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

Algorithms for the minimum spanning tree problem
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 in Software Verification & Cluster Computing, 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

Apache Spark (5 years).   **Javascript**
C/C++ (10 years)   **Git**
Scala (5 years)   **HTML and CSS**
SQL   **LaTeX**
Java (5 years)   **x86 assembly language**
Slurm Cluster Manager