MESSAGE FROM THE GENERAL CO-CHAIRS

It is with a great honour and pride that we welcome you in Ajaccio (France) for the IEEE International Symposium on Industrial Electronics (IEEE-ISIE) to be held in the "Palais des Congrès & Expositions" on May 4-7, 2004. As you probably know, ISIE is among the major annual events of the IEEE Industrial Electronics Society (IES) one of the most internationalised society of the IEEE. It is the first time than both IES and ISIE are coming in France and especially in its Mediterranean island, Corsica.

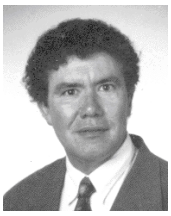
The conference venue, Ajaccio (or Aiacciu), has been chosen as the main city of this beautiful Mediterranean island and the only place in Corsica having such nice congress facilities. Corsica has a real cultural heritage since it has been always at the crossroad of civilisations. During the first millennium, Corsica was occupied by Phoenicians, Etruscans, Carthaginians, Romans, Byzantines and Saracens. During the first part of the second millennium, Corsica was administrated by Pisa and then by Genova before being annexed to the France Kingdom in 1768. The island, with 180km long and 80km width, has both mountain (max. 2710m) and sea-side (more than 500km of coast) climates with a mean minimum temperature of 8°C and a maximum of 22°C. Corsica is a well-known tourist destination with very good boat and plane connections to the main cities in France and also in Italy.

The International Symposium on Industrial Electronics (ISIE) is an interesting forum of discussion for engineers and scientists coming from all around the world. It is also very particular because of its inter-disciplinary character since industrial electronics is a mixture of technologies from power electronics to actuators and system integration passing through the computer and control systems and the industrial information technology. The symposium is organized with the sponsorship of both the IEEE Industrial Electronics Society (IES) and the IEEE France Section which is around 4000 members with 250 members for the IES. It is interesting to note that for IES 2004, a maximum of young engineers and scientists have been involved in both submitting and presenting papers and also in the symposium organization: it is very important for the future of IES.

We would like to thank all the individuals who help a lot in the organization: the track chairmen who did a great job in session programming, the so many reviewers who selected high standard papers, the technical program co-chairmen, the special session co-chairmen, the tutorial co-chairmen and all the others who make the venue in Ajaccio possible. We would like to express our gratitude to the local authorities in Corsica: the "Communauté Territoriale de Corse", the "Conseil Régional de Corse du Sud", the Major of Ajaccio, the Chamber of Commerce and Industry of Ajaccio and all the likeable team of the "Palais des Congrès & Expositions". Without them, all what you are going to see during ISIE 2004 would not have been possible. Finally, we thank all the authors and the attendees of ISIE 2004 because the expected success of the symposium is yours!

Enjoy ISIE 2004, enjoy Ajaccio, enjoy Corsica and "pace e salute"!

"Gherardu-Andria" Capolino and Carlo Cecati
General co-chairs ISIE 2004



MESSAGE FROM THE TECHNICAL PROGRAM CO-CHAIRS

The annual International Symposium of IEEE Industrial Electronics Society, ISIE, is one of the major event of the worldwide community working in the field of industrial electronics and its applications. It was therefore for us a great honour and a real pleasure to be responsible for the technical program of ISIE 2004.

The technical program is organized in four tracks: Sensors, Actuators and System Integration (TASI), Computer and Control Systems (TCCS), Industrial Information Technology (TIIT), Power Electronics (TPE) and as well as special sessions (SS) dedicated to Organic Electronics, Control of AC Machines and Genetic Algorithms and a Student Forum (SF) organized with the support of IES student activities promoting specific grants for some of them.

The different topics of each technical track give an overview of the industrial electronics in the world at the beginning of the 21st century and what can be say in few words is that multidisciplinary, mixed systems, control, energy optimisation are some of the keywords that can summarize the different presentations that will be given in the new "Palais des Congrès & Expositions" of Ajaccio.

282 papers from 45 countries have been selected from a pool of 418 regular submissions showing the increasing interest for IES symposium. The final technical program is organized in 49 sessions with oral presentation (including 3 special sessions), 2 plenary talks, and a student forum poster session. It represents the integrated effort of many individuals, namely, authors, reviewers, special session organizers, and the Technical Program Committee that we thank for their contribution to making the success of ISIE 2004.

Carlos Couto and Richard Grisel
Technical Program Co-chairs ISIE 2004

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PROGRAM AT A GLANCE

Session Schedule											
			J.J. Rousseau 2	Claude Papi 1	Fred Scamaroni	Daniele Casanova	Claude Papi 2	J.J. Rousseau 1	Henri Matisse
Tuesday 4	9h30	12h00	Opening session : Auditorium of "Palais des Congrès & Expositions"						
	14h00	15h30	TCCS1	TCCS2	TIIT1	SSO-1	SSAC	TPE1	TPE2
	16h00	17h30	TCCS1	TCCS2	TIIT1	SSO-1	SSAC	TPE1	TPE2
Wednesday 5	08h30	10h00	TCCS3	TCCS4	TASI1	SSO-2	TPE3	TPE4	TPE5
	10h30	12h00	TCCS3	TCCS4	TASI1	SSO-2	TPE3	TPE4	TPE5
	14h00	15h30	TCCS5	TCCS6	TASI2	SFO	TPE6	TPE7	TPE8
	16h00	17h30	TCCS5	TCCS6	TASI2	SFO	TPE6	TPE7	TPE8
Thursday 6	08h30	10h00	TCCS7	TCCS8	TASI3	TIIT2	TPE9	TPE10	TPE11
	10h30	12h00	TCCS7	TCCS8	TASI3	TIIT2	TPE9	TPE10	TPE11
	14h00	15h30	TCCS9	TIIT3	TASI4	TIIT4	TPE12	TPE13	TPE14
	16h00	17h30	TCCS9	TIIT3	TASI4	TIIT4	TPE12	TPE13	TPE14
Friday 7	08h30	10h00	TCCS10	TIIT5	TASI5	SSGEN	TPE15	TPE16	TPE17
	10h30	12h00	TCCS10	TIIT5	TASI5	SSGEN	TPE15	TPE16	TPE17
	14h00	15h30	TCCS11	TASI7	TASI6	TIIT6	TPE18	TPE19	TPE20
	16h00	17h30	TCCS11	TASI7	TASI6	TIIT6	TPE18	TPE19	TPE20

TASI : Sensors, Actuators and System Integration

TPE : Power Electronics

TCCS: Computer and Control Systems

SS : Special Sessions

TIIT : Industrial Information Technology

SF : Student Forum

TUESDAY 4TH

09h30 – 12h00
Opening session : Auditorium of "Palais des Congrès & Expositions"
Keynote lecture 1:
Industrial Electronics in the 21st century, Okyay Kaynak
Keynote lecture 2:
High speed trains: hopes and achievements, Michel Poloujadoff, Humberto Henao

TCCS – 1 **Process control**
Co-Chairs F. Fnaiech (Tunisia)
Room / Time Jean-Jacques Rousseau 2 14h00

14h00	**Neuro-adaptive modeling and control of a cement mill using a sliding mode learning mechanism** Andon V. Topalov, Okyay Kaynak
14h30	**Accurate temperature control of a ultrasonic cell using a microcontroller** Abdessamad Malaoui, Kamal Quotb, Mohamed Benhayoun, Mohamed Ankrim
15h00	**Embedded temperature web controller based on Internet** Huang Jiao, Liu Jianguo, Gao Min
15h30	**Break**
16h00	**Excess welding area localisation and profile modelling on distorted surface in turbine component repairing process** Hao Zeng, Huaizhong Li, Xiaoqi Chen, Kiah Mok Goh
16h30	**Decision support system for short term statistical feedback control on a semiconductor process** Sébastien Gebus, Mika Ruusunen

TUESDAY 4TH

09h30 – 12h00
Opening session : Auditorium of "Palais des Congrès & Expositions"
Keynote lecture 1:
Industrial Electronics in the 21st century, Okyay Kaynak
Keynote lecture 2:
High speed trains: hopes and achievements, Michel Poloujadoff, Humberto Henao

TCCS – 2 **Robotics systems**
Co-Chairs J.Y. Hung (USA)
Room / Time Claude Papi 1 14h00

