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COVARIATE SOFTWARE RELIABILITY MODELS AND APPLICATIONS

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FREE Webinar

Traditional software reliability growth models enable quantitative assessment of the software testing process by characterizing defect detection in terms of testing time or effort. However, the majority of these parametric models do not identify specific testing activities underlying defect discovery and thus can only provide general guidance on how to incrementally allocate effort. This talk presents a non-homogeneous Poisson process software reliability growth model incorporating covariates based on the discrete Cox proportional hazards model, which explicitly links test activities to defect discovery. Efficient and stable expectation conditional maximization algorithms are derived to estimate the numerical parameters of a model that best characterize the failure data collected during testing. An optimal test activity allocation problem is formulated to maximize defects discovered, so that they can be corrected prior to release. An overview of the Covariate Software Failure and Reliability Assessment Tool (C-SFRAT) will also be provided.

Date and Time

- Date: **Tuesday, 8 December 2020**
- Time: **11:00 AM to 12:00 PM**
- All times are US/Eastern

Location

This Webinar is to be delivered via Webex.

At registration, you must provide a valid e-mail address to receive the Webinar Session link approximately 16 hours before the event.

If you don't see it in your inbox, please remember to check your spam folder for the e-mail with the link.

Contact

- Email event contact
- Michael W. Bannan, Chair
- Boston/Providence/New Hampshire Reliability Chapter

Registration

- Starts **1 October 2020 9:00 PM**
- Ends **7 December 2020 6:00 PM**
- All times are US/Eastern
- No Admission Charge
- Register

Distinguished Lecturer

Lance Fiondella of University of Massachusetts Dartmouth

Biography

Lance is an associate professor in the Department of Electrical & Computer Engineering at the University of Massachusetts Dartmouth. He received his PhD (2012) in Computer Science & Engineering from the University of Connecticut. Dr. Fiondella has published over 130 peer-reviewed journal articles and conference papers, twelve of which have been recognized with awards, including seven with his students. His research has been funded by the United States Department of Homeland Security, U.S. Army Research Laboratory, Naval Air Systems Command, Naval Sea Systems Command, National Aeronautics and Space Administration, and National Science Foundation, including a CAREER award.

Agenda

11:00 AM Technical Presentation

12:00 PM Adjournment

The meeting is open to all You do not need to belong to the IEEE to attend this event; however, we welcome your consideration of IEEE membership as a career enhancing technical affiliation.

There is no cost to register or attend, but registration is required. Register

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