



WSEAS and EUROPMENT Conferences
Joint Program

**International Conference on APPLIED, NUMERICAL and
COMPUTATIONAL MATHEMATICS (ICANCM'11)**

**International Conference on COMPUTERS, DIGITAL
COMMUNICATIONS and COMPUTING (ICDCC'11)**

**International Conference on APPLIED SOCIAL SCIENCE,
SOCIAL ECONOMY and DIGITAL CONVERGENCE (IC-
ASSSE-DC'11)**

**4th International Conference on MANUFACTURING
ENGINEERING, QUALITY and PRODUCTION SYSTEMS
(MEQAPS '11)**

**4th International Conference on ENVIRONMENTAL and
GEOLOGICAL SCIENCE and ENGINEERING (EG '11)**

**International Conference on ENERGY SYSTEMS,
ENVIRONMENT, ENTREPRENEURSHIP, INNOVATION
(ICESEEI'11)**

**4th International Conference on MARITIME and NAVAL
SCIENCE and ENGINEERING (MN '11)**

Barcelona, Spain, September 15-17, 2011



NOVOTEL BARCELONA SANT JOAN DESPÍ

Ficha técnica / Factsheet

Habitaciones / Accomodation

Novotel Barcelona Sant Joan Despí situado estratégicamente al lado de la autopista AP-2, a las puertas del centro de negocios "Diagonal Pedralbes", junto a los ESTUDIOS de TV3, a 5 minutos del Palacio de Congresos y a 10 minutos del aeropuerto. Conectado directamente con el centro de Barcelona (Plaza Francesc Macià): 10 min. en trambaix (Estación Sant Martí de L'Erm a 200 m. del hotel).

Novotel Barcelona Sant Joan Despi is strategically located next to the A2 Motorway, the "Diagonal Pedralbes" Business center and the TV3 television studios. It is also situated just 5 minutes from the Congress Hall and 10 minutes from the airport. It has direct connection with the city centre of Barcelona (Francesc Macià Square): 10 mins, using the trambaix (Sant Martí de L'Erm station 200m from the hotel)

161 habitaciones que incluyen:

4 habitaciones adaptadas para discapacitados
Disponibles habitaciones para no fumadores
Cama Queen Size
Habitaciones insonorizadas
Aire Acondicionado
TV con canales internacionales
Minibar
Amplia mesa de trabajo
Acceso a Internet de banda ancha
Cine a la Carta y canales internacionales
Caja Fuerte

161 rooms including:

6 rooms adapted for disabled clients
Non smoking rooms available
Queen Size Bed
Total Soundproofing
Air Conditioning
TV with International Channels
Minibar
Wide working Table
Broadband access to internet
Film on Demand and International Channels
Safety Box

► Accesos/Access:

- **Desde/ From Barcelona (AP-2)** • Dir. Tarragona - Lleida • Salida/ Exit Sant Just - Sant Joan Despí.
- **Desde/ From Tarragona (AP-7) / Desde/ From Lleida/Zaragoza (AP-2)** • Dir. Barcelona Av. Diagonal • Salida/ Exit Sant Just - Sant Joan Despí.
- **Desde/ From Girona / Francia (AP-7)** • Dir. Tarragona • Salida/ Exit A2 Barcelona Diagonal • Salida Sant Just - Sant Joan Despí.
- **Desde/ From Girona / Francia (AP-7)** • Dir. Barcelona Ronda de Dalt • Salida/ Exit 10 bis dirección Tarragona • Salida/ Exit Sant Just - Sant Joan Despí.



NOVOTEL BARCELONA SANT JOAN DESPÍ

C/ De la TV3, 2

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e-mail: H3289@accor.com

www.novotel.com - www.accorhotels.com





Salones *Meeting facilities*

Disponemos de 4 salones con una superficie total de 340 m² y una capacidad para 200 personas. Todas las salas de reunión son diáfanas y con luz natural e incluyen aire acondicionado, padex, retroproyector de diapositivas, proyector LCD y acceso a Internet.