14h00	**Optimal path planning on 3D space using a DNA computing algorithm** Chun-Liang Lin, Nanjou Lin, Jr-Rung Lin, Horn-Yong Jan
14h30	**Time optimal trajectory planning for a robot system under torque and impulse constraints** Bang-Hyun Cho, Jae-Mu Yun, Jang-Myung
15h00	**Model gantry crane with dynamic feedback swing control** Lance Benn, Bruce Burton, James Ireland, Sen Wang, Ron Harley
15h30	**Break**
16h00	**Neural network based model reference adaptive control structure for a flexible joint with hard non-linearities** Hicham Chaoui, Pierre Sicard, Ahmed Lakhsasi, Howard Schwartz
16h30	**Control of the trajectory of a hexapod robot based on distributed Q-learning** Youcef Zennir, Pierre Couturier

TUESDAY 4TH

09h30 – 12h00
Opening session : Auditorium of "Palais des Congrès & Expositions"
Keynote lecture 1:
Industrial Electronics in the 21st century, Okyay Kaynak
Keynote lecture 2:
High speed trains: hopes and achievements, Michel Poloujadoff, Humberto Henao

TIIT – 1	**Networked control systems - Communication network**
Co-Chairs	D. Lim (New Zealand), V. Sempere (Spain)
Room / Time	Fred Scamaroni 14h00

14h00 **Guaranteed cost control and its application to networked control systems**
Shanbin Li, Zhi Wang, Youxian Sun

14h30 **Analysis of communication alternatives over public networks for a supervision and control system of metropolitan scope**
Víctor Sempere, Javier Silvestre, Teresa Albero

15h00 **Generalized distributed control system based on CAN bus for wind diesel hybrid systems**
Rafael Sebastián, Fernando Yeves, Manuel Castro

15h30 **Break**

16h00 **Bandwidth adaptation for WLAN media streaming**
Harry Li, Yanghua Zhu

16h30 **Wireless LAN network management**
Harry Li, Guangjing Chen

17h00 **Modelling and simulation of a distributed battery management system**
Darren Lim, Adnan Anbuky

TUESDAY 4TH

09h30 – 12h00
Opening session : Auditorium of "Palais des Congrès & Expositions"
Keynote lecture 1:
Industrial Electronics in the 21st century, Okyay Kaynak
Keynote lecture 2:
High speed trains: hopes and achievements, Michel Poloujadoff, Humberto Henao

SSO – 1 **Organic electronics**
Co-Chairs J.-P. Moliton (France)
Room / Time Daniele Casanova 14h00

14h00	**Organic photovoltaic cells based on organic discotic materials** Samuel Archambeau, Pierre Destruel, Isabelle Seguy, Mimoun Oukachmih, Pascale Jolinat, Harald Bock
14h30	**2D polylmeric devices with photonic band gap (PBG) for telecommunications at 1.55µm** Elodie Pialat, Thierry Trigaud, Marc Thevenot, Jean-Pierre Moliton
15h00	**Organic electronic devices using regioregular Poly(3-Octylthiophene) as an semiconducting material** Jérôme Ballet, René Leguerre, Didier Delabouglise, François Olivié, Gérard Sarrabayrouse, Augustin Martinez
15h30	**Break**
16h00	**Relationship between structure and performance in pentacene-based thin-film transistors** Gilles Horowitz, Wolfgang Kalb, Mohammad Mottaghi, Philippe Lang
16h30	**Self-assembled LbL opto-electronics from maleic anhydride copolymers** Gabriela Aldea, Jean-Michel Nunzi, Hector Gutierrez, Gabrielle-Charlotte Chitanu, Mamadou Sylla, Bogdan C Simionescu
17h00	**Advances in polymer based photonics technology: microlasers, electrooptic devices, new concepts** Joseph Zyss, Sophie Brasselet, Rolland Hierle, Isabelle Ledoux, Nguyen Than

TUESDAY 4TH

09h30 – 12h00
Opening session : Auditorium of "Palais des Congrès & Expositions"
Keynote lecture 1:
Industrial Electronics in the 21st century, Okyay Kaynak
Keynote lecture 2:
High speed trains: hopes and achievements, Michel Poloujadoff, Humberto Henao

SSAC	**Control of AC machines**	
Co-Chairs	F. Betin (France)	
Room / Time	Claude Papi 2	14h00

14h00	**An improved sensorless speed control of indirect stator flux-oriented induction motor drives** Mohamed Boussak, Kamel Jarray
14h30	**Optimized transient simulation of moving and rotating electrical machines** Bernd Aschendorf
15h00	**Robust control of an induction machine drive using a time-varying sliding surface** Arnaud Sivert, Franck Betin, Abdel Faqir, Gérard-André Capolino
15h30	**Break**
16h00	**Passivity-based control with robust observer for induction motor** Abdellah Mansouri, Mohammed Chenafa, Abderrahmane Bouhenna, Abdelkader Belaidi, Erik Etien
16h30	**Observer-based sensorless field-oriented control of induction machines** Reza Kiani Nezhad, Babak Nahidmobarakeh, Franck Betin
17h00	**Control of an unconventional rotary-linear brushless machine** Paolo Bolognesi, Alberto Landi, Lucio Taponecco

TUESDAY 4TH

09h30 – 12h00
Opening session : Auditorium of "Palais des Congrès & Expositions"
Keynote lecture 1:
Industrial Electronics in the 21st century, Okyay Kaynak
Keynote lecture 2:
High speed trains: hopes and achievements, Michel Poloujadoff, Humberto Henao

TPE – 1 **Power quality & active filtering - 1**
Co-Chairs W. Koczara (Poland), R. Teodorescu (Denmark)
Room / Time Jean-Jacques Rousseau 1 14h00

14h00	**A novel topology of PWM static Var compensator based on the concept of DC flyback converter** Yu Hongxiang, Lin Min, Ji Yanchao
14h30	**A new control algorithm to compensate the three phase shunt active power filter harmonics, reactive power, unbalanced linear/nonlinear load and unbalanced AC source** Salem Rahmani, Kamal Al-Haddad, Farhat Fnaiech
15h00	**A new nonlinearity-compensation-based multiple-loops control scheme applied to a three-phase series active power filter for voltage harmonic cancellation** Hadi Kanaan, Kamal Al-Haddad
15h30	**Break**
16h00	**A control strategy based on extended p-q theory usable in parallel active filters** Mehrdad Tarafdar Haque

TUESDAY 4TH

09h30 – 12h00
Opening session : Auditorium of "Palais des Congrès & Expositions"
Keynote lecture 1:
Industrial Electronics in the 21st century, Okyay Kaynak
Keynote lecture 2:
High speed trains: hopes and achievements, Michel Poloujadoff, Humberto Henao

TPE – 2 **Safety, reliability, diagnostics - 1**
Co-Chairs A. Marques Cardoso (Portugal), B. Ertan (Turkey)
Room / Time Henri Matisse 14h00

14h00 **The effect of inter-bar currents on the diagnostic of the induction motor**
Hubert Razik, Humberto Hénao, Renato Carlson

14h30 **An assessment of the connection between the working operations of a thyristor system used in a power plant and accelerated ageing tests**
Alexandrine Guédon-Gracia, Eric Woirgard, Christian Zardini, Guillaume Simon

15h00 **A general purpose software for signal processing oriented to the diagnosis of electrical machines**
Marcello Artioli, Amine Yazidi, Fiorenzo Filippetti, Gérard-André Capolino

15h30 **Break**

16h00 **Simplified axial flux spectrum method to detect incipient stator inter-turn short-circuits in induction machine**
Talal Assaf, Humberto Hénao, Gérard-André Capolino

TCCS – 3 **Signal processing**
Co-Chairs T. Lund (Australia)
Room / Time Jean-Jacques Rousseau 2 8h30

08h30 **Cepstrum digital image watermarking algorithm**
Min-Rui Zhang, Chen-Hong Lu, Ke-Chu Yi

09h00 **Image processing system to detect temporal changes in outside environments**
Jean-Michel Glaume, Petit Eric, Dominique Jouvaud, Philippe Barthelemy

09h30 **3D reconstruction of the left ventricle by triangulation method**
Nadia Souag

10h00 **Break**

10h30 **Scalable video contents delivery method with scalable transcoding**
Mei Kodama, Shunya Suzuki

11h00 **Application of video scalabibilty to video data distribution network and its evaluation**
Shunya Suzuki, Mei Kodama

11h30 **Omnidirectional mirror design : multiple linear ring-windows viewing**
Fabrice de Chaumont, Bruno Marhic, Laurent Delahoche

TCCS – 5 **Detection, estimation & identification**
Co-Chairs O. Vainio (Finland)
Room / Time Jean-Jacques Rousseau 2 14h00

14h00 **Estimation of frequency, amplitude and phase of sinusoidal signals**
Wu Jiekang, Liang Ying, Long Jun

14h30 **Stabilogram phase estimation**
Régis Fournier, Eric Deléchelle, Jacques Lemoine

15h00 **Comparative investigation of non invasive diagnosis methods for mechanical fault detection in induction motors**
Mario Eltabach, Ali Charara, Jérome Antoni

