de Paris VI (P & M Curie)

Doctorate, PhD, Computer Science, Université de Paris VI (P & M Curie)

User Profile

Researcher Status: Researcher

Research Specialization Keywords: Computer algebra, parallel computing

Employment

2016/7
Full Professor
Computer Science, University of Western Ontario
Full-time, Professor
Tenure Status: Tenure

2008/7 - 2016/7
Associate Professor
Computer Science, University of Western Ontario
Full-time, Associate Professor
Tenure Status: Tenure

2002/7 - 2008/7
Assistant Professor
Computer Science, University of Western Ontario
Full-time, Assistant Professor
Tenure Status: Tenure Track

2001/9 - 2002/7
Maitre de conferences
Computer Science, Université de Lille I (Sci. & Tech.)
Full-time, Associate Professor
Tenure Status: Tenure

2000/9 - 2001/8
Maitre de conferences
Computer Science, Université de Lille I (Sci. & Tech.)
Full-time, Assistant Professor
Tenure Status: Tenure Track

1997/7 - 2000/8 Computational Mathematician
Symbolic Computation, The Numerical Algorithms Group Ltd
Full-time
Tenure Status: Non Tenure Track

Research Funding History

Awarded [n=19]

2018/4 - 2024/3 NSERC Discovery Grant, Grant, Operating
Project Description: Pushing the limits of computer algebra: From the integer resolution of polynomial systems to the computation of topological closures

Funding Sources:

2018/4 - 2024/3 Natural Sciences and Engineering Research Council of Canada (NSERC)
NSERC Discovery Grant
Total Funding - 246,000 (Canadian dollar)
Portion of Funding Received - 246,000 (Canadian dollar)
Funding Competitive?: Yes

2019/5 - 2020/4 IBM Center for Advanced Studies (CAS, Grant, Operating

Funding Sources:

IBM (CAS) Centre for Advances Studies
CAS
Total Funding - 24,000 (Canadian dollar)
Portion of Funding Received - 24,000 (Canadian dollar)
Funding Competitive?: Yes

2016/12 - 2019/11
Principal Investigator
NSERC – Collaborative Research and Development (CRD), Grant, Operating
Project Description: Comprehensive Optimization of Parametric Kernels for Graphics Processing Units

Funding Sources:

Natural Sciences and Engineering Research Council of Canada (NSERC)
NSERC CRD
Total Funding - 144,000
Portion of Funding Received - 48,000
Funding Competitive?: Yes

2018/5 - 2019/4
Principal Investigator
IBM Center for Advanced Studies (CAS), Grant, Operating

Funding Sources:

IBM (CAS) Centre for Advances Studies
CAS
Total Funding - 24,000 (Canadian dollar)
Portion of Funding Received - 24,000 (Canadian dollar)
Funding Competitive?: Yes

2017/5 - 2018/5
Principal Investigator
IBM Center for Advanced Studies (CAS), Grant, Operating

Funding Sources:

IBM (CAS) Centre for Advances Studies
CAS
Total Funding - 24,000
Portion of Funding Received - 24,000
Funding Competitive?: Yes

2013/4 - 2018/3
Principal Applicant

NSERC Discovery Grant, Grant, Operating
Clinical Research Project?: No
Project Description: Hardware Acceleration Technologies Enabling Polynomial System Solving

Funding Sources:

Natural Sciences and Engineering Research Council of Canada (NSERC)
NSERC Discovery Grant
Total Funding - 100,000
Portion of Funding Received - 100,000
Funding Competitive?: Yes

2016/6 - 2017/6
Principal Applicant

IBM Center for Advanced Studies (CAS), Grant, Operating

Funding Sources:

IBM (CAS) Centre for Advances Studies
CAS
Total Funding - 24,000
Portion of Funding Received - 24,000
Funding Competitive?: Yes

2015/6 - 2016/6
Principal Applicant

IBM Center for Advanced Studies (CAS), Grant, Operating

Funding Sources:

IBM (CAS) Centre for Advances Studies
CAS
Total Funding - 30,000
Portion of Funding Received - 30,000
Funding Competitive?: Yes

2015/7 - 2015/11
Principal Applicant

Chinese Academy of Science Fellowship, Fellowship

Funding Sources:

Chinese Academy of Sciences (The)
Fellowship
Total Funding - 26,400 (Canadian dollar)
Portion of Funding Received - 26,400 (Canadian dollar)
Funding Competitive?: Yes

2014/6 - 2015/6
Principal Applicant

IBM Center for Advanced Studies (CAS), Grant, Operating

Funding Sources:

IBM (CAS) Centre for Advances Studies
CAS
Total Funding - 26,000
Portion of Funding Received - 26,000
Funding Competitive?: Yes

2013/6 - 2014/6
Principal Applicant

MITACS Accelerate, Grant, Operating

Funding Sources:

Mathematics of Information Technology and Complex Systems (MITACS)
Accelerate
Total Funding - 102,000 (Canadian dollar)
Portion of Funding Received - 102,000 (Canadian dollar)
Funding Competitive?: Yes

