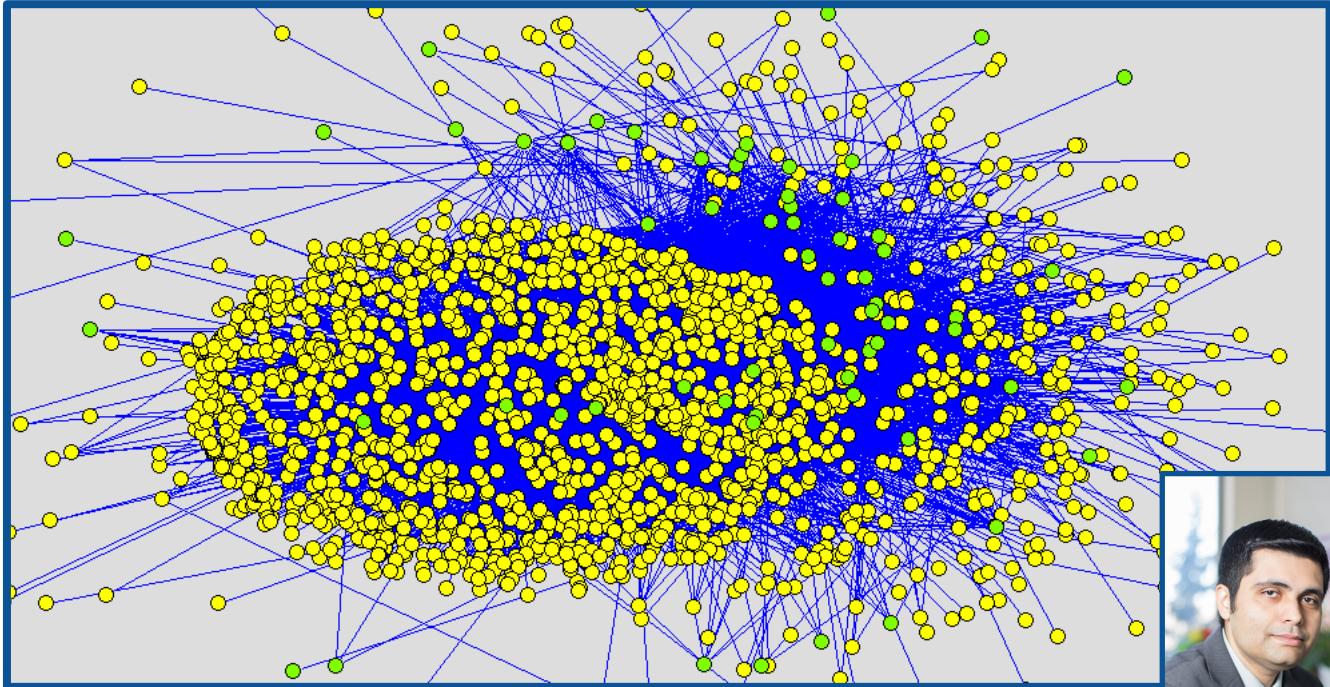


OPTIMIZATION SEMINAR SERIES



Join **Dr. Muhammad A. Khan**, Department of Mathematics and Computer Science, University of Lethbridge, as he explores

A Data Analytic Approach to Software Modularity

Wednesday April 11, 2018 • 2:00 pm
D630, University Hall, University of Lethbridge

There is a consensus in the software engineering community that modularity is a key feature of good software design. Typically, modularity is defined in terms of static dependencies between the elements of a software product. We take a dynamic approach and measure modularity using software evolution data extracted from commit logs. Our methodology produces a numerical as well as a visual representation of how the modularity of a software product changes over time, making it a useful tool for software project managers. We analyze the modularity of two real-life software systems: Bitcoin Core and GNU Octave over 10 and 25 years, respectively. As a test for validity, we demonstrate that our approach correctly identifies certain watershed moments in the Bitcoin and Octave life-cycles. This is joint work with Benkoczi, Gaur and Hossain to appear (in part) in the Proceedings of the 15th ACM/IEEE International Conference on Mining Software Repositories, May 28–29, 2018, Gothenburg, Sweden.

Learn more at <http://directory.uleth.ca/users/ma.khan>