The hotel has 4 meeting rooms with 340 m² of area available and capacity to accommodate 200 people. All the meeting rooms are diaphanous, bright and have air conditioning, Flipchart, overhead and slide projector, LCD projector and broadband access to Internet.

Salas de reuniones y Conferencias *Meeting & Conference rooms*

Nombre <i>Name</i>	Area <i>Area (m²)</i>					
JUJOL A	55	30	20	14	25	30
JUJOL B	75	60	48	28	36	60
JUJOL C	130	100	52	40	48	80
FONTSANTA	77,5	45	30	24	30	50
JUJOL A + JUJOLB	130	120	80	35	50	110
JUJOL B + JUJOLC	205	180	90	50	60	140
JUJOL A+B+C	260	200	135	70	-	170

Restauración *Food & Beverage*

- **Restaurante Claravía**
Disfrute de la mejor cocina tradicional donde la luminosidad, decoración y colores cálidos crean un ambiente perfecto.
- **Bar**
El lugar idóneo para disfrutar de su cóctel preferido en nuestra terraza, al lado de la piscina o ver su deporte favorito en una gran pantalla.

- **Claravía Restaurant**
Enjoy the best traditional cooking in a luminous, modern and peaceful ambient. Service at terrace in summer season.
- **Bar**
The best place to enjoy a cocktail in our terrace close to the swimming-pool or to watch your favourite sport in a big screen.



Otros servicios *Leisure Facilities*

- Business Center
- Children's Corner
- Terraza
- Piscina
- Parking privado cubierto
- Servicio de lavandería y limpieza en seco

En Novotel, el alojamiento y el desayuno de hasta dos niños menores de 16 años que compartan habitación con sus padres, son gratuitos.



- Business Center
- Children's Corner
- Terrace
- Swimming-Pool
- Covered Private Car Park
- Laundry and dry cleaning service

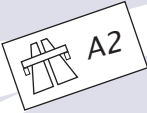
At Novotel, children under the age of 16 have free lodging and breakfast if they share room with their parents.



Salida 2
ST JUST
SANT JOAN DESPI



BARCELONA
AV. DIAGONAL



TARRAGONA



Esplugues
de Llobregat

TV3

C. de la TV3

Residencial
Sant Joan

Futur
Hospital
Commercial

C. de Fructuos
Celabert

C. de Jacint Verdaguer

Pl. de
l'Estatut

Parc de la
Fontsanta

Av. de la Mare de Deu de Montserrat

C. de Saint Marti de l'Erm

Tennis
Sant Joan

C. del Marqués de Monsitrol

Avinguda de Barcelona

1st Day, September 15, 2011

Registration: 08:00-08:45

Plenary Lecture 1: 08:45-09:30, Room A'



Researches Regarding the Improvement of Workpieces Surface Finish by Machining through Superfinishing Process
by Assoc. Prof. Badea Lepadatescu, Transilvania University of Brasov, ROMANIA.

Plenary Lecture 2: 09:30-10:15, Room A'



Modeling, Stability Analysis and Synthesis of Semiactive Control Strategies for Vibration Mitigation in Structures
by Prof. Hamid Reza Karimi, University of Agder, NORWAY.

Plenary Lecture 3: 10:15-11:00, Room A'



Enhancing Maritime Officers Opportunities for Managerial Level Positions
by Prof. Eugen Barsan, Constantza Maritime University, ROMANIA.

