IEEE OIPE 2016 PROVISIONAL PROGRAM

12th September 2016

Registration from 17:30

Welcome Reception from 18:00
conference site: Via Vito Volterra 62

13th September 2016

Registration from 08:00

Opening 09:00 – 09:30

Invited talk 09:30 – 10:30
Xin-She Yang **Nature-Inspired Metaheuristics for Optimization**

Coffee break 10:30 – 11:00

Oral Session I 11:00 – 13:00
Theoretical aspects and fundamentals

- *Thiago Bazzo, José Kolzer, Renato Carlson, Frédéric Wurtz,Laurent Gerbaud*- **Large Multidisciplinary Design Optimization Applied to a Permanent Magnet Synchronous Generator** (#12)
- *Alessandro Formisano, Paolo Di Barba, Raffaele Martone, Maurizio Repetto, Alessandro Salvini, Antonio Savini* - **A Brief Survey of Robust Optimization** (#72)
- *Rob De Staelen, Ahmed Hendy* - **Recovery of a Time Dependent Source from a Surface Measurement in a Cole-Cole Dispersive Medium Model** (#10)
- Diana Mavrudieva, Jean-Louis Coulomb **Comparison of Classical and Robust Optimizations of a Brushless AC Embedded Permanent Magnet Motor** (#11)
- Siyang Deng, Stéphane Brisset, Stéphane Clénet - **Comparative Study of Methods for Optimization of Electromagnetic devices with Uncertainty** (#17)
- Stephane Vivier - **Application of The Corrected Response Surface Methodology For The Optimization Of A Permanent Magnet Synchronous Machine** (#56)

Lunch 13:00 – 14:30

Oral Session II 14:30 – 16:00

Management and optimization of renewable energy system/smart grids

- Vincent Reinbold, Van-Binh Dinh, Daniel Tenfen, Benoit Delinchant - **Optimal Operation Of Building Micro-Grids, Comparison For Both Mixed Linear Integer And Continuous Non-Linear Approaches** (#76)
- Bruno Sareni , Malek Zaibi, Gérard Champenois, Xavier Roboam, Jamel Belhadj - **Integrated optimal design of a photovoltaic/wind system for electricity and water production** (#54)
- Vincent Reinbold, Daniel Tenfen - **Multi-Physic Load Demand Modeling To The Energy Management Of Micro-Grids** (#33)
- Maurizio Repetto, Fabio Freschi , Enrico Pons, Simone Ferrero - **Application Of Vector Immune System To Distribution Network Reconfiguration** (#19)
- Guillaume Crevecoeur - **Data-Driven Dynamic Efficiency Maps Of Electromechanical Drivetrains Subject To Variable Renewable Energy Sources** (#91)

Coffee Break 16:00 – 16:30

Poster Sessions "Young Researchers in OIPE Community" 16:30 – 18:30

- Mattia Filippini, Piergiorgio Alotto - ***Multi-Objective Optimization Of Coaxial Magnetic Gears*** (#15)
- Mateus Antunes Oliveira Leite, Benoit Delinchant, Jean-Michel Guichon, João Antônio de Vasconcelos - ***Simplex Based Adaptive Parametric Model Order Reduction For Applications In Optimization*** (#16)
- Maria Evelina Mognaschi, Paolo Di Barba, Marek Przybylski, Najmeh Rezaei , Barbara Slusarek , Slawomir Wiak - **Geometry Optimization And Material Synthesis For A Class Of Switched-Reluctance Motors** (#20)
- Marie Poline, Julien Pouget , Benoit Dupin, Julien Pousset, Mylène Delhommais, Laurent Gerbaud - **Feasability Of Optimization To Define Train Operation On A Predefined Trajectory** (#22)
- Bilquis Mohamodhosen, Frédéric Gillon, Abdelmounaïm Tounzi, Florent Delhaye - **Analysing The Effect Of Different Approaches With Simp Density Method For Topology Optimisation Of An Electromagnetic Device** (#27)
- Seung Geon Hong, Kang Hyouk Lee, Il Han Park - **Dot Sensitivity Analysis For Topology Optimization Of Ferromagnetic Material In Magnetostatic System** (#31)
- Alberto Rossi, Frédéric Messine, Carole Henaux, Bertrand Boyer - **Design Of An Innovative Hall Effetc Thruster Magnetic Circuit Via A Topology And Parametric Optimization Problem Resolution** (#35)
- Adriano Pires, Nelson Sadowski , Walter Carpes, João Pedro Bastos - **Computational System Based On Particle Swarm And Finite Elements To Magnetic Field Optimization** (#38)
- Eva-Maria Dölker, Daniel Strohmeier, Bojana Petkovic, Judith Mengelkamp, Konstantin Weise , Reinhard Schmidt, Hartmut - **Lorentz Force Evaluation With Elastic Net Regularization** (#47)
- Francesco Pizzo, Andrea G. Chiariello, Alessandro Formisano, Francesco Ledda, Raffaele Martone - **An Effective Combinatorial Scheme For Magnets Shape Optimization**(#48)
- Mehmet Emre Erdem, Gokhan Apaydin - **Hybrid Image Reconstruction Algorithm In Confocal Imaging** (#49)