2012/9 - 2013/4
Principal Applicant

MITACS Accelerate, Grant, Operating

Funding Sources:

Mathematics of Information Technology and Complex Systems (MITACS)
Accelerate
Total Funding - 25,000 (Canadian dollar)
Portion of Funding Received - 25,000 (Canadian dollar)
Funding Competitive?: Yes

2008/4 - 2013/3
Principal Applicant

NSERC Discovery, Grant, Operating
Project Description: High Performance Computer Algebra and Applications

Funding Sources:

Natural Sciences and Engineering Research Council of Canada (NSERC)
Discovery
Total Funding - 135,000 (Canadian dollar)
Portion of Funding Received - 135,000 (Canadian dollar)
Funding Competitive?: Yes

2010/11 - 2012/11
Principal Applicant

MITACS Elevate, Grant, Operating

Funding Sources:

Mathematics of Information Technology and Complex Systems (MITACS)
Elevate
Total Funding - 140,000
Portion of Funding Received - 140,000
Funding Competitive?: Yes

2011/5 - 2012/4
Principal Applicant

MITACS Elevate, Grant, Operating

Funding Sources:

Mathematics of Information Technology and Complex Systems (MITACS)
Elevate
Total Funding - 55,000
Portion of Funding Received - 55,000
Funding Competitive?: Yes

Co-investigator : I. Kotsireas

2011/5 - 2012/4
Principal Applicant

ADF Major grant, Grant, Operating

Funding Sources:

ADF
Major grant
Total Funding - 50,000
Portion of Funding Received - 50,000
Funding Competitive?: Yes

Co-investigator : P. Yu; R.M. Corless

2010/4 - 2011/3
Principal Applicant

NSERC RTI, Grant, Equipment

Funding Sources:

Natural Sciences and Engineering Research Council of Canada (NSERC)
RTI
Total Funding - 150,000
Portion of Funding Received - 150,000
Funding Competitive?: Yes

Co-investigator : E. Schost; R. E. Mercer

2009/4 - 2011/3
Co-investigator

MITACS Full Project, Grant, Operating
Project Description: Mathematics of Computer Algebra and Analysis (MOCAA)

Funding Sources:

Mathematics of Information Technology and Complex Systems (MITACS)
MITACS Full Project
Total Funding - 420,000 (Canadian dollar)
Portion of Funding Received - 12,500 (Canadian dollar)
Funding Competitive?: Yes

Principal Applicant : G.~Labahn

2009/1 - 2011/1
Principal Applicant

SHARCNET Graduate Fellowship, Fellowship

Funding Sources:

SHARCNET
Graduate Fellowship
Total Funding - 26,000
Portion of Funding Received - 26,000
Funding Competitive?: Yes

Completed [n=2]

2020/8 - 2020/11
Principal Investigator

MITACS Accelerate, Grant, Operating
Project Description: Algorithmic and Interface Advances in Computer Algebra Partner organization: Maplesoft Inc.

Funding Sources:

Mathematics of Information Technology and Complex Systems (MITACS)
MITACS Accelerate
Total Funding - 49,000 (Canadian dollar)
Portion of Funding Received - 49,000 (Canadian dollar)
Funding Competitive?: Yes

2019/5 - 2019/8
Principal Investigator

Maplesoft contract, Contract
Project Description: Advances in Computer Algebra

Funding Sources:

Waterloo Maple
Total Funding - 19,800 (Canadian dollar)
Portion of Funding Received - 1,900 (Canadian dollar)

Courses Taught

2021/05/01 - 2021/06/30
Instructor, Computer Science, University of Western Ontario
Course Title: CS 9646 - Algorithms for Multivariate Power Series and their application to Symbolic analysis
Course Code: CS9646
Course Topic: Computer Algebra
Course Level: Graduate
Academic Session: Summer
Lecture Hours Per Week: 3
Tutorial Hours Per Week: 0
Lab Hours Per Week: 0
Guest Lecture?: No

2020/09/01 - 2020/12/31
Instructor, Computer Science, University of Western Ontario
Course Title: CS 2214A: Discrete Structures for Computing
Course Code: CS2214
Course Topic: Discrete Mathematics
Course Level: Undergraduate
Academic Session: Fall
Lecture Hours Per Week: 3
Tutorial Hours Per Week: 1
Lab Hours Per Week: 0
Guest Lecture?: No

2020/01/01 - 2020/04/30
Instructor, Computer Science, University of Western Ontario
Course Title: CS 9867B - Algorithmic Properties of Polynomial Rings
Course Code: CS 9867
Course Topic: Computer Algebra
Course Level: Graduate
Academic Session: Winter
Lecture Hours Per Week: 3
Tutorial Hours Per Week: 0
Lab Hours Per Week: 0
Guest Lecture?: No

2019/09/01 - 2019/12/31
Instructor, Computer Science, University of Western Ontario
Course Title: CS 2214A: Discrete Structures for Computing
Course Code: CS2214
Course Topic: Discrete Mathematics
Course Level: Undergraduate
Academic Session: Fall
Lecture Hours Per Week: 3
Tutorial Hours Per Week: 1
Lab Hours Per Week: 0
Guest Lecture?: No