Coffee-break: 11:00-11:30

CONFERENCE ROOM A': 11:30-14:00

EG Session: Geological Science and Environmental Engineering

Chair: Nakorn Tippayawong, Paola Gattinoni

Research on Expansion of the Steel Base Materials	Adela Susana Todorut, Teodor Heput, Socalici Ana, Flori Mihaela, Crisan Eugen	661-196
The Contribution of Recharge in Mountain Area to Groundwater in the Lombardy Plain Aquifer (Northern Italy)	Daniele Cremonesi, Paola Gattinoni, Laura Scesi	661-145
Evaluation of Recrystallization Limestone in Laybid Mine, Esfahan, Iran	Javad Tabatabaei	661-114
Application of Biomass Gasification System as a Sustainable Energy Technology to Improve Efficiency and Reduce Smoke Emission from Sterilization of Mushroom Growing Substrates	N. Tippayawong, C. Chaichana, A. Promwungkwa, P. Rerkkriangkrai	661-111
Connectivity of an Alluvial Aquifer: From Theory to Practice	Paola Gattinoni	661-148
In-Situ Predictive Maintenance by Vibration Analysis for Cryogenic Pilot Plant for Tritium and Deuterium Separation	Sorin Gherghinescu, Gheorghe Popescu	661-157
An Analysis on the CO2 Reduction by Heat Pump Systems for Allelectric Houses in Korea	Sung-Wook Hwang, Hoon Jung, Hwan-Seon Nah, Seung-Hyun Jung, Woo-Keun Kwak, Noma Park, Jung-Hoon Kim	661-215

CONFERENCE ROOM B': 11:30-14:00

MEQAPS Session: Industrial Systems Engineering

Chair: Calin Gurau, Elena Scutelnicu

An Immersive Virtual Reality Training System for Mechanical Assembly	Amaury Peniche, Christian Diaz, Helmuth Trefftz, Gabriel Paramo	661-155
Supply Chain Organization and Management in French SMEs: An Exploratory Study	Calin Gurau	661-210
Behaviour Simulation of Aluminium Alloy 6082-T6 during Friction Stir Welding and Tungsten Inert Gas Welding	Dan Birsan, Elena Scutelnicu, Daniel Visan	661-154
Research on Friction Stir Welding and Tungsten Inert Gas assisted Friction Stir Welding of Copper	Elena Scutelnicu, Dan Birsan, Radu Cojocaru	661-153
The Importance of Preventive Maintenance in terms of Reliability in Aviation Sector	Emre Kiyak	661-104
Risk Assessment of Radiological and Non-radiological Hazard for Accident Prevention in Decommissioning Activities	Hyeon-Kyo Lim, Kwan-Seong Jeong, Kune-Woo Lee	661-206

The Profitability of Companies Operating in the Czech Stone Cluster and its Impacts	Jan Hribik	661-208
Robust Quality Analysis Using Coarsely Discretized Measurements	Maxime Deregnacourt, Martin Kozek	661-203
Investigating the Influence of TQM Elements on the Overall Performance of Jordanian Municipalities Case Study: Greater Irbid Municipality GIM	Mohammad D. Al-Tahat, Tayseer A. Daradkeh	661-152

CONFERENCE ROOM A': 14:00-17:00

MEQAPS Session: Quality Assurance and Production Systems

Chair: Simona Duicu, Diamanta Benson-Karhi

Research on Quality of Steel for Production of Rolling Cylinders	Adina Pauca, Teodor Heput, Virginia Socalici, Ana Josan	661-187
Research on Desulphurization of Steel with Calcium Aluminate Synthetic Slag with Addition of Titanium Oxide	Adriana Putan, Teodor Heput, Lucia Vilceanu, Vasile Putan	661-177
Estimation of a Normal Process Variance from Measurements with Large Round-Off Errors	Diamanta Benson-Karhi, Ellite Dvir, Itai Regev, Edna Schechtman	661-252
Contributions on the Study of Internal Flaws in Continuous Cast Semi-Finished Products	Erika Popa, Teodor Heput, Erika Ardelean, Ana Socalici	661-183
Research on the Influence of Binders with Basic Data Base on Compressive Strength of Pellets	Eugen Crisan, Marius Ardelean, Lucia Vilceanu, Teodor Heput	661-186
Researches on the Influence of Gas Content from the Steel on its Quality	Florin Dragoi, Ana Socalici, Teodor Heput, Erika Ardelean	661-176
An Overview of Critical Chain applied to Project Management	Francisco Correia, Antonio Abreu	661-211
Mathematical Model used for the Vibration Insulation within a Car	Ionatan Popa, Eugenia Secara, Leonte Petric, Violeta Guiman, Carol Ambrus, Vlase Sorin	661-193
Research on the Recovery of Oil in the Iron and Steel Mill Scale	Maria Laura Strugariu, Sorina Serban, Erika Ardelean, Ana Socalici, Teodor Heput	661-198
Intelligent Manufacturing and Computer Integration Manufacturing Systems	Simona Sofia Duicu, Luminita Popa	661-205

