

Register Now!
Online Learning
Via Zoom

Strategic Data Analytics in Operational Testing

Date: 17 - 20 November 2020
Time: 9.00am - 1.00pm

Public rate: S\$1,712.00 (incl GST)

Earlybird rate: S\$1,626.40 (incl GST)
(if register by 15 October 2020)

Special rate: S\$1,540.80 (incl GST)
(for TDSI Alumni and MDTs Lecturers)

Synopsis

This course introduces strategies for data collection and analysis aimed at efficient empirical studies of new, unfamiliar or complex systems commonly encountered in civilian as well as military applications. The objective is to establish optimal operational conditions and parameters of such systems without costly and lengthy trials and modifications. Familiarity with these strategies is essential for meeting requirements such as time-to-deployment or time-to-delivery, as well as operational cost-effectiveness.

Course Outline

General Framework

- ⇒ Performance improvement and optimization
- ⇒ Approach to new, unfamiliar, or complex systems
- ⇒ Strategic empirical studies and data analytics

Fundamental Strategies

- ⇒ Theoretical vs real-world performance
- ⇒ Limitations of conventional methods
- ⇒ Purposes, types and uses of models

Practical Considerations

- ⇒ Design and implementation of empirical studies
- ⇒ Handling the uncontrollable or unpredictable
- ⇒ Efficient characterization of multiple parameters

Analysis and Optimization

- ⇒ Multiple-objective systems
- ⇒ Software selection and demonstration
- ⇒ Further approaches and techniques

Learning Objective

This course aims at imparting to the participants the essence of data-based strategies and procedures for rapid understanding and optimal operation of hardware or man-machine systems.

Learning Outcome

At the end of this course, participants will understand the role and use of data-based analytical techniques not available in conventional courses of study for diplomas and degrees. After the first half of the course, participants are encouraged to bring their cases for discussion, illustration, and possible solution.

Pre-requisite

At least "O" level mathematics and familiarity with Windows operating system.

Who Should Attend

Managers and personnel with responsibilities for studying or operating hardware or man-machine systems, as well as those seeking data-based strategies for problem solving and decision-making. The discussions will be practical, generic and not confined to any particular technical operations.

This course will be conducted online via Zoom.

Participants must have a laptop or computer with webcam, headset (microphone and headphones) and a good Internet connection.

About the Instructor



GOH Thong Ngee, BE (Saskatchewan), PhD (Wisconsin-Madison), PE (Singapore), Professor Emeritus of Industrial Systems Engineering and Management, is formerly Department Head and Dean of Engineering at the National University of Singapore. He is a Founding Fellow of the Academy of Engineering Singapore, Founding President of the Singapore Institute of Industrial Engineers and formerly Vice-President of the Operational Research Society of Singapore. Prof Goh has been named "Educator of the Year" by the IEEE Engineering Management Society, and is recipient of the International Academy for Quality Masing Book Prize for co-authoring the book: *Six Sigma - Advanced Tools for Black Belts and Master Black Belts* (John Wiley); he has also been repeatedly honoured, with the William Hunter Award as well as the Eugene Grant Medal, by the American Society for Quality.

Prof Goh has served variously as advisory board member, external examiner or reviewer for universities and government research agencies in Asia, Europe, North America and Australia. He was Project Specialist at Lockheed Aircraft in the US for the Skyhawk project of the Republic of Singapore Air Force before returning to Singapore, and has been board member of the Singapore Productivity Board, also of the Defence Science and Technology Agency, among many high-level agencies he has served. With several decades' track record in teaching, research as well as industrial consulting and training in a wide spectrum of organizations, Prof Goh is a frequent invited speaker at professional conferences and corporate meetings.

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