15h30 **Break**

16h00 **Parameters estimation of permanent magnet synchronous machine without adding extra-signal as input excitation**
Sandrine Moreau, Rami Kahoul, Jean-Paul Louis

16h30 **A current estimator based model describing magnetic material behaviour at constant level flux**
Erik Etien, Gérard Champenois

17h00 **Models for bearing damage detection in induction motors using stator current monitoring**
Martin Blödt, Pierre Granjon, Bertrand Raison, Gilles Rostaing

17h30 **Techniques for unveiling faults during weft knitting production**
Andre Catarino, Ana Rocha, João Monteiro, Filomena Soares

TCCS – 4 **Automotive & transportation systems**
Co-Chairs D. Hissel (France)
Room / Time Claude Papi 1 8h30

08h30 **A model of electromagnetic radiated emissions for dual voltage automotive electrical systems**
Maria Carmela Di Piazza, Antonella Ragusa, Giovanni Tinè, Gianpaolo Vitale

09h00 **Electronic throttle state estimation and hybrid theory based optimal control**
Mario Vasak, Mato Baotic, Ivan Petrovic, Nedjeljko Peric

09h30 **Dynamic behaviour of a proton exchange membrane fuel cell under transportation cycle load**
James Garnier, Marie-Cécile Pera, Daniel Hissel, Alexandre De Bernardinis, Jean-Marie Kauffmann, Gérard Coquery

10h00 **Break**

10h30 **Pressure, flow and thermal control of a fuel cell system for electrical rail transport**
Jérome Lachaize, Stéphane Caux, Maurice Fadel, Pascal Schott, Laurent Nicod

11h00 **Linear observers for vehicle sideslip angle: experimental validation**
Joanny Stephant, Ali Charara, Dominique Meizel

11h30 **Design and evaluation of a new kind of remote control switches for automotive applications**
José Fariña, Juan J. Rodríguez-Andina, Jesús Doval, Alfredo del Río, Gerardo Peláez, Jorge Blanco

TCCS – 6 **Measurement & control**
Co-Chairs J.-M. Lee (Korea)
Room / Time Claude Papi 1 14h00

14h00 **A dynamic output feedback controller with compensation for sensor quantization**
John Y. Hung

14h30 **Adaptive internal model control using inverses of signals**
Muhammad Shafiq, Sayyid Anas

15h00 **Analytical approximation of the uniform magnitude-driven sampling effectiveness**
Marek Mikowicz

15h30 **Break**

16h00 **Simulation and testing of a low power wind energy system**
Ivan Meny, Philippe Enrici, Jean-Jacques Huselstein, Daniel Matt

16h30 **Insulation defect localization through partial discharge measurements and numerical classification**
Sanna Pöyhönen, Marco Conti, Andrea Cavallini, Gian Carlo Montanari, Fiorenzo Filippetti

WEDNESDAY 5TH

TASI – 1 **Devices & technologies**
Co-Chairs E. Pissaloux (France)
Room / Time Fred Scamaroni 8h30

08h30 **Design and characterization of a shape memory alloy based micro-actuator for tactile stimulation applications**
Ramiro Velazquez, Edwige Pissaloux, Jérome Szewczyk, Moustapha Hafez

09h00 **Fine magnetic field prospecting of an inverter DC bus**
Cyrille Gillot, Gérard Rojat, Hamed Yahoui

09h30 **Stripline Y-junction circulator using baryum hexagonal ferrite thin films**
Evangéline Benevent, Bruno Sauviac, Vincent Larrey, Didier Vincent, Alain Madelaine

10h00 **Break**

10h30 **Passive coplanar isolator with barium ferrite thin films**
Stéphane Capraro, Thomas Rouiller, Martine Le Berre, Jean-Pierre Chatelon, Daniel Barbier, Jean-Jacques Rousseau

11h00 **Hybrid flex foil-ferrite technology for miniaturized power and RF applications**
Menouer Saidani, Martin Gijs

11h30 **RF MIM capacitors using Si3N4 dielectric in standard industrial BiCMOS technology**
Jean-Daniel Arnould, Philippe Benech, S. Cremer, Joaquin Torres, Alexis Farcy

TASI – 2 **Sensors**
Co-Chairs P. Benech (France)
Room / Time Fred Scamaroni 14h00

14h00 **Love wave chemical sensors: design and optimisation. Case of oganophosphorous compounds detection**
Pierre Mazein, Céline Zimmermann, Corinne Déjous, Dominique Rebière**,** Jacques Pistré, Roger Planade

14h30 **Response of polymer-coated love-wave device: a method to characterize thin film materials in radio frequency domain**
Florence Razan, Céline Zimmermann, Dominique Rebiere, Corinne Dejous, Jacques Pistre

15h00 **Sensing characteristics of a novel NH3-nitrided Schottky-diode hydrogen sensor**
Wing Man Tang, Pui To Lai, Jing Ping Xu, Chu Lok Chan

15h30 **Break**

16h00 **New type interface between fluids and various signals**
Nobuo Ogawa

16h30 **Fabrication and characteristics of 0-3 PbTiO3 /P(VDF/TrFE) nanocomposites thin films for pyroelectric infrared sensor**
Sung Yeol Kwon, Jong Il Bae

WEDNESDAY 5TH

SS0 – 2 **Organic electronics**
Co-Chairs J.-P. Moliton (France)
Room / Time Daniele Casanova 9h00

09h00 **Efficient multilayer blue organic light-emitting diodes based on carbazole fluorophores**
Alexis Fischer, Marie-Claude Castex, Sébastien Chenais, Dominique Ades, Alain Siove, Bernard Geffroy

09h30 **Ion implantation effect on vapor deposited organic solar cells based on PN junctions or interpenetrating networks of donor and acceptor small molecules**
Bernard Ratier, Benoit Brousse, André Moliton

SFO **Oral session of the student forum (SFO)**
Co-Chairs M. Liserre (Italy), B. Nahidmobarakeh (France)
Room / Time Daniele Casanova 14h00

14h00 **A novel HDL based in-house design approach to fastflex data controllers**
Thomas Coggins, Marcian Cirstea

14h30 **Power balance control of multiple-input DC-DC power converter for hybrid vehicles**
Alessandro Lidozzi, Luca Solero

15h00 **Solving unconstraint assignment problem by a molecular-based computing algorithm**
Zuwairie Ibrahim, Osamu Ono, Yusei Tsuboi

15h30 **Break**

16h00 **Optimal design under constraints of a synchronous DC-DC converter**
Chérif Larouci, Aurélien Prost, Jérome Vauchet

16h30 **A low-speed axial-flux PM generator for wind power systems**
Angelo Raciti, Filippo Chimento

17h00 **Competitive learning applied to detect broken rotor bars in induction motors**
Francesco Cupertino, Vincenzo Giordano

TPE – 3 **Fuel cells & storage devices in PE systems**
Co-Chairs E. Pagano (Italy), S. Halasz (Hungary)
Room / Time Claude Papi 2 8h30

08h30 **Computer controlled linear regulator for characterization of polymer electrolyte membrane fuel cells (PEMFC)**
P.J.H. Wingelaar, Jorge Duarte, Marcel Hendrix

09h00 **A converter to interface ultra-capacitor energy storage to a fuel cell system normally operating with batteries**
Andrew Kotsopoulos, Jorge Duarte, Marcel Hendrix

09h30 **A 3kW fuel cell generation system using the fuel cell simulator**
Tae-Won Lee, Sung-Ho Kim, Young-Ho Yoon, Chung-Yuen Won

10h00 **Break**

10h30 **Study of ultracapacitors dynamic behaviour using impedance spectroscopy on a specific test bench**
Walid Lajnef, Jean-Michel Vinassa, Olivier Briat, Stéphane Azzopardi, Christian Zardini

11h00 **P&O MPPT robustness improved**
Nicola Femia, Giovanni Petrone, Giovanni Spagnuolo, Massimo Vitelli

TPE – 6 **AC drives control -1 (DTC)**
Co-Chairs X. Roboam (France), M. Kazmierkowski (Poland)
Room / Time Claude Papi 2 14h00

14h00 **Direct torque control of permanent magnet synchronous machines using stator flux full order state observer**
Junfeng Xu, Yinglei Xu, Jianping Xu, Jianghua Feng, Fengyan Wang

14h30 **A direct torque controlled brushless doubly-fed reluctance machine drive system**
Milutin Jovanovic, Jian Yu

15h00 **DTC control of an induction motor using a three-level inverter and fuzzy logic**
Xavier del Toro Garcia, Salvador Calls, Marcel Jayne, Phil Witting, Antoni Arias, Jose Luis Romeral