2019/09/01 - 2019/12/31
Instructor, Computer Science, University of Western Ontario
Course Title: CS 9635A and CS 4402A - Distributed and Parallel Systems
Course Code: CS9635 - CS4402
Course Topic: Parallel Computing
Course Level: Graduate
Academic Session: Fall
Lecture Hours Per Week: 3
Tutorial Hours Per Week: 0
Lab Hours Per Week: 0
Guest Lecture?: No

2019/01/01 - 2019/04/30
Instructor, Computer Science, University of Western Ontario
Course Title: CS 2214B: Discrete Structures for Computing
Course Code: CS2214
Course Topic: Discrete Mathematics
Course Level: Undergraduate
Academic Session: Winter
Lecture Hours Per Week: 3
Tutorial Hours Per Week: 1
Lab Hours Per Week: 0
Guest Lecture?: No

2018/01/01 - 2018/04/30
Instructor, Computer Science, University of Western Ontario
Course Title: CS 3350B - Computer Architecture
Course Code: CS3350
Course Topic: Computer Architecture
Course Level: Undergraduate
Academic Session: Winter
Lecture Hours Per Week: 3
Tutorial Hours Per Week: 0
Lab Hours Per Week: 0
Guest Lecture?: No

2018/01/01 - 2018/04/30
Instructor, Computer Science, University of Western Ontario
Course Title: CS 9635B and CS 4402B - Distributed and Parallel Systems
Course Code: CS9635 - CS4402
Course Topic: Parallel Computing
Course Level: Undergraduate
Academic Session: Winter
Lecture Hours Per Week: 3
Tutorial Hours Per Week: 0
Lab Hours Per Week: 0
Guest Lecture?: No

2017/09/01 - 2017/12/31
Instructor, Computer Science, University of Western Ontario
Course Title: CS 2209A: Applied Logic for Computer Science
Course Code: CS2209
Course Topic: Logic for computer science
Course Level: Undergraduate
Academic Session: Fall
Lecture Hours Per Week: 3
Tutorial Hours Per Week: 1
Lab Hours Per Week: 0
Guest Lecture?: No

2017/09/01 - 2017/12/31
Instructor, Computer Science, University of Western Ontario
Course Title: CS 9652A - Algorithms and software for symbolic solvers of polynomial systems
Course Code: CS9652
Course Topic: Computer Algebra
Course Level: Graduate
Academic Session: Fall
Lecture Hours Per Week: 3
Tutorial Hours Per Week: 0
Lab Hours Per Week: 0
Guest Lecture?: No

2017/01/01 - 2017/04/30
Instructor, Computer Science, University of Western Ontario
Course Title: CS 3350B - Computer Architecture
Course Code: CS3350
Course Topic: Computer Architecture
Course Level: Undergraduate
Academic Session: Winter
Lecture Hours Per Week: 3
Tutorial Hours Per Week: 0
Lab Hours Per Week: 0
Guest Lecture?: No

2017/01/01 - 2017/04/30
Instructor, Computer Science, University of Western Ontario
Course Title: CS 9535B and CS 4402B - Distributed and Parallel Systems
Course Code: CS9635 - CS4402
Course Topic: Parallel Computing
Course Level: Graduate
Academic Session: Winter
Lecture Hours Per Week: 3
Tutorial Hours Per Week: 0
Lab Hours Per Week: 0
Guest Lecture?: No

2015/01/01 - 2015/04/30
Instructor, Computer Science, University of Western Ontario
Course Title: CS 3350B - Computer Architecture
Course Code: CS3350
Course Topic: Computer Architecture
Course Level: Undergraduate
Academic Session: Winter
Lecture Hours Per Week: 3
Tutorial Hours Per Week: 0
Lab Hours Per Week: 0
Guest Lecture?: No

2015/01/01 - 2015/04/30
Instructor, Computer Science, University of Western Ontario
Course Title: CS 9535B and CS 4402B - Distributed and Parallel Systems
Course Code: CS9635 - CS4402
Course Topic: Parallel Computing
Course Level: Graduate
Academic Session: Winter
Lecture Hours Per Week: 3
Tutorial Hours Per Week: 0
Lab Hours Per Week: 0
Guest Lecture?: No

2015/01/01 - 2015/04/30
Instructor, Computer Science, University of Western Ontario
Course Title: CS 3101B - Theory and Practice of High-performance Computing
Course Code: CS3101
Course Topic: Parallel Computing
Course Level: Undergraduate
Academic Session: Winter
Lecture Hours Per Week: 3
Tutorial Hours Per Week: 1
Lab Hours Per Week: 0
Guest Lecture?: No