- Antonio Faba, Ermanno Cardelli, Michele Pompei, Simone Quondam Antonio , Francesco Tissi - **Optimal Design Of Lightning Pulse Generators For The Simulation Of The Indirect Effects In The Avionic Systems** (#50)
- Maria Cristina Piccirilli, Giuseppe Fontana , Francesco Grasso , Antonio Luchetta , Stefano Manetti, Alberto Reatti - **Talic: A Symbolic Program For Fully Automated Testability Analysis Of Linear Time-Invariant Circuits**(#51)
- Bogdan Mociran, Vasile Topa, Amalia Verde, Raluca Oglejan - **A Robust Method Of Choosing A Unique Solution Within Pareto Front** (#52)
- Raluca Oglejan, Bogdan Mociran, Alexandru Avram - **Numerical Modeling And Position Optimization Of Moving Inclusions In Electric Models Using Extended Finite Element Method** (#86)
- Mylène Delhommais, Frédéric Wurtz, Laurent Gerbaud - **Optimization Process To Use Non-Derivable Model In A First Order Optimization Problem Dealing With Implicit Equation To Solve** (#53)
- Reona HOSHINO, Yoshifumi OKAMOTO, Shinji WAKAO - **Topology Optimization Of Magnetic Shield Using Level-Set Function Combined With Element-Based Topologycal Derivatives** (#55)
- Byung Chul CHEON, Jung Ho LEE , Young Hyun KIM - **Study Of Magnetization Phenomenon For Vfmm Using Fem And Experimental Verification** (#60)
- Francesco Benedetto, Gaetano Giunta , Antonio Tedeschi - **Optimizing The Performance Of Cooperative Spectrum Sensing In Cognitive Radio Communication Systems** (#73)
- Sara Carcangiu, Alessandra Fanni, Renato Forcinetti, Augusto Montisci - **Multiobjective Tabu Search Algorithm For The Optimal Design Of A Thermo-Acoustic Magneto-Hydro-Dynamic Electric Generator**(#81)
- Alessandro Fedeli, Matteo Pastorino, Cristina Ponti, Andrea Randazzo, And Giuseppe Schettini - **A New Forward Scattering Model For Synthetic Data Production In Microwave Imaging Applications** (#87)
- Mumtaz Hussain Soomro, Cristiano De Marchis - **Optimization Of Non-Negative Matrix Factorization To Identify Muscle Synergies** (#90)
- Grazia Lo Sciuto , Sebastian Brusca , Giacomo Capizzi , Gianluca Susi - **A New Methodology To Predict Wind Farm Energy Production By Means Of A Spiking Neural Network Based-System** (#92)
- Stefano Gaiotto, Francesco Riganti Fulginei, Alessandro Salvini - **A Switched-Capacitor Voltage Regulator Used To Suppress Emi In A Measurement Instrument** (#103)

