

Department of Computer Science

Helping Developers Understand Their Distributed Systems

Distributing the state of a software system has numerous advantages: The system becomes more fault tolerant, more scalable, and more available. These advantages come at the cost of complexity.

Concurrency, partial failures, and asynchrony make it difficult to design and reason about systems with distributed state. In this talk I will discuss several approaches that my group has been working on to help developers overcome these challenges and to allow developers to gain insight into the runtime operation of their distributed systems.

These approaches span several research areas including program analysis and visualization, and we have evaluated the resulting tools on complex and widely used distributed systems. I will demo some of these tools in the talk.

**Dr. Ivan
Beschastnikh**

**Department of
Computer Science
UBC**

**Friday
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11:30 AM – 1:00 PM

**Room: 7-212
Lecture Theatre**

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Short bio:

I have broad research interests that usually touch on systems and software engineering. My current projects span distributed systems, formal methods, modeling, tracing and analysis of program behavior. I enjoy building and studying real software systems and tend to be empirical in my research.