2014/09/01 - 2014/12/31
Instructor, Computer Science, University of Western Ontario
Course Title: CS 2101A - Foundations of Programming for High Performance Computing
Course Code: CS2101
Course Topic: Parallel Computing
Course Level: Undergraduate
Academic Session: Fall
Lecture Hours Per Week: 3
Tutorial Hours Per Week: 1
Lab Hours Per Week: 1
Guest Lecture?: No

2014/01/01 - 2014/04/30
Instructor, Computer Science, University of Western Ontario
Course Title: CS 3101B - Theory of High-performance Computing
Course Code: CS3101
Course Topic: Parallel Computing
Course Level: Undergraduate
Academic Session: Winter
Lecture Hours Per Week: 3
Tutorial Hours Per Week: 1
Lab Hours Per Week: 0
Guest Lecture?: No

2014/01/01 - 2014/04/30
Instructor, Computer Science, University of Western Ontario
Course Title: CS 9535 and CS 4402B - Distributed and Parallel Systems
Course Code: CS9635 - CS4402
Course Topic: Parallel Computing
Course Level: Graduate
Academic Session: Winter
Lecture Hours Per Week: 3
Tutorial Hours Per Week: 0
Lab Hours Per Week: 0
Guest Lecture?: No

2013/09/01 - 2013/12/31
Instructor, Computer Science, University of Western Ontario
Course Title: CS 2101A - Foundations of Programming for High Performance Computing
Course Code: CS2101
Course Topic: Parallel Computing
Course Level: Undergraduate
Academic Session: Fall
Lecture Hours Per Week: 3
Tutorial Hours Per Week: 1
Lab Hours Per Week: 1
Guest Lecture?: No

2013/01/01 - 2013/04/30
Instructor, Computer Science, University of Western Ontario
Course Title: CS 3101B - Theory of High-performance Computing
Course Code: CS3101
Course Topic: Parallel Computing
Course Level: Undergraduate
Academic Session: Winter
Lecture Hours Per Week: 3
Tutorial Hours Per Week: 1
Lab Hours Per Week: 0
Guest Lecture?: No

2013/01/01 - 2013/04/30
Instructor, Computer Science, University of Western Ontario
Course Title: CS 9535 and CS 4402B - Distributed and Parallel Systems
Course Code: CS9635 - CS4402
Course Topic: Parallel Computing
Course Level: Graduate
Academic Session: Winter
Lecture Hours Per Week: 3
Tutorial Hours Per Week: 0
Lab Hours Per Week: 0
Guest Lecture?: No

2012/09/01 - 2012/12/31
Instructor, Computer Science, University of Western Ontario
Course Title: CS 2101A - Foundations of Programming for High Performance Computing
Course Code: CS2101
Course Topic: Parallel Computing
Course Level: Undergraduate
Academic Session: Fall
Lecture Hours Per Week: 3
Tutorial Hours Per Week: 1
Lab Hours Per Week: 1
Guest Lecture?: No

2012/01/02 - 2012/04/30
Instructor, Computer Science, University of Western Ontario
Course Title: CS 9535 and CS 4402B- Distributed and Parallel Systems
Course Code: CS9635 - CS4402
Course Topic: Parallel Computing
Course Level: Graduate
Academic Session: Winter
Lecture Hours Per Week: 3
Tutorial Hours Per Week: 0
Lab Hours Per Week: 0
Guest Lecture?: No

2012/01/01 - 2012/04/30
Instructor, Computer Science, University of Western Ontario
Course Title: CS 2101B - Foundations of Programming for High Performance Computing
Course Code: CS2101
Course Topic: Parallel Computing
Course Level: Undergraduate
Academic Session: Winter
Lecture Hours Per Week: 3
Tutorial Hours Per Week: 1
Lab Hours Per Week: 1
Guest Lecture?: No

Student/Postdoctoral Supervision

Master's non-Thesis [n=2]

2016/9 - 2017/12
Principal Supervisor

Haoze Yuan (Completed) , University of Western Ontarioo
Degree Name: PhD
Specialization: Computer Science
Student Degree Received Date: 2017/12
Thesis/Project Title: Multithreaded algorithms for integer programming on graphics processing units
Present Position: Graduate Student, University of Western Ontarioo

2016/9 - 2017/12
Principal Supervisor

Yiming Guan (Completed) , The University of Western Ontario
Student Degree Received Date: 2017/12
Thesis/Project Title: Cache-oblivious algorithm for Fourier-Motzkin elimination
Present Position: Software Engineer, Mycionics Inc., Canada

Master's Thesis [n=18]

2020/9 - 2021/12
Principal Supervisor

Juan-Pablo Gonzalez Trochez (In Progress) , The University of Western Ontario
Degree Name: MSc
Specialization: Computer Science
Student Degree Start Date: 2020/9
Student Degree Expected Date: 2021/12
Thesis/Project Title: Modular Methods for Computing the Intersection of a Hyper-Surface and the Quasi-Component of a RegularChain
Present Position: Graduate student, University of Western Ontarioo

