

# Fault Detection and Isolation, Diagnosis, and Fault-Tolerant Schemes

## Call for Papers

The quality of industrial production, regardless of the activities area (agriculture, automotive, etc.), is strongly linked to the reliability of industrial systems used and their good functioning. Indeed, in nominal operation, products manufactured must meet well-defined specifications. The occurrence of a failure on the production line degrades these specifications causing a deterioration of the quality desired. Hence, it is primordial to integrate diagnostic algorithms to perform early diagnosis and then combined with fault-tolerant control approaches in order to enhance system reliability.

This special issue focuses to integrate the new developments about the monitoring, fault detection, diagnosis, and fault-tolerant control. The issue will cover all aspects of theoretical developments and practical applications, such as methodologies, techniques, design, experiments, and experiences in current research in this area. Potential topics include, but are not limited to:

- Fault detection and diagnosis
- Fault isolation
- Reliability
- Statistical approaches
- Model-based methods: observers, parity relations, and identification
- Pattern recognition
- Artificial neural networks
- Fuzzy logic and neurofuzzy approaches
- Fault prediction
- Fault-tolerant control
- Modelling and simulation fault
- Sensor network design
- Application to power plants, bioprocess systems, thermal, electrical, mechanical, and electronic systems, chemical and biomedical processes, space vehicles and traffic systems, marine, aeronautics, aerospace systems, and so forth

Contributions to fundamental theory, methodology development, solution techniques and applications, and state-of-the-art reviews are welcome.

Before submission authors should carefully read over the journal's Author Guidelines, which are located at <http://www.hindawi.com/journals/ijqsr/guidelines/>. Prospective authors should submit an electronic copy of their complete manuscript through the journal Manuscript Tracking System at <http://mts.hindawi.com/> according to the following timetable:

Manuscript Due	Friday, 6 January 2012
First Round of Reviews	Friday, 6 April 2012
Publication Date	Friday, 6 July 2012

### Lead Guest Editor

- [Yahya Chetouani](#), Université de Rouen, Rouen, France

### Guest Editors

- [F. Bagui](#), High School of Engineers, CESI Normandie, Rouen, France
- [Ghaleb Hoblos](#), Ecole Supérieure d'Ingénieurs Généralistes, Institut de Recherche en Systèmes Electroniques Embarquées, Rouen, France
- [Hassan Noura](#), Electrical Engineering Department, United Arab Emirates University, Al Ain, UAE