Edmond La Chance

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**EDUCATION**

**2008-2011** B.S, Université du Québec à Chicoutimi

**2011-2013** M.S, Université du Québec à Chicoutimi

*Algorithmes pour l’arbre couvrant minimal*

This master thesis empirically compares various ways of implementing minimum spanning trees. Several data structures and algorithms are implemented in C++ and measured: Union-Find, Binomial Heap, Binary heap, Fibonacci heap, Prim’s Algorithm, Boruvka’s Algorithm, Kruskal’s Algorithm.

**2013-2021** PhD, Université du Québec à Chicoutimi

*Extended Combinatorial Testing using Graph Algorithms and Apache Spark*

This thesis presents a generalization of t-way testing, reductions to graph coloring and vertex cover problems and distributed algorithms using Apache Spark and Scala. Experimental results were obtained using computer clusters provided by Compute Canada.

**WORK HISTORY**

**2015-2021 - Lecturer, Université du Québec à Chicoutimi**

Classes taught:

**2015-2021 | 8INF803 (Distributed Databases)**

In 8INF803, students learn about distributed databases, crawling and distributed data processing. On the technical side, we mostly use Apache Spark, Scala and Python. We also show how to implement iterative algorithms with proper memory management and checkpointing.

**2015 | 8GIF128 (Web programming)**

In 8GIF128, we teach HTML, CSS, Javascript, DOM, REST and WebSockets. The final project is a website with several services, with WebSocket communication.

**SKILLS**

**Favorite Programming Languages:**

Scala, Modern C++, Java, C

**Writing:**

Latex, HTML/CSS

**Favorite tools:**

VsCode, PowerPoint, MSWord, SumatraPDF, yedEditor, mouseWithoutBorders, IntelliJ IDE

**PUBLICATIONS**

Extended Combinatorial Test Generation using Graph Reductions. Submitted in Soft-

ware Testing, Verification and Reliability, March 2020, under review.

Graph Methods for Generating Test Cases with Universal and Existential Constraints.

Springer Lecture Notes in Computer Science Volume 9447 (pp. 55–70).