2020/9 - 2021/12
Principal Supervisor

Ryan Sandford (In Progress) , The University of Western Ontario
Degree Name: MSc
Specialization: Computer Science
Student Degree Start Date: 2020/9
Student Degree Expected Date: 2021/12
Thesis/Project Title: Computing Intersection Multiplicities
Present Position: Graduate student, University of Western Ontarioo

2019/9 - 2021/8
Principal Supervisor

Peter Valovcik (In Progress) , The University of Western Ontario
Degree Name: MSc
Specialization: Computer Science
Student Degree Start Date: 2019/9
Student Degree Expected Date: 2021/8
Thesis/Project Title: Multithreaded Algorithms for Rational Function Arithmetic
Present Position: Graduate student, University of Western Ontarioo

2018/9 - 2020/8
Principal Supervisor

Mahsa Kazemi (Completed) , The University of Western Ontario
Student Degree Start Date: 2017/9
Student Degree Received Date: 2020/8
Thesis/Project Title: An Implementation of Power Series in the BPAS Lib
Present Position: Full-Stack Software Developer, Bell Canada

2017/9 - 2018/8 Principal Supervisor	Alexander Brandt (Completed) , University of Western Ontarioo Degree Name: PhD Specialization: Computer Science Student Degree Received Date: 2018/8 Thesis/Project Title: High Performance Sparse Multivariate Polynomials: Fundamental Data Structures and Algorithms Present Position: Graduate student, University of Western Ontarioo
2017/9 - 2020/12 Principal Supervisor	Amha Tsegaye (Completed) , University of Western Ontarioo Student Degree Received Date: 2020/12 Thesis/Project Title: Applying Front End Compiler Process to Parse Polynomials in Parallel Present Position: Logistician, Walmart
2017/9 - 2020/8 Principal Supervisor	Colin Costello (Completed) , University of Western Ontarioo Student Degree Received Date: 2020/8 Thesis/Project Title: A Generic Implementation of Fast Fourier Transforms for the BPAS Library Present Position: Software Developer
2017/9 - 2018/12 Principal Supervisor	Delaram TalaAshrafi (In Progress) , University of Western Ontarioo Degree Name: PhD Specialization: Computer Science Student Degree Expected Date: 2018/12 Thesis/Project Title: Complexity Results for Fourier-Motzkin Elimination Present Position: Graduate student, University of Western Ontarioo
2016/9 - 2018/4 Principal Supervisor	Linxiao Wang (Completed) , University of Western Ontarioo Degree Name: PhD Specialization: Computer Science Student Degree Received Date: 2018/4 Thesis/Project Title: Putting Fürer's Algorithm into Practice with the BPAS Library Present Position: Graduate student, University of Western Ontarioo
2016/9 - 2017/12 Principal Supervisor	Masoud Ataei (Completed) , The University of Western Ontario Student Degree Received Date: 2017/12 Thesis/Project Title: On the Extended Hensel Construction and its Application to the Computation of Real Limit Points Present Position: Software Engineer, IBM Canada
2015/9 - 2016/12 Co-Supervisor	Davood Mohajerani (Completed) , The University of Western Ontario Thesis/Project Title: Big prime field FFT on the GPU Present Position: Software Developer
2014/9 - 2015/9 Principal Supervisor	Li Zhang (Completed) , Western University Student Degree Received Date: 2015/9 Thesis/Project Title: Implementation techniques for the truncated Fourier transform Present Position: Software Engineer, IBM Canada
2013/1 - 2014/4 Principal Supervisor	Farnam Mansouri (Completed) , Western University Thesis/Project Title: On the parallelization of integer polynomial multiplication Present Position: Software Development Engineer, Microsoft, Redmond, USA
2012/9 - 2013/12 Principal Supervisor	Sushek Shekar (Completed) , Western University Thesis/Project Title: On the Interoperability of Programming Languages based on the Fork-Join Parallelism Model Present Position: Embedded Software Designer, Cisco, Canada

2012/9 - 2014/8 Co-Supervisor	Svyatoslav Covanov (Completed) , Ecole Polytechnique (France) and Western University Thesis/Project Title: Putting Furer's Algorithm into Practice Present Position: PhD Candidate, Lorraine Research Laboratory in Computer Science and its Applications (LORIA), France
2010/9 - 2011/12 Principal Supervisor	Md Mohsin Ali (Completed) , Western University Thesis/Project Title: On the Factor Refinement Principle and it's Implementation on Multicore Architectures Present Position: Staff Scientist, National Computational Infrastructure, The Australian National University
2010/9 - 2012/4 Principal Supervisor	Zunaid Haque (Completed) , Western University Thesis/Project Title: Multi-threaded real root isolation on multi-core architectures Present Position: QA Analyst, Manulife, Toronto, ON
2008/9 - 2010/8 Principal Supervisor	Liyun Li (Completed) , Western University Thesis/Project Title: Efficient Evaluation of Large Polynomials Present Position: Full Stack Web Developer, OANDA, San Francisco, California

Doctorate [n=19]

