ICAD 2014 The Eighth International Conference on Axiomatic Design

Program overview:

Time	Sept 24th Wednesday	Time	Sept 25th Thursday	Time	Sept 26th Friday
09:00 to 09:55	Tutorial 1	09:00 to 10:45	Paper session 1	09:30 to 11:00	Paper session 3
10:00 to 10:55	Tutorial 2	10:45 to 11:15	Coffee Break	11:00 to 11:15	Coffee Break
10:55 to 11:15	Coffee Break	11:15 to 13:00	Paper session 2	11:15 to 13:00	Paper session 4
11:15 to 12:10	Tutorial 3	13:00 to 15:00	Lunch and Lecture	13:00 to 14:30	Lunch
12:15 to 13:10	Tutorial 4	15:00	Tour to the Mafra Palace	14:30 to 16:00	Paper session 5
13:15 to 14:30	Lunch	19:30	Gala Dinner	16:00 to 16:15	Coffee Break
14:30 to 15:25	Tutorial 5			16:15 to 18:00	Paper session 6
16:00 to 18:00	Opening session and Keynote			19:30	Dinner
18:00 to 18:30	Welcome drink at the Campus				
20:00	Welcome Dinner				

Registration: The conference organization invites all participants to register during the Wednesday morning, from 9:00 to 12:00. Tutorial participants might register during the coffee break period.

Conference Bus: For your convenience, the conference provides an early bus that leaves the conference hotel every morning.

All tours and dinners have a bus from the campus to the event and from the event to the hotel conference.

Wednesday, September 24

09:00 – 09:55	**Tutorial 1- Introduction to Axiomatic Design Theory,** Mary Kathryn Thompson, Professor, DTU
10:00 – 10:55	**Tutorial 2 - Dealing with redundant designs,** António Gonçalves-Coelho, Professor, FCT-UNL
10:55 – 11:15	Coffee Break
11:15 – 12:10	**Tutorial 3 - The Linearity Theorem and its influence in design parameter selection,** Efrén Moreno Benavides, Professor, UPM
12:15 – 13:10	**Tutorial 4 - Teaching and Learning Axiomatic Design in Several Contexts,** Christopher A. Brown, Professor, WPI
13:15 – 14:30	Lunch
14:30 – 15:25	**Tutorial 5 - Mathematical Elucidations of Axiomatic Design Thru Case Studies,** Hilario Oh, Professor, MIT
16:00 – 18:00	**Opening Session and Keynote** - **Opening:** Fernando Santana, Dean of FCT/UNL - **Keynote: A Solution to Energy and Environmental Problems - Electrification of Ground Transportation Systems (EGTS)**, Nam P. Suh, Inventor of Axiomatic Design, Cross Professor, Emeritus, MIT - **Invited Communication**: **A Portuguese Experience in Simultaneous Engineering**, Henrique Neto, Founder of IBEROMOLDES Group - **Invited Communication**: **Innovation. Customer Focus. Sustainability**, João Paulo Oliveira, President of Bosch Termotecnologia SA - **Closing:** Artur Trindade, Secretary of State of Energy
18:00 – 18:30	Welcome drink at Campus de Caparica
19:00	Bus leaves the Campus, passes at the hotel in the way to the dinner location
20:00	Dinner at Grémio Literário
22:30	Bus leaves from Grémio Literário to the conference hotel

Thursday, September 25

08:30	Bus leaves the conference hotel to the Campus
09:00 – 10:45	**Paper session 1**
10:45 – 11:15	Coffee Break
11:15 – 13:00	**Paper session 2**
13:00 – 15:00	Lunch
15:00	Bus leaves the Campus directly to Mafra Palace
16:00 – 18:00	Reception at Mafra Palace. Visit to the palace and to the library.
18:00	Welcome cocktail
18:30	Concert at Mafra Church
19:30	Gala dinner at Diana's Room
22:00	Bus leaves Mafra to the conference hotel

Friday, September 26

09:00	Bus leaves the conference hotel to the Campus
09:30 – 11:00	**Paper session 3**
11:00 – 11:15	Coffee Break
11:15 – 13:00	**Paper session 4**
13:00 – 14:30	Lunch
14:30 – 16:00	**Paper session 5**
16:00 – 16:15	Coffee break
16:15 – 18:00	**Paper session 6**
18:30	Bus leaves the Campus, passes at the hotel to the dinner location
19:30	Dinner at Ordem dos Engenheiros - OE (The Portuguese Society of Chartered Engineers)
22:00	Bus leaves OE to the conference hotel

