CALL FOR PAPERS
SPECIAL SESSION ON
"Incomplete Data Test, Analysis and Fusion under Complex Environments"
ICIST2024
December 6-9, 2024 – Chengdu, Sichuan, China

Session Organizers:

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Session Description:

Data test, analysis and fusion consists of the acquisition, processing and combination of information from multiple sources, which aims to draw more comprehensive, specific and accurate inferences about the world than that are achievable from any individual source in isolation. This topic is relevant in many areas: monitoring and maintenance of running equipment, target tracking and recognition in battlefield surveillance, sensor fusion in robotics, image processing in computer vision, expert opinion fusion in risk analysis and so forth. As it is known, data acquisition is often conducted in complex environments, sampled data is inherently noisy and incomplete, human experience/knowledge is inevitably imprecise/ambiguous/irrelevant, and data processing is often subject to various uncertainties. As such, the right test, analysis and fusion of such uncertain and incomplete data is always at the core of any fusion system. This gives rise to a series of both theoretical and practical challenges with focuses on three aspects: 1) how the uncertainty is tested and quantified under complex environments? 2) how uncertain pieces of information can be aggregated in a reasonable and precise way? and 3) how the fused data benefits the physical implementation of interested systems?

This Special Session will focus on the latest advances in uncertain information fusion. Possible theories for managing uncertain information include, but are not limited to, the artificial intelligence, machine learning, communication theory, computer modeling, control theory, estimation theory, data analysis, fault diagnosis, intelligent test, information theory, probability theory, Bayesian inference, fuzzy sets, random sets, reliability theory, rough sets, possibility theory, and belief functions. Prospective authors are invited to submit their novel and original manuscripts about the theoretical underpinnings or the practical applications of these theories.

Topics and Technical Issues include (but not limited to)

Uncertain modeling
Data fusion
Target tracking and recognition
Situation assessment
Image fusion
Pattern analysis
Data mining
Artificial intelligence
Health monitoring
Instrumentation and measurement
Intelligent test and data analysis

SUBMISSION:
Papers must be submitted electronically for peer review through online paper submission by **Aug 1**, 2024:
https://openreview.net/group?id=IEEE.org/ICIST/2024/Conference#tab-your-consoles.

All papers must be written in English and should describe original work. For guidelines, please follow the ICIST website link: https://conference.cs.cityu.edu.hk/icist/.

Important Dates:
Aug 1, 2024: deadline for paper submission
Sep 1, 2024: notification of paper acceptance
Oct 1, 2024: deadline for final camera-ready papers