2020/9 - 2024/8 Principal Supervisor	Haoze Yuan (In Progress) , The University of Western Ontario Degree Name: PhD Specialization: Computer Science Student Degree Start Date: 2020/9 Student Degree Expected Date: 2024/8 Thesis/Project Title: Data Reshaping in Algebraic Computations Present Position: Graduate student, University of Western Ontarioo
2019/1 - 2022/12 Principal Supervisor	Delaram TalaAshrafi (In Progress) , The University of Western Ontario Degree Name: PhD Specialization: Computer Science Student Degree Start Date: 2018/1 Student Degree Expected Date: 2022/12 Thesis/Project Title: Automatic Generation of Pipelined Code in Symbolic Computation Present Position: Graduate student, University of Western Ontarioo
2018/9 - 2022/8 Principal Supervisor	Alexander Brandt (In Progress) , The University of Western Ontario Degree Name: PhD Student Degree Start Date: 2018/9 Student Degree Expected Date: 2022/8 Thesis/Project Title: The Design & Implementation of an Open-Source High-Performance Polynomial System Solver Present Position: Graduate student, University of Western Ontarioo
2017/9 - 2021/8 Principal Supervisor	Mehdi Samadieh (In Progress) , University of Western Ontarioo Student Degree Expected Date: 2021/8 Thesis/Project Title: A quadratic lifting scheme for the extended Hensel construction Present Position: PhD graduate student, University of Western Ontarioo
2017/9 - 2021/8 Principal Supervisor	Mohammadali Asadi (In Progress) , University of Western Ontarioo Student Degree Expected Date: 2021/8 Thesis/Project Title: Computing topological closures in higher dimension Present Position: PhD graduate student, University of Western Ontarioo

2017/5 - 2022/4 Principal Supervisor	Lin-Xiao Wang (In Progress) , The University of Western Ontario Degree Name: PhD Specialization: Computer Science Student Degree Start Date: 2017/5 Student Degree Expected Date: 2022/4 Thesis/Project Title: On the Periodicity of Integer Convex Hulls of Parametric Polyhedral Sets Present Position: Graduate student, University of Western Ontarioo
2017/1 - 2021/3 Principal Supervisor	Davood Mohajerani (Completed) , The University of Western Ontario Student Degree Received Date: 2021/3 Thesis/Project Title: Arbitrary precision arithmetic on the GPU Present Position: Software Developer
2016/9 - 2017/12 Co-Supervisor	Rui-Juan Jing (Completed) , Chinese Academy of Sciences & University of Western Ontario Student Degree Received Date: 2017/12 Thesis/Project Title: Computing Integer Points of Polyhedral Sets Present Position: Assistant Professor, Jiangsu University , China
2016/1 - 2017/10 Co-Supervisor	Egor Chesakov (Withdrawn) , The University of Western Ontario Thesis/Project Title: Vascular Tree Structure: Fast Curvature Regularization and Validation Present Position: research engineer, Microsoft, Redmond, USA
2015/9 - 2017/12 Academic Advisor	Mahsa Kazemi (Completed) , Ispahan University of Technology & University of Western Ontario Student Degree Start Date: 2017/12 Thesis/Project Title: Theory and implementation for local bifurcations analysis of smooth maps Present Position: Full-Stack Software Developer, Bell Canada
2014/9 - 2019/4 Co-Supervisor	Steven Thorton (Completed) , The University of Western Ontario Student Degree Received Date: 2019/4 Thesis/Project Title: Algorithms for Bohemian Matrices Present Position: Data Scientist, RN Financial Corporation
2013/9 - 2018/1 Co-Supervisor	Robert H. C. Moir (Completed) , University of Western Ontarioo Student Degree Received Date: 2018/1 Thesis/Project Title: Feasible Computation in Symbolic and Numeric Integration Present Position: Applied Mathematician and Philosopher of Science
2012/9 - 2017/3 Principal Supervisor	Xiaohui Chen (Completed) , Western University Student Degree Received Date: 2017/3 Thesis/Project Title: MetaFork: A Compilation framework for concurrency models targeting hardware accelerators Present Position: Senior Software Engineer, Huawei, China
2012/9 - 2016/11 Principal Supervisor	Ning Xie (Completed) , Western University Thesis/Project Title: Towards Comprehensive Parametric Code Generation Targeting Graphics Processing Units in Support of Scientific Computation Present Position: Compiler Software Engineer, Cerebras Systems, Toronto, Canada
2012/5 - 2017/5 Principal Supervisor	Parisa Alvandi (Completed) , Western University Thesis/Project Title: Computing Limit Points of Quasi-components of Regular Chains and its Applications Present Position: Researcher, Pixyz Software, Montreal, Canada