CONFERENCE ROOM B': 14:00-17:00

ICESEEI-MN Session: Energy Systems, Environment and Naval Science

Chair: Vassilis Gekas, Loredana Anne-Marie Badescu

Recovery of Essential Oils from Carobs through various Extraction Methods	A. Orphanides, V. Goulas, M. Chrysostomou, V. Gekas	661-097
The Identification of Hazards to the Selected Source of Emergency Water Supply	Alena Bumbova, Milan Caslavsky, Frantisek Bozek	661-288
Research on the Emission of Dust Resulting from Sanding Process for Solid Spruce, Beech and MDF Panel	Ilie Darii, Loredana Anne-Marie Badescu	661-296
Intelligent Predictive Maintenance for Itapebi Hydro-Generator	Luis Claudio Ribeiro, Marco Aurelio M. Gutierrez, Elias G. Da Silva, Luiz Eduardo Borges Da Silva, Erik L. Bonaldi, Levy Ely De L. De Oliveira, Jonas Guedes Borges Da Silva E Germano Lambert-Torres	661-228
Conceptual Framework: Systems and Sustainability	Nooshin Esmaeili	661-233
Corporate Environmental Responsibility and Corporate Environmental Performance: An Empirical Approach using Panel Data Estimator	Robert Aurelian Sova, Ion Stancu, Laurentiu Fratila, Anamaria Diana Sova, Christophe Rault	661-289
An Idea for a New Modeling Approach of Climatic Changes. A Correlation Study for Cyprus	Z. Pittaki, A. Orphanides, V. Gekas	661-098
Corrosion in Spanish Boats	Jose A. Orosa, Juan J. Galan, Mar Toledano	661-144
Information Model Sustainable Development of Nautical Tourism in Republic of Croatia 2010-2015	Vinko Viducic, Damir Boras, Ljiljana Viducic	661-115
The Influence of Characterizing Factors on Port Performance, Measured by Operational, Financial and Efficiency Indicators	Vitor R. Caldeirinha, J. Augusto Felicio, Joana Coelho	661-131

Coffee-break: 17:00-17:30

2nd Day, September 16, 2011

CONFERENCE ROOM A': 09:00-11:00

ICANCM Session: Numerical Techniques

Chair: Yezid Donoso, Si Pom Kim

Numerical Model for an IWRC Bending over Sheave Problem and its Finite Element Solution	Cengdz Erdonmez, Cevat Erdem Dmrak	661-287
Counting Roots of Random Polynomial Equations in Small Intervals	Efraim Shmerling	661-299
Unavailability and Cost Minimization in a Parallel-Series System Using Multi-	Ferney A. Maldonado-Lopez, Jorge Corchuelo, Yezid Donoso	661-216

Objective Evolutionary Algorithms		
Multi-Objective Evolutive Algorithm for Efficient Coverage Problem of WSN Using a SPEA Approach	German A. Montoya, Horacio Riveros Ardila, Sebastian Rivera Diaz, Yezid Donoso	661-213
Coverage Problem Approach Using Multi-Objective Scheme	German A. Sotelo, Steven J. Rigby, Yezid Donoso	661-174

CONFERENCE ROOM B': 09:30-11:00

IC-ASSSE-DC Session: Social Sciences

Chair: Raluca Felicia Toma

A Comprehensive Survey of Instructional Technology Integration into Educational Technology	Baharak Makki, Bahador Makki	661-249
Enhancement of String Matching Queries on Albanian Names for Kosovo Civil Registry	Blerim Rexha, Valon Raca, Agni Dika	661-290
Critical Discourse Analysis of the 'War on Terror' – Blairian Discourse and Philosophical Framework	Ioana Laura Raicu	661-281
The Semantics of the Term 'Wisdom' in Biblical Writings	Raluca Felicia Toma	661-280