Paper session 1 Thursday, September 25, 09:00 – 10:45

Session Chair: Amro Farid

02 Where is the 'Why' in Axiomatic Design? Mary Kathryn Thompson
03 Extroverted, Non-verbal, and pseudo-discomforting stimulators for recognizing targets Masayuki Nakao, Satoshi Nakagawa and Kenji Iino
17 A Theory of Maturity Erik Puik and Darek Ceglarek
22 Axiomatic design of manufacturing processes considering coupling Christopher A. Brown
19 Methodological contradictions solved by the linearity theorem: the vacuum cleaner as a case study Efrén M. Benavides and Joan B. R. Pastor

Paper session 2 Thursday, September 25, 11:15 – 13:00

Session Chair: Efrén Benavides

05 Axiomatic Design Approach for the Conceptual Design of Sustainable Buildings Marianna Marchesi, John E. Fernandez, Dominik T. Matt and Sang-Gook Kim
09 A Review on Information in Design Erik Puik and Darek Ceglarek
12 An Axiomatic Design Standpoint of Socio-political Models for Sustainable Governance Miguel Cavique, João Fradinho, António Gonçalves-Coelho and António Mourão
26 Coupling and Complexity in Additive Manufacturing Processes Mary Kathryn Thompson and Joseph Timothy Foley
11 An Integrated QFD and Axiomatic Design Methodology for the Satisfaction of Temporary Housing Stakeholders **Lindsey R. Gilbert III, Mohammed Omar and Amro M. Farid**

Paper session 3 Friday, September 26, 09:30 – 11:00
Session Chair: Mary Kathryn Thompson

04 Size uniforming process of minute sphere based on axiomatic design Hiroaki Rikihisa and Masayuki Nakao
08 Axiomatic Design & Design Structure Matrix Measures for Reconfigurability & Its Key Characteristics In Automated Manufacturing Systems Amro M. Farid
13 Adaptive Tolerance Allocation to Adjust the Sigma Level Through Minimization of the Information Content David Henriques, José Gomes Requeijo, António Gonçalves-Coelho and António Mourão
25 Design of Thermally Stabile 2D Photonic Crystals for Thermophotovoltaic Systems Heon Ju Lee and Sang-Gook Kim

Paper session 4 Friday, September 26, 11:15 – 13:00
Session Chair: Masayuki Nakao

01 Axiomatic design approach to the design of a device for wire electrical discharge machining Oana Dodun, Nicolae Seghedin, Petru Duşa and Laurenţiu Slătineanu
23 An Axiomatic Design of a Multi-Agent Reconfigurable Manufacturing System Architecture Amro M. Farid and Luis Ribeiro
24 An AD Optimized Method for the Structural Analysis of Pressure Vessels Andrea Girgenti, Cosimo Monti, Alessandro Giorgetti and Paolo Citti
27 Axiomatic Design of a Drop On Demand Deposition Process for Sol-Gel PZT Stephen P. Bathurst and Sang Gook Kim
28 Axiomatic Design of an Improved Egg Carton Manufacturing Process Andelle Kudzal, Zhaolong Zhang and Justin Lagassey

Paper session 5 Friday, September 26, 14:30 – 16:00
Session Chair: Christopher Brown

06 Application of Axiomatic Design to Electric Bicycles Andreas Kreuzer, Bernhard Nitsche and Jussi Kantola
07 Axiomatic Design Principles in Teaching Manufacturing Technology Design - Preliminary Approach Laurenţiu Slătineanu, Margareta Coteaţă, Oana Dodun, Irina Beşliu, Nicolae Seghedin and Lorelei Gherman
10 Conceptual design evaluation of different friction devices through the use of Axiomatic Design Andrea Girgenti, Cosimo Monti, Alessandro Giorgetti and Paolo Citti
15 - 16 Axiomatic Design to Assess Influences Affecting Pedagogic-Learning in the Courses Engineering Materials I and Fluid Mechanics I (Part 1 and 2) Mirzi D. Llego-Betasolo

Paper session 6 Friday, September 26, 16:15 – 18:00
Session Chair: Paolo Citti

14 Business Interoperability: Dyadic supply chain process decomposition using Axiomatic Design Pedro Espadinha-Cruz, António Gonçalves-Coelho, António Mourão and António Grilo
18 Six Sigma roadmaps and the degrees of innovation – An explanation based on the Axiomatic Design Theory Pedro Alexandre Marques, José Gomes Requeijo, Pedro Manuel Saraiva and Francisco Frazão Guerreiro
21 An Axiomatic Design Based Approach on Analysis of Alternative Route(s) to the Congested Mendana Highway of Solomon Islands Mirzi D. Llego-Betasolo, Jayson George Hallu and Justin Kubul
20 Axiomatic Design as a consultancy tool in product design Joan B. R. Pastor and Efrén M. Benavides