2009/9 - 2014/12 Co-Supervisor	Paul Vrbik (Completed) , Western University Student Degree Received Date: 2014/12 Thesis/Project Title: Computing Intersection Multiplicity via Triangular Decomposition Present Position: Assistant Professor, University of Toronto at Mississauga
2009/1 - 2013/11 Principal Supervisor	Sardar Anisul Haque (Completed) , Western University Thesis/Project Title: Hardware Acceleration Technologies in Computer Algebra: Challenges and Impact. Present Position: Assistant Professor, Alcorn State University
2007/9 - 2011/8 Principal Supervisor	Changbo Chen (Completed) , Western University Thesis/Project Title: Solving Polynomial Systems via Triangular Decomposition Present Position: Associate Professor, Chongqing Institute of Green and Intelligent Technology, Chinese Academy of Sciences
2006/9 - 2011/1 Principal Supervisor	Wei Pan (Completed) , Western University Thesis/Project Title: Algorithmic Contributions to the Theory of Regular Chains Present Position: Senior Compiler Engineer, NVIDIA, Santa Clara, California

Post-doctorate [n=8]

2018/3 - 2019/8 Principal Supervisor	Rui-Juan Jing (Completed) , The University of Western Ontario Thesis/Project Title: Computing the Integer Points of a Parametric Polyhedron Present Position: Assistant Professor, Jiangsu University , China
2018/1 - 2019/12 Principal Supervisor	Robert H. C. Moir (Completed) , The University of Western Ontario Thesis/Project Title: Triangular Decomposition of Polynomial Systems with the BPAS library Present Position: Applied Mathematician and Philosopher of Science
2017/5 - 2017/8 Principal Supervisor	Parisa Alvandi (Completed) , University of Western Ontarioo Thesis/Project Title: Implementation of Regular chains in the Basic Polynomial Algebra Subprograms Present Position: Researcher, Pixyz Software, Montreal, Canada
2014/3 - 2015/2 Principal Supervisor	Liangyu Chen (Completed) , The University of Western Ontario Thesis/Project Title: Resultant computation on the GPU Present Position: Assistant Professor, East China Normal University, China
2014/3 - 2014/7 Principal Supervisor	Yi Li (Completed) , The University of Western Ontario Thesis/Project Title: Linear Programming over Rational Functional Fields Present Position: Researcher, Chongqing Institute of Green and Intelligent Technology, Chinese Academy of Sciences
2011/9 - 2013/12 Principal Supervisor	Changbo Chen (Completed) , The University of Western Ontario Thesis/Project Title: Computer Algebra and High-Performance Computing Support for Model Predictive Control Present Position: Associate Professor, Chongqing Institute of Green and Intelligent Technology, Chinese Academy of Sciences
2011/5 - 2012/1 Co-Supervisor	Yuzhen Xie (Completed) , The University of Western Ontario Thesis/Project Title: Cache-oblivious and adaptive algorithms in symbolic computation Present Position: Data Scientist II, TD Bank, London, Canada
2009/9 - 2012/12 Principal Supervisor	Rong Xiao (Completed) , The University of Western Ontario Thesis/Project Title: High Performance Real Solving Tools in Support of Industrial Applications Present Position: Senior Software Engineer, Amazon Web Services, Mississauga, Ontario, Canada

Publications

Journal Articles

1. Parisa Alvandi*, Masoud Ataei*, Mahsa Kazemi* and Marc Moreno Maza. (2020). On the Extended Hensel Construction and its application to the computation of real limit points. J. Symb. Comput.98: 120--162.
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4. Rui-Juan Jing* and Marc Moreno Maza. (2018). Computing the integer points of a polyhedron. ACM Commun. Comput. Algebra. 52(4): 126--129.
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5. Sardar Anisul Haque*, X. Li*, Farnam Mansouri*, Marc Moreno Maza, Davood Mohajerani*, Wei Pan. (2017). CUMODP: a CUDA library for modular polynomial computation. ACM Commun. Comput. Algebra. 51(3): 89--91.
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Published, ACM,
Refereed?: Yes

3. Marc Moreno Maza and Stephen M. Watt. (2007). Proceedings of Parallel Symbolic Computation, {PASCO} 2007, International Workshop. , ACM,
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1. Alexander Brandt*, Davood Mohajerani*, Marc Moreno-Maza, Jeeva Paudel, Lin-Xiao Wang*. (2019). KLARAPTOR: A Tool for Dynamically Finding Optimal Kernel Launch Parameters Targeting CUDA Programs. 10. Computing Research Repository (CoRR).

2. Alexander Brandt, Davood Mohajerani*, Marc Moreno-Maza, Jeeva Paudel and Lin-Xiao Wang*. (2019). A Technique for Finding Optimal Program Launch Parameters Targeting Manycore Accelerators. 11. Computing Research Repository (CoRR).

3. Mohammadali Asadi*, Alexander Brandt*, Robert H. C. Moir* Marc Moreno Maza and Yuzhen Xie. (2019). On the Parallelization of Triangular Decomposition of Polynomial Systems. 10. Computing Research Repository (CoRR).

4. Rui{-}Juan Jing*, Marc Moreno Maza and Delaram Talaashrafi*. (2018). Complexity Estimates for Fourier-Motzkin Elimination. 34. Computing Research Repository (CoRR).

5. Xiaohui Chen*, Marc Moreno Maza and Jeeva Paudel and Ning Xie*. (2018). Comprehensive Optimization of Parametric Kernels for Graphics Processing Units. 17. Computing Research Repository (CoRR).