15h30 **Break**

16h00 **Simple autonomous sensorless generation system with wound induction machine**
Grzegorz Iwanski, Wlodzimierz Koczara

TPE – 4 **Control of power converters - 1**
Co-Chairs G. Gateau (France), P. Sicard (Canada)
Room / Time Jean-Jacques Rousseau 1 8h30

08h30 **A new modification in structure of one-cycle controller**
Mohsen Ruzbehani, Luowei Zhou, Mingyu Wang

09h00 **New phase shift full bridge converter with wide ZVS ranges and low conduction losses**
Gwan-Bon Koo, Tae-Sung Kim, Gun-Woo Moon, Myung-Joong Youn

09h30 **DC-DC quasi-resonant converters: linear robust control**
Hassan Bevrani, Toshifumi Ise, Yasunori Mitani, Kiichiro Tsuji

10h00 **Break**

10h30 **Simplified feedback linearization of a single-phase active power filter using sliding mode control**
Jaume Miret, Luis Garcia de Vicuña, Jose Matas, Josep M. Guerrero, Juan Cruz

11h00 **Linearization of the control-to-output transfer function for a PWM buck-boost converter**
Yu-Kang Lo, Shang-Chin Yen, Jan-Ming Wang

TPE – 7 **Multilevel converters**
Co-Chairs T. Meynard (France), G. Joos (Canada)
Room / Time Jean-Jacques Rousseau 2 14h00

14h00 **Implementation on a microcontroller of a space vector modulation technique for NPC inverters**
Armando Bellini, Stefano Bifaretti, Stefano Costantini

14h30 **Implementation of a peak current control algorithm within a FPGA**
Martin Aime, Thierry Meynard, Guillaume Gateau

15h00 **A five level diode clamped multilevel inverter with self stabilization of the unbalance DC-link voltage and feedback control of the AC output voltage**
Bouhali Bouhali, El Madjid Berkouk, Bruno Francois

15h30 **Break**

16h00 **Computed PWM for flying capacitors multicell converters**
Laurent Delmas, Thierry Meynard, Guillaume Gateau

16h30 **FPGA-based multilevel PWM for H-bridge active rectifiers**
Carlo Cecati, Antonio Dell'Aquila, Marco Liserre, Vito G. Monopoli

TPE – 5 **Power system engineering & optimal design & testing**
Co-Chairs E. Monmasson (France), K. Al-Haddad (Canada)
Room / Time Henri Matisse 8h30

08h30 **Optimal system analysis with cost and reliability criterion: an application to a metallurgical plant**
Olivier Wailly, Nicolas Heraud

09h00 **An interface for switching signals and a new real-time testing platform for accurate hardware-in-the-loop simulation**
Hernan Figueroa, Antonello Monti, Xin Wu

09h30 **Control of a triple drive paper system based on the energetic macroscopic representation**
Alexandre Leclercq, Pierre Sicard, Alain Bouscayrol, Betty Semail

10h00 **Break**

10h30 **Direct optimization of motor drives systems for an electric vehicle**
Yann Fefermann, Xavier Roboam, Jean-Michel Enjalbert

11h00 **Design optimisation of multicoil traction transformers to limit psophometric currents**
Antonio Coccia, Andrea Del Pizzo, Renato Rizzo

11h30 **Formal verification and controller redesign of power electronic converters**
Marcia Miranda, Lima Antonio

TPE – 8 **Electrical machines & actuators**
Co-Chairs B. Aschendorf (Germany), G. Buja (Italy)
Room / Time Henri Matisse 14h00

14h00 **A power drive for piezoelectric actuators**
Gunnar Gnad, Roland Kasper

14h30 **High performance control of switched reluctance motor drive system automobiles by C-dump converters**
Yong Ho Yoon, Sang Hoon Song, Tae Won Lee, Young Real Kim, Chung-Yuen Won

15h00 **The analysis of saturation effects on transient behaviour of induction machine direct starting**
Nuh Erdogan, Humberto Henao, Richard Grisel

15h30 **Break**

16h00 **On-line torque estimation in a switched reluctance motor for torque ripple minimisation**
Zhengyu Lin, Donald Reay, Barry Williams, Xiangning He

16h30 **Modelling of electromagnetic actuators using hybrid analytical and finite-element method**
René Sallier, Steven Liu, Kai Lehmann, Bernd Reimann

TCCS – 7 **Non-linear control**
Co-Chairs O. Kaynak (Turkey)
Room / Time Jean-Jacques Rousseau 2 8h30

08h30 **Variable structure PID control design based on DNA coding method**
Chun-Liang Lin, Horn-Yong Jan, Thong-Hsing Huang

09h00 **Robust position control of an electropneumatic system using second order sliding mode**
Mohamed Smaoui, Xavier Brun, Daniel Thomasset

09h30 **A novel induction motor IRFOC with on-line parameter estimation taking into account thermal and deep-bar effects**
Mario Javier Durán Martínez, José Luis Durán Martínez, Francisco Pérez Hidalgo, José Fernández Moreno

10h00 **Break**

10h30 **Design of a switched control with pole location constraints for a UPS system**
Vinicius F. Montagner, Valter J. S. Leite, Pedro L. D. Peres

11h00 **Extension of chaos anticontrol applied to the improvement of switch-mode power supply electronic compatibility**
Cristina Morel, Marc Bourcerie, François Chapeau-Blondeau

11h30 **Nonlinear predictive adaptive controllers for nonlinear systems**
Makrem Mrabet, Farhat Fnaiech, Kamal Al-Haddad

TCCS – 9 **Non-linear systems**
Co-Chairs P. Acarnley (UK)
Room / Time Jean-Jacques Rousseau 2 14h00

14h00 **Linearly constrained adaptive algorithms for line-frequency signal processing**
Olli Vainio

14h30 **Rule-based decoupled fuzzy sliding mode control for inverted pendulum swing-up**
Celestino Brunetti, Mariagrazia Dotoli

15h00 **Energy management strategy for embedded fuel cell system using fuzzy logic**
Mestan Tekin, Daniel Hissel, Marie-Cécile Pera, Jean-Marie Kauffmann

15h30 **Break**

16h00 **A contribution to frequency domain tuning for fuzzy control**
Jérome Faucher, Pascal Maussion, Jean Faucher

16h30 **Experimental identification of an induction motor considering the effects of main flux saturation by using a constrained minimization**
Maurizio Cirrincione, Marcello Pucci, Giansalvo Cirrincione, Gérard-André Capolino

17h00 **Closed loop tests for performance evaluations of controlled DC-DC switching converters**
Aldo Balestrino, Alberto Landi, Luca Sani

TCCS – 8 **Neural networks applications**
Co-Chairs B. M. Wilamowski (USA)
Room / Time Claude Papi 1 8h30

08h30 **Adaptive tuning of a PI speed controller for DC brushless motor optimum speed control using a neural network**
Tariq El-Balluq, Paul Acarnley

09h00 **Development and implementation of a neuro fuzzy technique for position sensor elimination in a SRM**
Luís Oscar A. P. Henriques, Luís Rolim, Walter Suemitsu, Paulo Costa Branco

09h30 **Dynamical recurrent neural network towards modeling of on-board fuel cell power supply**
Samir Jemeï, Daniel Hissel, Marie-Cécile Péra, Jean Marie Kauffmann

10h00 **Break**

10h30 **Using neural nets in rule discovery for intelligent equipment maintenance, diagnosis and prognosis**
YiZhi Zhao, JingBing Zhang, DanHong Zhang, Ming Luo

11h00 **Identification of electrical parameters and rotor speed of induction motor using radial basis neural network**
Godpromesse Kenne, Tarek Ahmed-Ali, Françoise Lamnabhi-Lagarrigue, Homère Nkwawo

TIIT – 3 **Chaos in communication & control system**
Co-Chairs G. Delaunay (France), R. Sebastian (Spain)
Room / Time Claude Papi 1 14h00

14h00 **A comparison study for chaotic modulation with multiplication and feedback**
Moez Feki, Bruno Robert, Guillaume Gelle, Georges Delaunay

14h30 **Energy efficient medium access control protocols for wireless sensor networks and its state-of-art**
Ruizhong Lin, Zhi Wang, Youxian Sun

15h00 **Equivalent matrix DBP for streams with (m,k)-firm deadline**
Jiming Chen, Zhi Wang, Yeqiong Song, Youxian Sun

15h30 **Break**

16h00 **Security performances of a chaotic cryptosystem**
Véronique Guglielmi, H. Poonith, D. Fournier-Prunaret, A.K. Taha

