



Academic scholars and industry partners

Expanding the Science of Testing

an interdisciplinary program through the collaboration of Computer Science, Management Information Systems and Computer Engineering scholars at the FedEx Institute of Technology



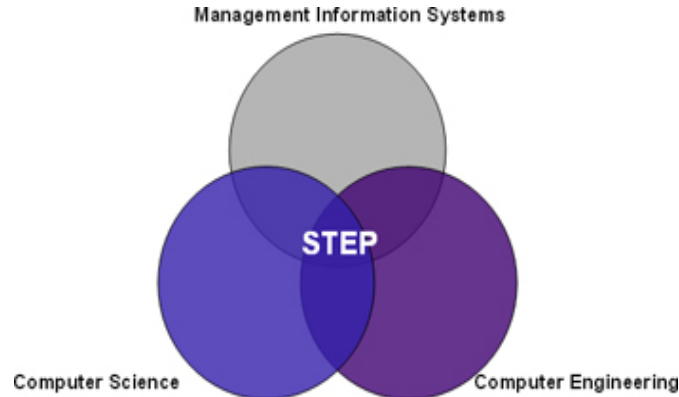


Systems Testing Excellence Program



Expanding the Science of Testing

Academic scholars



Industry partners



Expanding the Science of Testing

- Industry-based **research** in software testing
- Annual international research **workshop** on advances and innovations in software testing
- Basic and Advanced level **training certification**
 - Emphasizing research-based industrial best practices

A collaborative success...STEP and FedEx

- STEP researchers are publishing in the top journals and international research conferences
 - We are changing the conversation about how researchers talk about testing
- Our work is featured at top testing conferences
 - ICST, STAREAST, Softec, and we organize an international workshop
- We offer a new standard for testing certification
 - Basic & Advances levels
 - Rigorous, research- based, university- based industry certification
 - Offered internationally to grow the base of well- trained testers

Agile Research Core (ARC) @ STEP

Cross-disciplinary group of Faculty and PhD Candidates exploring research questions, e.g.:

- How long should a scrum be?
- What is the best team composition?
- How do you scale agile development to multi-year, multi-group, enterprise-level efforts?
- How long should a sprint be?
- When do you use agile vs. structured approach?

Agile Research Core (ARC) @ STEP

- Are there generational differences for structured vs. agile approaches?
- User stories aren't always sufficient
 - How do you empower an agile team to make decisions that will affect users?
 - How can you do without 1,500 page requirements documents where users have thought it through?
- How do you handle some developers may lack skills, sharing code will make it transparent?

Agile Research Core (ARC) @ STEP

- How do you get developers to write tests first?
 - How do you change the mindsets of those with structured development ingrained in them?
- Software is tested & working by end of sprint
 - How to do continuous integration testing?
 - People fall back on old habits of features, no tests. How do you maintain the agile discipline?
- What are the best tools for supporting automated build and regression testing?

Agile Research Core (ARC) @ STEP

- How much backlog vs. new vs. refactoring work in each sprint?
- All team members, including testers and Product Owner (customer rep.), are included in sprint reviews
 - Given tensions between different team members, how do you keep conflict under control?

Expanding the Science of Testing

Where industry meets academia.....

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