

An Indian-Australian research partnership

## Improving testing techniques and reliability study for web based applications

**Project number:** IMURA0123

**Monash University supervisors:** Dr. S.Ling(Chris),

**Monash University contact:** [Chris.Ling@infotech.monash.edu.au](mailto:Chris.Ling@infotech.monash.edu.au)

**IITB supervisors:** Prof. Ajit K. Verma, Prof. A. Srividya

**IITB contact:** [akv@ee.iitb.ac.in](mailto:akv@ee.iitb.ac.in), [asvidya@civil.iitb.ac.in](mailto:asvidya@civil.iitb.ac.in)

---

### Research Academy theme/s

1) Advanced computational engineering, simulation and manufacture

### The research problem

The research is aimed at improving the quality and reliability of web based systems. This includes studies on software testing techniques and reliability issues for web based applications especially for critical (mission/safety) applications. Reliability modelling using soft computing approaches and analysis of data and optimisation of test activities is a key to such studies and solution strategies for technique improvement would be an outcome of this research to improve the productivity of web based systems.

### Project aims

1. Research on the current software testing methodology for web based applications including processes, models and techniques.
2. Work on test techniques to improve security and reliability of web based applications.
3. Data analysis and modelling
4. Suggested approaches for improvement in testing techniques for web based applications.

### Expected outcomes

1. New/improved Test Processes.
2. Efficient test techniques that will provide better security and reliability.
3. New modelling approaches.
4. Better automation support.

### Which of the above Theme does this project address?

Advanced computational engineering, simulation and manufacture

### How will the project address the Goals of the above Themes?

This project deals with real practical problems faced by the industry and people. This project includes the study in the field of computer science and reliability studies.