6. Sviatoslav Covanov*, Davood Mohajerani*, Marc Moreno-Maza and Lin-Xiao Wang*. (2018). Putting Furer Algorithm into Practice with the BPAS Library. 54. Computing Research Repository (CoRR).

7. Xiaohui Chen*, Marc Moreno Maza, Jeeva Paudel, Ning Xie*. (2017). Comprehensive optimization of parametric kernels for graphics processing units. 10. University of Western Ontario

8. Robert M. Corless, Robert H. C. Moir*, Marc Moreno Maza and Ning Xie*. (2017). Symbolic-Numeric Integration of Rational Functions. 25. Computing Research Repository (CoRR).

9. Robert M Corless, Robert HC Moir*, Marc Moreno Maza, Ning Xie*. (2017). Symbolic-Numeric Integration of Rational Functions. 21. University of Western Ontario

10. Changbo Chen*, Svyatoslav Covanov*, Farnam Mansouri*, Marc Moreno Maza and Ning Xie* and Yuzhen Xie. (2016). Parallel Integer Polynomial Multiplication. 11. Computing Research Repository (CoRR).

11. Russell J. Bradford Changbo Chen*, James H. Davenport, Matthew England, Marc Moreno Maza and David J. Wilson*. (2014). Truth Table Invariant Cylindrical Algebraic Decomposition by Regular Chains. 16. Computing Research Repository (CoRR).

12. Sardar Anisul Haque*, Marc Moreno Maza and Ning Xie*. (2014). A Many-core Machine Model for Designing Algorithms with Minimum Parallelism Overheads. 14. Computing Research Repository (CoRR).

13. Matthew Englan, Russell J. Bradford, Changbo Chen*, James H. Davenport, Marc Moreno Maza and David J. Wilson*. (2014). Problem formulation for truth-table invariant cylindrical algebraic decomposition by incremental triangular decomposition. 16. Computing Research Repository (CoRR).

14. Parisa Alvandi*, Changbo Chen* and Marc Moreno Maza. (2013). An Algorithm for Computing the Limit Points of the Quasi-component of a Regular Chain. 23. Computing Research Repository (CoRR).

15. Changbo Chen* and Marc Moreno Maza. (2012). Algorithms for Computing Triangular Decompositions of Polynomial Systems. 12. Computing Research Repository (CoRR).

16. Marc Moreno Maza and Rong Xiao*. (2012). Generating Program Invariants via Interpolation. 31. Computing Research Repository (CoRR).

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1. Marc Moreno-Maza. Multithreaded programming on the GPU: pointers and hints for the computer algebraist. Proceedings of the International Workshop on Parallel Symbolic Computation. PASCO@ISSAC 2017, (1-3). ACM, United States
Abstract
Published
Refereed?: No, Invited?: Yes
Editors: Jean-Charles Faugere, Michael B. Monagan and Hans-Wolfgang Loidl

2. Rui-Juan Jing*, Marc Moreno-Maza and Delaram Talaashrafi*. (2020). Complexity Estimates for Fourier-Motzkin Elimination. Lecture Notes in Computer Science vol. 12291. Computer Algebra in Scientific Computing (CASC) - 22nd International Workshop, (282--306). Springer, Germany
Paper
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Refereed?: Yes, Invited?: No
Editors: Francois Boulier, Matthew England, Timur M. Sadykov and Evgenii V. Vorozhtsov

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Editors: Francois Boulier, Matthew England, Timur M. Sadykov and Evgenii V. Vorozhtsov

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8. Svyatoslav Covanov*, Davood Mohajerani*, Marc Moreno-Maza and Lin-Xiao Wang*. (2019). Big Prime Field FFT on Multi-core Processors. Proceedings of the 2019 International Symposium on Symbolic and Algebraic Computation. International Symposium on Symbolic and Algebraic Computation (ISSAC), (106--113). ACM, United States
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Editors: Vladimir P. Gerdt, Wolfram Koepf, Werner M. Seiler and Evgenii V. Vorozhtsov

12. Rui-Juan Jing*, Marc Moreno Maza. (2017). Computing the Integer Points of a Polyhedron, II: Complexity Estimates. Lecture Notes in Computer Science, vol 10490. International Workshop on Computer Algebra in Scientific Computing (CASC), (242-256). Springer, Germany
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18. Parisa Alvandi*, Masoud Ataei*, Marc Moreno Maza. (2017). On the Extended Hensel Construction and its Application to the Computation of Limit Points. Proceedings of the 2017 ACM on International Symposium on Symbolic and Algebraic Computation. ISSAC, (13-20). ACM, United States
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26. Sardar Anisul Haque*, Xin Li*, Farnam Mansouri*, Marc Moreno Maza, Wei Pan*, Ning Xie*. (2014). Dense Arithmetic over Finite Fields with the CUMODP Library. Lecture Notes in Computer Science, vol. 8592. International Congress on Mathematical Software (ICMS), (725--732). Springer, Germany
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