THURSDAY 6TH

TASI – 3 **MEMS & interfaces**
Co-Chairs N. Ogawa (Japan)
Room / Time Fred Scamaroni 8h30

08h30 **Novel method for indirect sensing of hard disk drive imbalance**
Branislav Hredzak, Guoxiao Guo

09h00 **Mobile robot localization by multi sensor fusion and constraint propagation**
Mélanie Delafosse, Arnaud Clerentin, Laurent Delahoche, Eric Brassart, Bruno Marhic

09h30 **FPGA implementation of multi-elementary motion detectors (EMDs) for the visual guidance of micro-air-vehicules**
Fabrice Aubepart, Mourad El Farji, Nicolas Franceschini

10h00 **Break**

10h30 **Design and modelling of mixed signal I/O IPs: an I2C bus controller**
Olivier Romain, Tidiane Cuenin, Patrick Garda

11h00 **An A/D interface for resonant piezoresistive MEMS sensor**
Luigi Dilillo, Vincent Beroulle, Norbert Dumas, Laurent Latorre, Pascal Nouet

TASI – 4 **Control & measurement**
Co-Chairs P. Fouillat (France)
Room / Time Fred Scamaroni 14h00

14h00 **A standard CMOS technology wideband amplifier based on current conveyor and its application in NMR microscopy**
Tewfik Cherifi, Laurent Quiquerez, Thierry Tixier, Nacer Abouchi

14h30 **Failure detection and adaptive compensation for fault tolerant flight control systems**
Chun-Liang Lin, Thong-Hsing Huang, Chun-Te Liu

15h00 **Photoelectric laser stimulation in a failure analysis laboratory**
Abelatif Firiti, Dean Lewis, Felix Beaudoin, Philippe Perdu, Gerald Haller, Pascal Fouillat

15h30 **Break**

16h00 **Design slop constraint for reducing noise generation and coupling mechanisms in mixed signal IC's**
Olivier Valorge, Cristian Andreï, Francis Calmon, Christian Gontrand, Pierre Dautriche

16h30 **Fault tolerant control using augmented fault detection filter**
Hicham Jamouli, Dominique Sauter, Jean-Yves Keller

17h00 **Contribution to an improvement of quantitative evaluation model for reliability of safety-related functions**
Karim Hamidi, Olaf Malasse, Jean-François Aubry

TIIT – 2 **Process control - Diagnostic**
Co-Chairs N. Heraud (France), J. Monteiro (Portugal)
Room / Time Daniele Casanova 8h30

08h30 **Observability and reliability of a photovoltaic sensor**
Ouadie Bennouna, Nicolas Heraud, Christian Cristofari

09h00 **Yarn mass analysis with 1mm capacitive sensors**
Vìtor Carvalho, João Monteiro, Rosa Vasconcelos, Filomena Soares

09h30 **A new time-delay compensation scheme for hydraulic systems**
Chun-Liang Lin, Chun-Hsiung Chen, Van-Tsai Liu, Thong-Shing Hwang

10h00 **Break**

10h30 **Addition of fault detection capabilities in automation applications using Petri nets**
Luis Gomes, João-Paulo Barros, Rui Lino

11h00 **Adaptive objects for behavior based product models**
László Horváth, Imre J. Rudas

11h30 **Glass furnaces, simplified modelling for control and real-time simulation**
Olivier Auchet, Claude Iung, Pierre Riedinger, Olaf Mallasse

TIIT – 4 **Mobile robot navigation - Industrial robot**
Co-Chairs F. Calegari (Italy), A. Kaneshige (Japan)
Room / Time Daniele Casanova 14h00

14h00 **Control strategies for very low speed trajectories for an industrial robot**
Ezio Bassi, Francesco Benzi, Fabio Calegari, Alessandro Erba

14h30 **Reactive real time behaviour for mobile robots in unknown environments**
Bharat Reddy, Bahram Kimiaghalam, Abdollah Homaifar

15h00 **Real time path planning based on the potential method for an autonomous mobile overhead traveling crane**
Takeshi Akamatsu, Akihiro Kaneshige, Kazuhiko Terashima

15h30 **Break**

16h00 **Redundant arm positioning control of the humanoid robot by linear visual servoing**
Kyota Namba, Noriaki Maru

TPE – 9 **Renewable energy systems**
Co-Chairs A. Bouscayrol (France), F. Filippetti (Italy)
Room / Time Claude Papi 2 8h30

08h30 **Comparative study of maximum power strategy in wind turbines**
Adam Mirecki, Xavier Roboam, Frédéric Richardeau

09h00 **Saturation phenomena in asynchronous generators used in wind farms**
Piegari Luigi, Rizzo Renato

09h30 **Optimized DC-AC boost converters for modular photovoltaic grid connected generators**
Emmanuel Achille, Christian Glaize, Thierry Martiré, Charles Joubert

10h00 **Break**

10h30 **Load matching of photovoltaic field orientation in stand-alone distributed power systems**
Nicola Femia, Giovanni Petrone, Giovanni Spagnuolo, Massimo Vitelli

11h00 **Increasing the efficiency of P&O MPPT by converter dynamic matching**
Nicola Femia, Giovanni Petrone, Giovanni Spagnuolo, Massimo Vitelli

TPE – 12 **Electrical networks, transport & energy production applications**
Co-Chairs M. Poloujadoff (France), B. François (France)
Room / Time Claude Papi 2 14h00

14h00 **Robust control of induction motor with maximum efficiency for HEVs**
Nie Ziling, Ma Weimin, Lv Hao

14h30 **Design of an output LC filter for a doubly fed induction generator supplying non-linear loads for aircraft applications**
Flavia Khatounian, Eric Monmasson, Frédérique Berthereau, Jean-Paul Louis

15h00 **Stochastic estimate of redundancy effects for non conventional ac locomotive traction drives**
Stefano Savio, Mario Marchesoni, Vincenzo Fazio

15h30 **Break**

16h00 **To an optimal control of an integrated starter alternator using an induction machine**
Agnes Konieczka, Jean-Paul Vilain, Cedric Plasse

16h30 **A novel dynamic controller for stability enhancement using capacitive series compensator**
Adel Sharaf, Mohamed El Moursi

17h00 **Bi-directional power converter for wide speed range integrated starter-generator**
Primoz Bajec, Danijel Voncina, Damijan Miljavec, Janez Nastran

TPE – 10 **Power conversion devices & components**
Co-Chairs J. Duarte (Netherlands), D. Sadarnac (France)
Room / Time Jean-Jacques Rousseau 1 8h30

08h30 **Averaged large-signal model of single magnetic push-pull forward converter**
Juan Cruz, Miguel Castilla, Jaume Miret, Jose Matas, Josep M. Guerrero

09h00 **Thyristors and triacs control by a high frequency sine signal**
Christophe Mauriac, Yves Raingeaud, Laurent Gonthier, Jean Baillou, Robert Pezzani

09h30 **Behaviour of punch-through and non-punch–through insulated gate bipolar transistors under high temperature gate bias stress**
Cheick Oumar Maiga, Boubekeur Tala-Ighil, Hamid Toutah, Bertrand Boudart

10h00 **Break**

10h30 **Open loop real–time power electronic device temperature estimation**
Mahera Musallam, Paul P. Acarnley, C.Mark Johnson, Len Pritchard

11h00 **Fuzzy logic control of a dynamic voltage restorer**
Francisco Jurado, Manuel Valverde

11h30 **RF output power sensing for low power transmitters in mobile base stations based on antenna switch isolation losses**
Jose Ignacio Garate, Juan Jose Zamora, Jose Miguel De Diego, Luis Gonzalez

TPE – 13 **Voltage source inverters & UPS**
Co-Chairs H. Rasmussen (Denmark), M. Cirrincione (Italy)
Room / Time Claude Papi 2 14h00

14h00 **Output impedance design of parallel-connected UPS inverters**
Josep M. Guerrero, Luis Garcia de Vicuña, Jose Matas, Juan Cruz, Miguel Castilla

14h30 **On the use of natural coordinates for the three dimensional space vector modulation applied to four leg inverters**
Manuel Perales, M. Angeles Prats, Ramón Portillo, Leopoldo G. Franquelo

15h00 **Power quality and reliability supply improvement using a power conditioning system with energy storage capability**
Domenico Casadei, Gabriele Grandi, Claudio Rossi

15h30 **Break**

16h00 **On compensation of wave reflections in transmission lines and applications to the overvoltage problem in AC motor drives**
Alessandro de Rinaldis, Gerardo Escobar, Romeo Ortega, Mark W. Spong

16h30 **Novel sensorless direct power and torque control of space vector modulated AC/DC/AC converter**
Marek Jasinski, Marian P. Kazmierkowski

