

# Control, Intelligent Systems, and Robotics

PRESENTATION/ SESSION 1

May 13, 2015, Wednesday

11:00 AM-1:00 PM

Track 3

E3-06-12

**Wang Kangli**

A Semi-autonomous Reconfigurable Hybrid UAV with Vertical and Cruise Flying Abilities

**Ke Yijie**

Modeling Methodology of an Unconventional Aircraft (U-Lion) with Both VTOL and Fixed-wing Capabilities

**Zhang Chong**

A Novel Multi-Objective Ensemble Prognostic Approach for Remaining Useful Life Estimation

**Arrchana Muruganantham**

Evolutionary Dynamic Multiobjective Optimization via Kalman Filter Prediction

**Ren Ruoxu**

An Experimental Study of Correlation between Text and Image Similarity by Information Fusion Approach

PRESENTATION/ SESSION 2

May 13, 2015, Wednesday

02:00-04:00 PM

Track 3

E3-06-12

**Josey Mathew**

Kernel-Based SMOTE for SVM Classification of Imbalanced Datasets

**Mohammad Ikhsan**

Automatic Assessment of Needle Insertion Safety in B-Mode Ultrasound

**Sun Lu**

State Estimation with Generalized t-Distribution Model

**Liu Shuo**

Uniform Local Air Flow Control

**Yan Hengchao**

SMOTE-Based Precognitive Maintenance Framework for Equipment Fault Diagnosis under Imbalanced Condition Monitoring

# Control, Intelligent Systems, and Robotics

PRESENTATION/ SESSION 3

May 14, 2015, Thursday

11:00 AM-1:00 PM

Track 3

E3-06-12

**Li Xian**

Approximate Feedforward Control

**Xiao Shengtao**

Reinforcement Learning Control for a Robotic Manipulator with Unknown Deadzone

**Yip Chun Ming Tommy**

Ensuring Zero Steady State Error in Interval Type-2 Fuzzy PI Control System with Non-symmetrical Fuzzy Sets

**Chen Wang**

Reference Adaptation of Robots in Physical Interactions with Unknown Environments

**Mingming Li**

Adaptive Tracking Control of Robotic Manipulators under Motion Constraints

**Xiaomei Liu**

Formation Control of Multi-agents in Constrained Space

PRESENTATION/SESSION 4

May 14, 2015, Thursday

02:00-04:00 PM

Track 3

E3-06-12

**Lim Pin**

Multimodal Degradation Prognostics Based on Switching Kalman Filter Ensemble

**Yan Weili**

Multirate Adaptive Feedforward FIR Filter for Suppressing Disturbances to the Nyquist Frequency and Beyond

**Hu Bin**

Earliest Switch-on of Dual Stage Actuation in Hard Disk Drives

**Fangwen Tu**

Disturbance Observer Based Control of Free-Flying Space Manipulator with Flexible Links and Joints

**Jiang Rui**

Time-based Finite-horizon Information Fusion For Urban Vehicle Localization

# Control, Intelligent Systems, and Robotics

POSTER/SESSION 1  
LT2 Area

May 13, 2015, Wednesday  
11:00 AM-1:00 PM

**Chen Wang**

Adaptive Optimal Control of Nonlinear Discrete-time Systems with Online System Identification

**Du Xinxin**

Vision Approach towards Fully Self-Reverse Parking System

**Ke Yijie**

Conceptual Design Approach for a Morphing Aircraft J-Lion with VTOL and Fixed-Wing Flight Capabilities

**Li Xuefang**

Iterative Learning Control for a Class of Inhomogeneous Heat Equation

**Lim Pin**

A Time Window Neural Network Based Framework for Remaining Useful Life Estimation

**Yan Hengchao**

Gamma Process with Recursive MLE for Wear PDF Prediction in Precognitive Maintenance under Aperiodic Monitoring

**Yan Weili**

A General Multirate Approach for Direct Closed-loop Identification to the Nyquist Frequency and Beyond

**Goh Sim Kuan**

Evolutionary Big Optimization (BigOpt) of Signals

**Gee Sen Bong**

Application of MOEA/D on Multi-objective Vehicle Routing Problem

**Xiao Shengtao**

Adaptive Object Learning for Robot Carinet

**Zhang Chong**

A Data-driven Health State Classification Approach for Failure Diagnosis

**Li Xian**

A Dynamic Model for Liquid Desiccant Dehumidifier