

Lalla MOUATADID

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EDUCATION

- 2014-2018 | **PhD**, Computer Science, Theory Group
University of Toronto, ON, Canada
Supervisors: Derek Corneil & Allan Borodin
- 2012-2013 | **Master of Science**, Computer Science, Theory Group
University of Toronto, ON, Canada
Supervisors: Derek Corneil & Allan Borodin
Thesis: *Linear Time Algorithms on Cocomparability Graphs*
- 2006-2009 | **Bachelor of Science**, Computer Science, minor in Mathematics
Vancouver Island University, BC, Canada
Graduated *magna cum laude* / with *distinction*
Thesis: *Gray Code Generation of Ideals of Crown Posets in CAT*

WORK EXPERIENCE

- 2014 & 2016 | **Sessional Course Instructor**, 3rd year Computer Science
University of Toronto, Canada
CSC 373: *Algorithm Design, Analysis & Complexity*, 100+ students
Duties included: Curriculum Design (lectures, assignments, exams). Organizing TAs. Holding Office Hours. Grading.
- 2009 - 2012 | **Software Engineer**, NISA
Nanaimo, BC, Canada
Duties included: Building customized software solutions for clients.
Sole developer for NISA's biggest projects: CanadianNanny.ca
- 2008 | **Java Developer**, Summer Co-op Internship, Pelican Software
Nanaimo, BC, Canada
Duties included: Implementing software components to tubular management inventory systems for businesses in the Oil and Gas industry.

PUBLICATIONS

- 2017 | **Maximum Induced Matching Algorithms via Vertex Ordering Characterizations.** Michel Habib & Lalla Mouatadid.
ISAAC. Vol. 92, pp 43:1-43:12. LIPIcs.
Invited to the Special Issue - Algorithmica
Preliminary results presented at STOC 2017 - Poster Presentation.
- A New Graph Parameter to Measure Linearity.**
Pierre Charbit, Michel Habib, Lalla Mouatadid, & Reza Naserasr.
COCOA. pp 154-168. Springer. Journal version submitted to DAM.
- 2016 | **A Linear Time Algorithm to Compute a Max Weighted Independent Set on Cocomparability Graphs.** Ekkehard Köhler & Lalla Mouatadid.
Information Processing Letters. Vol. 116, issue 6, pp 391-395.
- 2014 | **Linear Time LexDFS on Cocomparability Graphs.**
Ekkehard Köhler & Lalla Mouatadid.
SWAT. pp 319-330. Springer. Journal version submitted to Algorithmica

UPCOMING WORK - available upon request

- **Approximating Modular Decomposition is Hard.** Submitted.
Michel Habib, Lalla Mouatadid, & Mengchuan Zou.
- **A Note on the De Bruijn-Erdős Theorem for Asteroidal-Triple Free Graphs.** Submitted.
Lalla Mouatadid.
- **Graph Searches & Geometric Convexities in Graphs.** In Preparation.
Michel Habib, Lalla Mouatadid.
- **The LexDFS Structure of Poset.** In Preparation.
Derek Corneil, Lalla Mouatadid, & Gara Pruesse.

SELECTED TALKS

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| 2017 | Princeton University , Princeton, U.S.A.
Graph Searches on Structured Families of Graphs |
| | Shanghai Jiao Tong University , Shanghai, China
Graph Searches on Structured Families of Graphs |
| | Workshop on Graph Classes, Optimization, and Width Parameters (GROW) , Toronto, Canada
Maximum Induced Matching on Cocomparability Graphs |
| 2016 | Fourth Annual Heidelberg Laureate Forum , Heidelberg, Germany
Graph Searches on Structured Families of Graphs - Poster.
Invited by Laureate Professor Stephen Cook. |
| | Search Games: Theory and Algorithms , Lorentz, The Netherlands
Graph Searches on Structured Families of Graphs. |
| 2015 | Workshop on Graph Classes, Optimization, and Width Parameters (GROW) , Aussois, France
Path Graphs, Clique Trees, and Flowers. |
| | University Paris Diderot, IRIF , Paris, France
Path Graphs, Clique Trees, and Flowers. |
| | Brandenburgische Technische Universität , Cottbus, Germany
Path Graphs, Clique Trees, and Flowers. |
| 2014 | Southeastern International Conference on Combinatorics, Graph Theory, and Computing , Boca Raton, U.S.A.
Special sessions on “Structured Families of Graphs: Mathematical and Algorithmic Aspects”.
Linear Time LexDFS on Cocomparability Graphs. |

AWARDS, HONORS, & FELLOWSHIPS

2018	Alfred B. Lehman Graduate Scholarship.
2017-2018	Doctoral Completion Award.
2015-2018	NSERC Post Graduate Scholarship - Doctoral.
2012-2017	Graduate Student Fellowship, Computer Science, U of Toronto.
2014	ACM-Women full sponsorship for the Grace Hopper Conference.
2013	First Prize: Poster at the ACM Celebration of Women in Computing.
2009	Math Association of America sponsorship to present bachelor's thesis.
2007-2008	Vancouver Island University Academic Excellence Award. Ina Roelants Memorial Award. International Education Academic Excellence Scholarship. David Jones Scholarship for Leadership and Volunteer Work.

PROFESSIONAL SERVICE

2013-2018	Reviewer: <ul style="list-style-type: none">· Journal of Graph Theory· SIAM Discrete Mathematics· Discrete Applied Mathematics· Journal of Combinatorics· Discrete Mathematics & Theoretical Computer Science· Information Processing Letters· International Workshop on Graph-Theoretic Concepts in Computer Science (WG) Teaching Assistant, U. of Toronto: <ul style="list-style-type: none">· CSC 2404: Computability & Logic Graduate course· CSC 2420: Algorithm Design, Analysis, & Theory Graduate course· CSC 473: Advanced Algorithm Design· CSC 373: Algorithm Design, Analysis, & Complexity· CSC 263: Data Structures and Analysis· CSC 236: Introduction to Theory of Computation· CSC 165: Mathematical Expression & Reasoning for Computer Science
2017	Program Committee Member - GROW 2017 Girls in STEM Workshop, U. of Toronto <ul style="list-style-type: none">· Organized and ran a workshop for girls in grades 6 to 9.· A collaboration with the U of T Math Department.
2014, 2016	Course Instructor, U. of Toronto <ul style="list-style-type: none">· CSC 373: Algorithm Design, Analysis, & Complexity (2nd offering).· CSC 373: Algorithm Design, Analysis, & Complexity (1st offering).
2016	Lead Mentor, Undergraduate Summer Research Program, U. of Toronto <ul style="list-style-type: none">· Weekly meetings mentoring and guiding undergraduate students in their summer research projects.

SKILLS

- **Technical expertise:**
 - C, C++, MATLAB, Java, PHP, MySQL, JavaScript, jQuery, HTML, \LaTeX .
- **Languages:**
 - Fluent in English & French.

REFERENCES

Research	Allan Borodin Professor - University of Toronto, Canada bor@cs.toronto.edu
	Derek Corneil Professor - University of Toronto, Canada dgc@cs.toronto.edu
	Michel Habib Professor - University of Paris - Diderot & IRIF, France habib@irif.fr
	Ekkehard Köhler Professor - Brandenburg University of Technology, Germany ekkehard.koehler@b-tu.de
Teaching	Francois Pitt Associate Professor & Undergraduate Computer Science Chair - University of Toronto, Canada fpitt@cs.toronto.edu
	Karen Reid Associate Professor - University of Toronto, Canada reid@cs.toronto.edu