17h00 **Three-phase four-wire active front-end feeding a three-level voltage source inverter**
Pompeo Marino, Felice Liccardo, Castrese Schiano, Nunzio Visciano

TPE – 11 **HV power conversion & matrix converters**
Co-Chairs F. Cupertino (Italy), C. Espanet (France)
Room / Time Henri Matisse 8h30

08h30 **A study on electronic ballast for metal halide lamps with adaptive starting**
GyeHyun Jo, Chong Yeun Park

09h00 **High power factor dimmable electronic ballast for multiple tubular fluorescent lamps**
Fabio Wakabayashi, Rodrigo Oliveira, Carlos Canesin

09h30 **PWM control algorithm including semi natural two steps commutation strategy applied on a direct three phase matrix converter**
Mahmoud Hamouda, Farhat Fnaiech, Kamal Al-Haddad

10h00 **Break**

10h30 **An all-digital controlled AC-DC matrix converter with high-frequency isolation and power factor correction**
Rafael Garcia-Gil, Jose Miguel Espí, Frederich Voelker, Erique J. Dede, Enrique Maset

11h00 **Comparison between back-to-back converter and matrix converter based on the thermal stress of the switches**
Domenico Casadei, Gabriele Grandi, Claudio Rossi, Andrew Trentin, Luca Zarri

TPE – 14 **Control of power converters - 2**
Co-Chairs M. Boussak (France), D. Casadei (Italy)
Room / Time Henri Matisse 14h00

14h00 **Feedback linearization control for parallel operation of half-bridge converters with current-doubler rectifier**
Josep M. Guerrero, Luis Garcia de Vicuña, Jose Matas, Juan Cruz, Jaume Miret

14h30 **Input filter influence on the control stability of DC/DC converters**
Daniel Sadarnac, Charif Karimi, Khaled Louati

15h00 **A new approach in combining one-cycle controller and PID controller**
Mohsen Ruzbehani, Luowei Zhou, Mingyu Wang

15h30 **Break**

16h00 **DC-link voltage control and performance analysis of SVG**
Hanxiang Cheng, Xianggen Yin

16h30 **Average current-mode control for a boost converter using an 8-bit microcontroller**
Dake He, Mark Nelms

TCCS – 10 **Advances in control**
Co-Chairs J.Y. Hung (USA)
Room / Time Jean-Jacques Rousseau 2 8h30

09h00 **Wastewater treatment monitoring using self-organizing map**
Hilario López García, Iván Machón González

09h30 **Model predictive control of an electromagnetic actuator fed by multilevel PWM inverter**
Paolo Mercorelli, Nicolai Kubasiak, Steven Liu

10h00 **Break**

10h30 **A new identification approach for closed loop DC electrical drive using prior knowledge**
Abdallah Habbadi, Francisco Carrillo

11h00 **Concepts of synchronous generator's digital control**
Gorislav Erceg, Romina Erceg, Igor Erceg

11h30 **From the French school of regulation during 19th century to the emergence of automatic control after the second world war**
Patrice Remaud, Jean-Claude Trigeassou

TCCS – 11 **Intelligent control technologies**
Co-Chairs D. Irwin (USA)
Room / Time Jean-Jacques Rousseau 2 14h00

14h00 **Fuzzy logic control via an FPGA: a design using techniques from digital signal processing**
Trevor Lund, Miguel Aguirre, Antonio Torralba

14h30 **Multiobjective design of embedded processors on FPGA platforms**
Khemaies Ghali, Omar Hammami, Ivan Hermann

15h00 **A unified software architecture for embedded systems**
Cyrille Petitjean, Jean-Marc Perronne, Jean-Philippe Lauffenburger, Michel Basset

15h30 **Break**

16h00 **Use of DSP technology for improving our O.R.B.I.T.A.L. beacon**
Thierry Capitaine, Thierry Venet, Jacky Senlis

16h30 **Determination of magnetic properties of soft-magnetic ring cores with a reduced number of primary and secondary winding turns**
Marko Petkovsek, Peter Zajec, Janez Nastran, Danijel Voncina

17h00 **Active control of a clamped beam equipped with piezoelectric actuator and sensor using GPC**
Julien Richelot, Joel Bordeneuve-Guibé, Valérie Budinger

FRIDAY 7TH

TIIT – 5 **Image - Visual servoing - Vehicles control**
Co-Chairs P. Bolognesi (Italy), D. Bueche (France)
Room / Time Claude Papi 1 8h30

08h30 **Drive-by-wire systems for ground vehicles**
Manuele Bertoluzzo, Paolo Bolognesi, Ottorino Bruno, Giuseppe Buja, Alberto Landi

09h00 **Pilot symbol assisted modulation for power line communications**
David Bueche, Patrick Corlay, Marc Gazalet, Francois-Xavier Coudoux, Marc Slachiak

09h30 **Biologically inspired 3D scene depth recovery from stereo images**
Flavien Maingreaud, Edwige Pissaloux, Christophe Leroux, Alain Micaelli

10h00 **Break**

10h30 **Image segmentation and pattern recognition for road marking analysis**
Julien Rebut, Abdelaziz Bensrhair, Gwenaelle Toulminet

TASI – 7 **Behavioral modeling**
Co-Chairs R. Grisel (France)
Room / Time Claude Papi 1 14h00

14h00 **A CMOS analogue function VHDL-AMS behavioral ageing model**
Benoit Mongellaz, Francois Marc, Corinne Bestory, Yves Danto

14h30 **EMC evaluation in integrated circuits using VHDL-AMS**
Richard Perdriau, Mohamed Ramdani, Jean-Luc Levant, Anne-Marie Trullemans

15h00 **PLL modeling method for integration in an IF receiver ASIC**
Thierry Lagutere, Jean-Marie Paillot, Hervé Guegnaud

15h30 **Break**

16h00 **Using fractional differentiation for the modeling of 1/fI noise - Application to discrete-time noise sources in VHDL-AMS**
Noëlle Lewis, Guillaume Monnerie, Jocelyn Sabatier, Pierre Melchior, Michel Robbe, Hervé Lévi

16h30 **VHDL-AMS behavioral model of analog neural networks based on fully parallel weight perturbation algorithm using incremental on-chip learning**
Jacques Michel, Yannick Herve

17h00 **VHDL implementation of a neuronal diagnosis system: application to induction machine fault detection**
Thierry Dummartin, Richard Grisel, Giansalvo Cirrincione

FRIDAY 7TH

TASI – 5 **Instrumentation**
Co-Chairs M. Saidani (Switzerland)
Room / Time Fred Scamaroni 8h30

08h30 **A microcontroller based wall shear stress measurement**
Laghrouche Mourad, Meunier Delphine, Boussey Jumana, Tardu Sedat, Adane A. Hamid

09h00 **MERITE a versatile platform for wireless sensor network**
Olivier Romain, Bertrand Granado, Andrea Pinna, David Faura, Khallil Hachicha, Patrick Garda

09h30 **Detection of obstacles on the moon**
Seiji Hata, Kenji Sumioka

10h00 **Break**

10h30 **Depth estimation based on thick oriented edges in images**
Christophe Simon, Frédérique Bicking, Thierry Simon

11h00 **An efficient algorithm for intelligent instrumentation system**
Ghaleb Hoblos, Houcine Chafouk, Nicolas Langlois

11h30 **Measurement, characterization, simulation and optimization of a coplanar isolator for microwave applications**
Thomas Rouiller, Bruno Sauviac, Gérard Noyel

TASI – 6 **AMS & RF blocks**
Co-Chairs Y. Deval (France)
Room / Time Fred Scamaroni 14h00

14h00 **An original solution for Bluetooth wireless synchronous communication dedicated to a sensors and actuators system**
Salim El Homsi, Eric Campo, Thierry Val, Jean-Jacques Mercier

14h30 **A 2-6 GHz CMOS factorial delay locked loop dedicated to multi-standard frequency synthesis**
Cédric Majek, Nathalie Deltimple, Hervé Lapuyade, Jean Baptiste Bégueret, Eric Kerhervé, Yann Deval

15h00 **Multi-functional RF frequency synthesizer for multi-standard smart objects**
Christophe Rougier, Jean-Baptiste Begueret, Hervé Lapuyade, Yann Deval, Angelo Malvasi

15h30 **Break**

16h00 **A novel approach for radio frequency front end as part of system-on-chip in digital MOS technologies**
Gilles Petit, Richard Kielbasa, Vincent Petit

16h30 **MEMS-based reconfigurable antennas**
Patrice Panaia, Cyril Luxey, Gilles Jacquemod, Robert Staraj, Georges Kossiavas, Laurent Dussopt, François Vacherand, Christophe Billard

