12th IFAC/IFIP/IFORS/IEA Symposium on Analysis, Design, and Evaluation of Human-Machine Systems

August 11 - 15, 2013

Wright State University
AGENDA
Sunday, August 11, 2013
5:00 PM - 7:00 PM Registration | Titanium Room 7:00 PM - 9:00 PM Welcome Event | Ballroom 1 & 2
Monday, August 12, 2013
8:30 AM - 5:00 PM Registration | Titanium Room 9:00 AM - 11:00 AM Opening Ceremony, Welcome Address, Plenary 1 | Ballroom 1 & 2 11:00 AM - 12:30 PM Lunch | (provided) 2:30 PM - 3:00 PM Coffee Break | Platinum & Sterling AB Technical Sessions: Model Based Design (M/B)
Ballroom 3 | 12:30 PM - 2:30 PM
• A Quantitative Evaluation Method for Plant Operation in Alarm Management Based on a Queuing Model
• Platform Constrained: Supporting a Adjustable Mapping Model
• Even Driven Notation and Hierarchical Automata Semantics for Incremental Task Modeling
• SmartMate: A Model-based Architecture for Context-sensitive User Interfaces 5:00 PM - 7:00 PM Improving Physical-physiological Interaction Requirements for Maintenance Enabling Systems Specification
Ballroom 4 | 3:30 PM - 5:00 PM
• Towards a Building a Genomic Sensor Cloud for human-centric Sensing Applications
• Towards a Smartphone-based Multimodal Sensing Towards an Extensible Virtual GEDS Center
• Augmenting Situational Awareness for First Responders Using Social Media as a Sensor Towards a Collaborative Smartphone Sensing Platform

Human Centric Sensing & Applications
Ballroom 3 | 3:30 PM - 5:00 PM
• Sociotechnical Systems Resilience: a Dissonance Engineering Point of View
• Forward-looking Measuring Allocation Allocation for Evaluating Supervisory Control in a Complex and Dynamic Lab System
• Supervision Functions - Secure Operation of Sustainable Power Systems
• SA Shared Control Driving Assistance System: Interest of Using a Driver Model in both Lane Keeping and Obstacle Avoidance Situations

Supervisory Control
Ballroom 4 | 3:00 PM - 5:00 PM
• The Yellow Glover: Wearable Computing Technology for Maintenance Assistance in IPS
• Virtual Systems to Train and Assist Control Applications in future Factories
• Improving Proactive Human Behavior in Supervision of Manufacturing Systems Using Chronicles
• A Vision on Tomorrow's Knowledge Sharing Applications in Future Factories
• Augmented Reality for human-based Assembly: Using Product and Process Semantics
• Online Support for Shop-floor Operators Using Body Motion Tracking

Decision Support Systems
Ballroom 5 | 3:00 PM - 5:00 PM
• The Use of ICT Tools Be the Way to Increase Competitiveness in Swedish Industry
• Consequence Reasuring in Multilevel Flow Modelling
• An Event Procedure Management to Support Decision-makers in perspective and Real-time Project Management
• Dining Assistant: Shared Haptic Human System Interaction
• Evaluation of A New Machine-human Decision Support System for Group Scheduling

Risk Management in Life Critical Systems
Ballroom 5 | 12:30 PM - 2:30 PM
• Touch-Enabled Input Devices for Controlling Virtual Environments
• The UFAS Facility: A Virtual Environment Platform for Human Performance Research
• Developing Advanced GP's Navigational System Designs: Sufficient Simulations
• A Virtual World Application to Assets and AB Human Machine Collaboration

Human Computer Interaction
Ballroom 1 | 12:30 PM - 2:30 PM
• Design and Implementation of an Integrated, Platform Independent 3D Visualization of Complex Process Data
• Attendee Allocation for Multi-modal Perception of Human-friendly Robot Partners
• Full Human Factors: Human-Centered Design for Railway Systems
• User-oriented System for Smart City Approaches
A Real-Time Functional Magnetic Resonance Imaging (fMRI) Neurolfeedback System

University of Iowa Workshop
Ballroom 1 & 2 | 3:00 PM - 5:00 PM
This tutorial will provide a practical introduction to using microprocessors and wireless communication. The tutorial is appropriate for researchers who are comfortable with programming and are interested in exploring their skills into the hardware domain or who have previously worked with microcontrollers and wish to be introduced to some new development tools and techniques. The workshop will conclude with a practical discussion of what would be required to incorporate these and similar devices into projects suggested by the attendees.

