

## [特別講演] Intelligence-Driven Software Engineering

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The present-day system of developing and distributing software relies on a sophisticated ecosystem of repositories that catalog virtually every aspect and every kind of artifact of a software's lifecycle. They include version control systems for source code, to bug tracking systems, to online developer and user discussion forums. These repositories, commonly referred to as Big Code, encapsulate vast amounts of human software development expertise, experience, and opinions. This has motivated a burgeoning field of research within software engineering that uses Artificial Intelligence (AI) technologies, such as machine learning, to mine Big Code for relevant insights, i.e., "intelligence", and use it to power next-generation software engineering solutions. In this talk I will provide an overview of research conducted at Fujitsu Laboratories of America, in the area of intelligence-driven software engineering, in the context of the larger body of work in this upcoming area. In particular, I will discuss our research in the areas of automated testing, debugging and patching, as well as our efforts to translate this research into practical solutions to help real users to be more productive and to develop more correct and reliable software.

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