17h00 **Behavioral modeling and simulation of mixed signal front-end for software defined radio terminals**
Ludovic Barrandon, Samuel Crand, Dominique Houzet

SSGEN **Genetic algorithms**
Co-Chairs P. Zanchetta (Italy)
Room / Time Daniele Casanova 8h30

08h30 **Control of matrix converters for AC power supplies using genetic algorithms**
Pericle Zanchetta, Mark Sumner

09h00 **On-line genetic design of unstructured controllers for electric drives**
Francesco Cupertino, Ernesto Mininno, David Naso, Biagio Turchiano, Luigi Salvatore

09h30 **On-line optimisation of a fuzzy drive controller using genetic algorithms**
Wander G. da Silva

10h00 **Break**

10h30 **Improved current control of active power filters using genetic algorithms**
Maria Marinelli, Antonio Dell`Aquila

11h00 **Interests of genetic algorithms to select and optimize scenarios in a system design process**
Claude Baron, Daniel Estève, Mohamed Yacoub

11h30 **On-line multiobjective automatic control system generation by evolutionary algorithms**
Paul Stewart, D. A. Stone, P. J. Fleming

TIIT – 6 **Multi-agent - Control system**
Co-Chairs D. Diep (France), A. Aendenroomer (Singapore)
Room / Time Daniele Casanova 14h00

14h00 **Communication brokerage for a federated control environment**
Anton Aendenroomer, Zhong Qiang Ding, Hao He, Kiah Mok Goh

14h30 **Scheduling agents in a distributed flexible manufacturing system**
Daniel Diep

15h00 **Definition of a generalised interface for the management of large utilities plants**
Salvatore Cavalieri, Fabrizio D'Urso, Carmelo Floridia, Andrea Rossettini

15h30 **Break**

16h00 **Control of execution in distributed manufacturing systems**
Pierre Couturier, Daniel Diep

16h30 **Consortium based negotiation for distributed multi-equipment execution control**
Bryan Tsong Jye Ng, Li Qun Zhuang, Jing Bing Zhang, Yi Zhi Zhao

17h00 **Fault tolerant analysis of multi-agent manufacturing systems based on Petri nets**
Fu-Shiung Hsieh

TPE – 15 **AC drives control - 2**
Co-Chairs M. Jovanovic (UK), C. Cecati (Italy)
Room / Time Claude Papi 2 8h30

08h30 **Adaptive sensorless field oriented control of PM motors including zero speed**
Henrik Rasmussen, Pierre Vadstrup, Hakon Børsting

09h00 **Initial position estimation and low speed sensorless control of synchronous motors based on system identification theory**
Shinji Ichikawa, Mutuwo Tomita, Shinji Doki, Shigeru Okuma

09h30 **A control strategy for reducing the torque ripple in DTC for low speed**
Shahriyar Kaboli, Mohammad Reza Zolghadri, Saeed Haghbin

10h00 **Break**

10h30 **Set-up and experimental validation of a peak torque feeding algorithm for electrical drives**
Salvatore D'Arco, Diego Iannuzzi, Enrico Pagano, Pietro Tricoli

11h00 **An optimized algorithm for torque oscillations reduction in DTC-induction motor drives using 3-level inverters**
Gianluca Brando , Andrea Del Pizzo , Renato Rizzo

11h30 **A new approach for speed estimation in induction motor drives based on a reduced-order extended Kalman filter**
Vicente Leite, Rui Araújo, Diamantino Freitas

TPE – 18 **Power quality & active filtering - 2**
Co-Chairs G. Vitale (Italy), H. Henao (France)
Room / Time Claude Papi 2 14h00

14h00 **A new control strategy of shunt active filters for power quality improvement of highly and randomly varying loads**
Ahmad Esfandiari, Mostafa Parniani, Hossein Mokhtari

14h30 **Noise-tolerant algorithm for active power filters**
Wilson Santana, Luiz Silva, Levy Oliveira, Valberto Silva, Germano Torres

15h00

15h30 **Break**

TPE – 16 **Energy generation for special applications**
Co-Chairs G.A. Capolino (France), A. Raciti (Italy)
Room / Time Jean-Jacques Rousseau 1 8h30

08h30 **Design of a step-up 400mW@40V charge-pump for microrobotics applications in a 100V-0.7μm intelligent interface technology.**
Raimon Casanova-Mohr, Pere Miribel-Catala, Manel Puig-Vidal, Josep Samitier i Martí

09h00 **The permanent magnet synchronous motor in household appliances domain**
Thierry Martire, Daniel Matt, Jêrome Fadat

09h30 **Four-wire single-phase static converters for rural distribution system**
Maria Bellar

10h00 **Break**

10h30 **Decoupled generation with additional degree of freedom**
Wlodzimierz Koczara, Nazar Al-Khayat, Robert Seliga, Jawad Al-Tay

11h00 **Design and comparison of various voltage control systems for distributed generators to mitigate voltage imbalances**
Ferhat Chabour, Bruno Francois

11h30 **Comparative analysis of single-phase to three-phase converters for rural electrification**
Maria Dias Bellar

TPE – 19 **Safety, reliability, diagnostics - 2**
Co-Chairs L. Borges da Silva (Brazil), H. Yahoui (France)
Room / Time Jean-Jacques Rousseau 1 14h00

14h00 **Use of ESR to predict failure of output filtering capacitors in boost converters**
Acacio Amaral, Antonio Cardoso

14h30 **Operating of induction generator connected to utility grids during grid separation**
Mohamed Orabi, Tamotsu Ninomiya

15h00 **Combined use of unsupervised and supervised learning for large scale power system static security mapping**
Mohamed Boudour, Abdelhafid Hellal

15h30 **Break**

16h00 **Electronic circuits evolution to introduce a superimposed voltage in the electric power system**
Juan Jose Zamora, Inmaculada Zamora, Angel Javier Mazon, Ekaitz Olaguenaga

TPE – 17 **Control of power converters - 3**
Co-Chairs P. Maussion (France), A. Dell'Aquilla (Italy)
Room / Time Henri Matisse 8h30

08h30 **LQG controller for asymmetrical half-bridge converter with range winding**
Jeong-Hwan Park, Mohammad Reza Zolghadri, Bahram Kimiaghalam, Abdollah Homaifar, Fred C. Lee

09h00 **Analysis and control of a current fed sine wave converter for use in high frequency coil measurements**
Georgios Dimitrakakis, Emmanuel Tatakis

09h30 **Small vector PWM strategies of three-level inverters**
Sándor Halász, István Varjasi

10h00 **Break**

10h30 **Modulation techniques for a low-cost single-phase to three-phase converter**
Roger Madorell, Josep Pou

11h00 **Fuzzy logic controller based on space vector modulation for induction motor control**
Pedro Ponce-Cruz, Juan Ramirez

11h30 **Analysis of single-phase and three-phase dc/ac and ac/dc PWM converters with the frequency-shift technique**
Frede Blaabjerg, Antonio Dell'Aquila, Marco Liserre, Remus Teodorescu, Francesco Vacca, Silvano Vergura

TPE – 20 **AC drives control - 3**
Co-Chairs M. Kazmierkowski (Poland), R. Rizzo (Italy)
Room / Time Henri Matisse 14h00

14h00 **A sliding mode controller to minimize SRM torque ripple and noise**
Erdal Bizkevelci, Kemal Leblebicioglu, H. Bulent Ertan

14h30 **Drive converters with synchronized PWM during overmodulation**
Vasili Ermuratski, Valentin Oleschuk

15h00 **Reduction of the torque ripples in brushless PM motors by optimization of supply - Theoretical method and experimental implementation**
Abdoul Ousmane N'diaye, Christophe Espanet, Abdellatif Miraoui

15h30 **Break**

16h00 **Energy conservation of a novel soft-starter controlled by IGBT for induction motors with minimum current**
Guangqiang Lü, Hongxiang Yu, Yanchao Ji

STUDENT FORUM (POSTER SESSION)

SFP	**Tuesday 4th and Wednesday 5th**	
Co-Chairs	M. Liserre, B. Nahidmobarakeh	
Room / Time	First floor	12h00-14h00 17h00-18h00

Novel fragile authentication watermark based on chaotic system
Gang-Chui Shao, Min-Rui Zhang

Fuzzy logic PID controller based on FPGA for process control
Vittaya Tipsuwanporn, Thanongchai Runghimmawan, Viriya Krongratana, Taweepol Suesut, Pongsak Jitnaknan

A new evolutionary method for designing grounding grids by touch voltage control
Ferrante Neri

Bias and temperature dependent modeling of on wafer HEMT's by a direct and fast procedure
Giovanni Crupi, Nicola Donato