Adaptive Aiding
Ballroom 3 | 3:00 PM - 5:00 PM
• A Human Cognitive Performance Measure Based on Available Options for Artificial Intelligence Systems
• Towards Seamed Mobility: Individual Mobility Profiles to Ease the Use of Shared Vehicles
• Multiple Correspondence Analysis of Fuzzy Task Performance and Psychological Aspects of HMD use in Real Car Following Situations
• An Empirical Investigation of the development of Driver’s Mental Model of a Lane Departure Warning System While Driving
• Communication Technologies for the Improvement of Marine Transportation Operations

Usability Engineering
Ballroom 4 | 3:00 PM - 5:00 PM
• Development and Validation of a Work Efficiency Test Using Locomotive and Car Passenger
• The Usability Engineering Repository UoDI for the Development of Task- and Event-based Human-machine Interfaces
• Model Based Technology Integration Engineering Architecture: Deep Dive into Virtual Reality Applications
• A User-oriented Test Environment Based on User-Interface Evaluation
• Graphical Controls
• Validation of a Unified Model of Driver Behaviour for Train Operators

Human Machine Systems
Ballroom 5 | 3:00 PM - 5:00 PM
• Human Stability: Towards Multi-level Control of Human Behavior
• Toward a Distributed Case-Based Reasoning for Human Machine State Diagnosis Application to Railway Driver State Analysis
• Ethnicity Identification From Facial Images
• On-Man Machine Interaction with Qualitative Data
• Mobile Interaction Technologies in the Factory of the Future
• Meuham Effect Function for Oblique Rotation of a Teleoperation Viewpoint: Counter-Intuitive Predictions and Implications for the Basis of Fitts’ Law

Tuesday, August 13, 2013
8:30 AM - 2:00 PM Registration | Titanium Room 8:45 AM - 9:20 AM Coffee Break | Platinum & Sterling AB 9:20 AM - 11:00 AM Keynote | Ballroom 1 & 2 11:00 AM - 12:30 PM Lunch | (on your own) 2:30 PM - 3:00 PM Coffee Break | Platinum & Sterling AB 3:00 PM - 5:00 PM Technical Sessions:

Decision Support Systems (M/B)
Ballroom 3 | 12:30 PM - 2:30 PM
• Know Your Options - Interfering Consequences and Forecasted Performance Analysis: A Concept for the Novel Type of Information System KYO-ICP
• Comparing Image Guided Systems to Improve Complex Navigation in Medicine
• Real-time Risk Estimation for Better Situational Awareness
• Benchmarking Medical Image Databases
• Toward a Cooperative Action-Driven Decision Model of an Airport Security Process

Cognitive System - Human Machine Systems
Ballroom 3 | 3:00 PM - 5:00 PM
• Spatial Correlation in Nuclear Power Plant
• Analysis of Longitudinal Driving Behaviors During Car Following Situation by Driving Simulator VBRAC
• Visualization of Control Structure in Human-Automation System Based on Cognitive Task Work Analysis
• Modeling Analyst Process of Transforming Data into Understanding
• Task Allocation in Production Systems - Measuring and Analysing of Levels of Automation

Cognitive System Engineering
Ballroom 5 | 12:30 PM - 2:30 PM
• The Application of Cognitive Interface Design Methodology for a Digitalized Control Room in Nuclear Power Plant
• Diagnosis Application to Railway Driver State Analysis
• Testimony Identification From Facial Images
• On-Line Machine Interaction with Qualitative Data
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Planning and Scheduling in the Context of Human Factors
Ballroom 5 | 3:00 PM - 5:00 PM
• Human computer Interaction
• A Multiple Correspondence Analysis and Fuzzy Set Based Approach for the Analysis of Pathologies Drivers from Healthy Drivers, a Case Study with the Steering Wheel Control

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Wednesday, August 14, 2013
8:45 AM - 9:20 AM Coffee Break | Platinum & Sterling AB 9:20 AM - 11:00 AM Keynote | Ballroom 1 & 2 11:00 AM - 12:30 PM Lunch | (on your own) 2:30 PM - 3:00 PM Coffee Break | Platinum & Sterling AB 6:00 PM - 7:30 PM Award Ceremony & Conference Closing | Ballroom 1 & 2
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