Coffee-break: 11:00-11:30

CONFERENCE ROOM A': 11:30-14:30

MEQAPS Session: Manufacturing Systems Engineering

Chair: Badea Lepadatescu, Jean-Francois Chatelain

Researches Regarding the Improvement of Workpieces Surface Finish by Machining through Superfinishing Process	Badea Lepadatescu, Adela-Eliza Dumitrascu, Ioan Enescu, Anisor Nedelcu	661-191
A Study for Tool Deflection in using Actual Shape	Hae-Soo Lee, Jin-Ah Kim, Byung-Hun Park, Tae-Hoo Kim, Eon-Chan Jeon, Hyunsu Kim	661-256
Effect of Tool Geometry Special Features on Cutting Forces of Multilayered CFRP Laminates	J.-F. Chatelain, I. Zaghbani	661-151
A Comparison of the Distortion of Machined Parts Resulting From Residual Stresses within Workpieces	J.-F. Chatelain, J.-F. Lalonde, A. S. Tahan	661-150
Evaluation of using Advanced Manufacturing Technologies and Clusters of Advanced Technologies	Jan Hribik	661-207

Productivity Enhancement in a Wood Furniture Manufacturing Factory by Improving Work Procedures and Plant Layout	Korrakot Yaibuathet Tippayawong, Thitima Prapasirisulee	661-124
Architecture of Knowledge Management in the Manufacturing Process	Luiza Daschievici, Daniela Ghelase, Vasile Marinescu	661-237
Effects of Temperature in Relation to Sheet Metal Stamping	Paul C. Okonkwo, Michael P. Pereira, Georgina Kelly, Bernard F. Rolfe	661-163
Hardware-in-the-Loop Simulation of an Active Heave Compensated Drawworks	Sanin Muraspahic, Lawk Farji, Yousef Iskandarani, Hamid Reza Karimi	661-245
Determination of the Forming Conditions of fitting Pipes Using the Bulging Processes	SeungGul Baek, TaeGul Kim, SeungKyu Kim, TaeHo Kim, YoungChul Park	661-257
A Study for FCAW Welding Fabrication Characteristics of Marine Structure	Sung-Hwan Jee, Jung-Do Chun, Min-Sik Han, Eon-Chan Jeon	661-258

CONFERENCE ROOM B': 12:00-14:30

ICDCC Session: Computers and Communications

Chair: Marc Jansen, Bara Adela

Rule-based Genetic Algorithm for In-Service Training Curriculum Plan	Didem Abidin, Sen Cakir	661-269
DNA Sequence Alignment: Hybrid Parallel Programming on a Multicore Cluster	Enzo Rucci, Armando De Giusti, Franco Chichizola, Marcelo Naiouf, Laura De Giusti	661-284
Investigation on OLSR Routing Protocol Efficiency	Jiri Hosek, Karol Molnar	661-265
Distributed Computing Environment for Community and Social Health Studies	Lucian Milea, Adrian Zafiu, Valentin Voiculescu, Mihail Teodorescu	661-298
What Does IT Service Management Look Like in the Cloud? An ITIL Based Approach	Marc Jansen	661-168
Comparison of Linear Microwave Antenna Arrays for Fixed Communication Systems	Mario Reyes-Ayala, Javier Cruz-Puebla, Guillermo Perez-Lopez, Edgar Alejandro Andrade-Gonzalez, Jose Alfredo Tirado-Mendez	661-267
QDI Decomposed DIMS Method Featuring Homogeneous/Heterogeneous Data Encoding	Padmanabhan Balasubramanian, Nikos E. Mastorakis	661-225
Data Level's Integrated Model for the National Grid Company's Decision Support System	Simona Vasilica Oprea, Adela Bara, Victor Vladucu, Anda Velicanu	661-277
Parallel Suboptimal Heuristic Search for Finding a W-Admissible Solution. Performance Analysis	Victoria Sanz, Marcelo Naiouf, Armando De Giusti	661-285