Application of fuzzy logic to tune a DC electric motor PID controller
Leopoldo Luongo, Mirko Ranieri

Variable parameter EW-RLS algorithm with dead zone for the trajectory tracking of the joints of the manipulator
Yuncan Xue, Zhiqian Mei

An improved robust gradient algorithm with application to fed-batch fermentation process
Yuncan Xue, Qiwen Yang

New approach for the symmetrical multilevel inverters control: optimal minimization of the total harmonic distorsion (OMTHD) technique
Yamina Sahali, Mohamed Karim Fellah

Implementation of a teleteaching room
Aurélie Zanin, Hélène Morel, Nathalie Chon-Sen, Mathieu Trocmé, Céline Pagniez

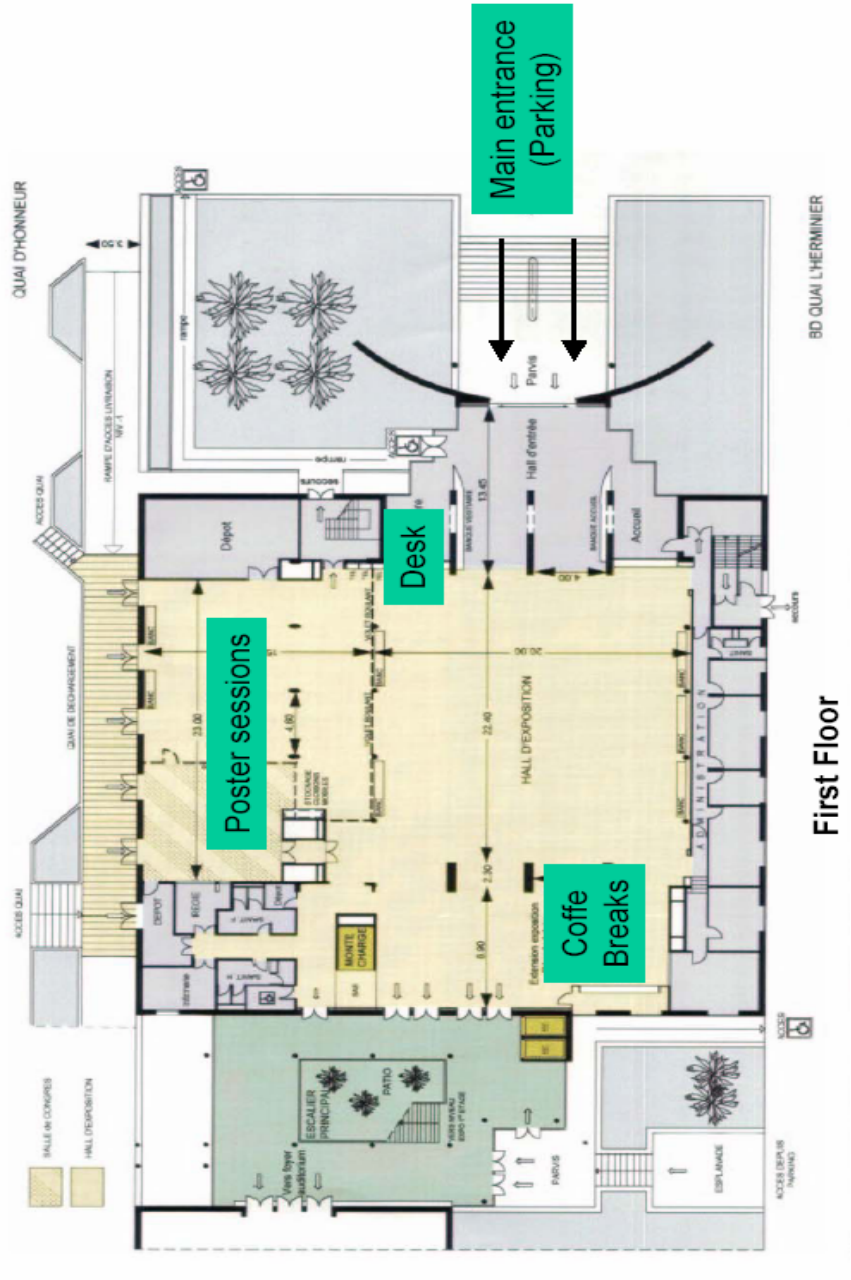
Mobile based SCADA for industrial application
Mevlüt Karacor, Mehmet Adem, Engin Ozdem

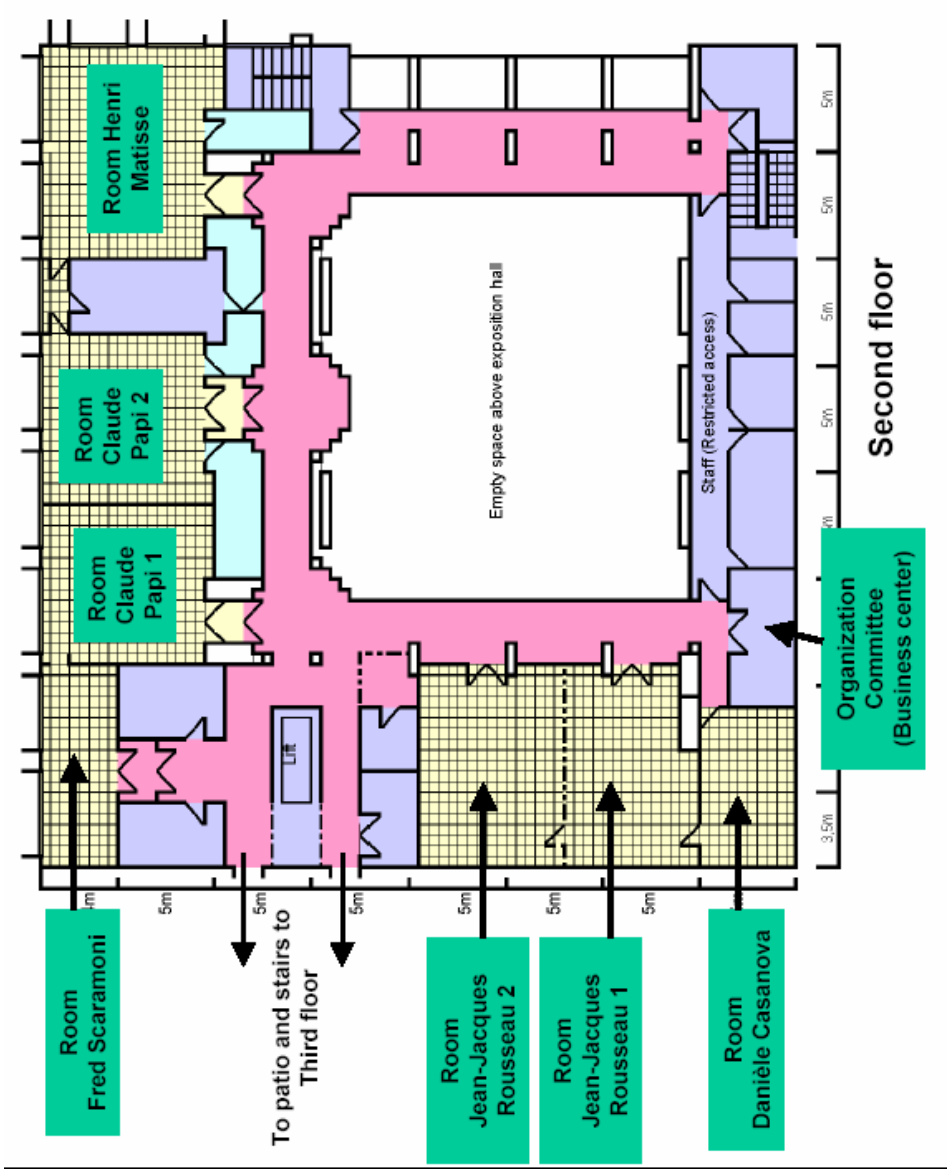
Recloser Modernization using Digital Signal Processors
Wanir Medeiros Júnior, José Wilson Nerys, Enes Marra

Energetic macroscopic representation of a subway traction system for a simulation model
J.C. Mercieca, J.M. Verhille, Alain Bouscayrol

Simulation of series hybrid electric vehicles based on energetic macroscopic representation
W. Lhomme, Alain Bouscayrol, P. Barrade

Room Location




Second floor
Room Henri Matisse
Room Claude Papi 2
Room Claude Papi 1
Empty space above exposition hall
Staff (Restricted access)
Organization Committee (Business center)
Lift
Room Fred Scaramoni
To patio and stairs to Third floor
Room Jean-Jacques Rousseau 2
Room Jean-Jacques Rousseau 1
Room Danièle Casanova
5m
3.5m