Coffee-break: 14:30-15:00

19:00: CONFERENCE BANQUET

3rd Day, September 17, 2011

CONFERENCE ROOM A': 09:00-11:30

EG Session: Environment and Development

Chair: Ahmad Rasdan Ismail, Marie Dvorackova

Multiple Linear Regressions of Environmental Factors toward Discrete Human Performance	A. R. Ismail	661-103
Characterisation of Fine and Coarse Atmospheric Aerosols at the Measuring Sites in Riga City Centre, Latvia	Agnese Osite, Arturs Viksna, Janis Kleperis, Iveta Steinberga	661-202
Sand, Gravel, Clay, and Coal Combustion Byproducts used as a Filter Material for Phosphorus Removal in Small Scale On-Site Wastewater Systems - An Overview	Figene Ahmedi, Petko Pelivanoski	661-161
Behavior of Polyvinyl Alcohol in Anaerobic Environment after (Pre)Treatment with Chemical Oxidation	Marie Dvorackova, Jan Ruzicka, Kim Dung Tu	661-212
Biodegradability of Aliphatic-Aromatic Copolyester in Aqueous Anaerobic and Aerobic Environments	Marie Dvorackova, Petr Stloukal, Marek Koutny, Marcela Gregovska	661-251
Evaluation on the Perception of the Population in the Targoviste Municipality Concerning the Environmental Condition	Radita Alexe	661-293
Save the Environment by Building Ecological Passive Houses	Ruxandra Crutescu	661-204
Phytoremediation of Lead with Buttonwood in Urban Polluted Soils	Seyed Armin Hashemi, Setareh Koochaki Chenani	661-106

CONFERENCE ROOM B': 09:00-11:30

MEQAPS Session: Complex Systems Engineering

Chair: Hamid Reza Karimi, Yung-Chia Chang

Kinematics of a Variable Compression Ratio Engine	Adrian Gabor, Paul Grigore, Eugenia Secara, Leonte Petric, Ioan-Serban Radu	661-192
Modeling and Simulation of an Active Heave Compensated Draw-Works	Ahmed A. Walid, Peter Gu, Yousef Iskandarani, Hamid Reza Karimi	661-247

Prediction of Inventory Levels and Capacity Utilization with Artificial Neural Networks	Bernd Scholz-Reiter, Florian Harjes, Amir Kaviani Mehr	661-142
Prioritizing 5S Activities by Kano Model For a Semiconductor Wafer Fabrication	Chuan-Yung Chen, Yung-Chia Chang	661-128
Considerations on Knowledge Management in Cutting Process	Daniela Ghelase, Luiza Daschievici, Vasile Marinescu	661-238
Theoretical Research on the Failure Mode and Effects Analysis (FMEA) Method and Structure	Florina-Cristina Filip	661-189
Towards Manufacturing Concepts Unity	Ionel Botef	661-127
Managing Manufacturing Enterprise System and CAPP System Complexity: An Investigatory Perspective	Ionel Botef	661-133
Effect of Slip Factor in Hydrodynamic Behaviors of Basic Micro-Flows Problems	K. Bataineh, A. F. Khadrawi, M. A. Al-Nimr	661-171

Coffee-break: 11:30-12:00

CONFERENCE ROOM' 12:00-14:00

ICANCM Session: Applied Mathematics

Chair: Yezid Donoso, Si Pom Kim

A NN-based Model for Time Series Forecasting in Function of Energy Associated of Series	C. Rodriguez Rivero, J. Pucheta, J. Baumgartner, M. Herrera, D. Patino, B. Kuchen	661-304
A Multi-Objective Routing Protocol for a Wireless Sensor Network Using a SPEA2 Approach	Carlos Lozano-Garzon, Yezid Donoso	661-217
Interference and Shortest Path Optimization on a ZigBee Sensors Network Application	Fabio Jauregui, Ruben Guerrero, Darwin Rodriguez, Yezid Donoso	661-173
A Neural Network Algorithm to Simplify 2D Meshes	Francisco-M. Martinez, Jose-L. Oliver, Leandro Tortosa, Jose-F. Vicent	661-234
Thermal-Structural Coupled Field Analysis for High Pressure and Temperature 3-Way Forged Ball Valve	Si Pom Kim, Joon Ho Lee, Joon Hong Park, Rock Won Jeon, Young Chul Park	661-262

Coffee-break: 14:00-14:30