14th September 2016

Oral Session III 09:00 – 10:30

Shape and Topology Optimization

- *Bin Xia, Junmo Yeon, Chang-Seop Koh* - **Optimal Shape Design Of A Multi-Layered Interior Permanent Magnet Synchronous Machine Using Adaptive Dynamic Taylor Kriging Model** (#29)
- *Maria Evelina Mognaschi, Paolo Di Barba, Lorenzo Fassina, Giovanni Magenes* - **Shape Synthesis Of A Well-Plate For Electromagnetic Stimulation Of Cells** (#24)
- *Yoshifumi Okamoto, Reona Hoshino, Shinji Wakao* - **Enhancement of Topology Optimization Based on Level-set-function in Magnetic Field System** (#65)
- Kang Hyouk Lee, Seung Geon Hong , Il Han Park - **Multiple Level Set Method For Multi-Material Shape Optimization In Electromagnetic System** (#32)
- Seong soo Lee, Jung Ho Lee , Young Hyun Kim - **Optimum Design Of Interior Permanent Magnet Synchronous Motor For Torque Ripple Improvement Of Electric Railway Vehicle** (#58)

Coffee break 10:30 – 11:00

Oral Session IV 11:00 – 13:00

Applications I

- Alon Ascoli, Ronald Tetzlaff, Leon Chua - **Real Non-Volatile Memristors With Fading Memory** (#74)
- Arnaud BARASTON, Laurent GERBAUD, Jean-Luc SCHANEN - **Design By Optimization Of Controlled Converters With Emc Filters For Aerospace** (#28)
- Le Nhat Hoang TRAN, Laurent GERBAUD, Nicolas RETIERE, Hieu NGUYEN-HUU - **Analytical frequency modeling of static converters toward sizing of the system by optimization** (#18)
- Luca Giaccone, Aldo Canova - **A tool for the power cable optimal positioning** (#45)
- HwanKyu Jeong, JungHo Lee, YoungHyun Kim - **Optimum Design Of Spoke Type Motor And Magnetizer Using Fem And Rsm** (#61)
- Simone Minucci, Raffaele Albanese, Giovanni Artaserse, Marco Ariola, Giuseppe Calabrò, Gianmaria De Tommasi, Flavio Crisanti, Christop - ***Design Of High Flux Expansion Experiments In Jet Tokamak Via Optimization Of The Divertor Coils Current*** (#34)
- Alberto Oliveri, Flavio Stellino, Matteo Lodi, Mauro Parodi, Marco Storace- **Parameter Optimization Of A Power-Law Rate-Dependent Hysteresis Model** (#62)

Lunch 13:00 – 14:30

Poster Session II 14:30 – 16:00

- Andrea Alfei, Valentina Lucaferri, Mario Mercurio - **Optimization Of Piezoelectric Devices For Energy Harvesting**(#40)
- Mario Mercurio, Martina Radicioni, Andrea Alfei - **Optimal Configurations Of Piezoelectric Devices' Interconnections For Energy Harvesting** (#41)
- Luca Giaccone, Aldo Canova - **Real Time Optimization Of Active Loops For The Magnetic Field Minimization**(#46)
- Orazio Casablanca, Francesca Garescì, Bruno Azzerboni, Massimo Chiappini, Lucio Bonaccorsi, Giovanni Finocchio - **Non-Linear Analysis Of The Low Frequency Metamaterials**(#77)
- Andrea De Iacovo, Lorenzo Colace, Gaetano Assanto, Luca Maiolo , Alessandro Pecora - **Evaluation Of The Characteristics Of Inhomogeneous, Non-Ideal Schottky Diodes** (#85)
- Luca BOGGERO, Marco FIORITI, Carlo RAGUSA, and Sabrina CORPINO - **Fuzzy Approach In Trade Off Studies Of Hybrid-Electric Propulsion Systems In Aeronautics**(#93)
- Gabriele Maria Lozito, Salvatore Coco, Antonino Laudani, Giuseppe Pollicino - **Effective Permeability Estimation Of A Composite Magnetic Shielding Mortar By Using Swarm Intelligence**(#97)
- Maurizio Repetto, Fabio Freschi, Daniela Tordella, Michele Iovieno - **Synthesis Of Magnetic Field Distribution For Astrophysics Plasma Experiment** (# 42)

- Gabriele Maria Lozito, Salvatore Coco, Antonino Laudani, Francesco Riganti Fulginei, Alessandro Salvini - **Sensitivity Analysis Of The Reduced Forms Of The One-Diode Model For Photovoltaic Devices**(#98)
- Andreea Zaharia, Stephane Brisset, Mircea Radulescu -**Design Of A Brushless Dc Permanent Magnet Generator For Use In Micro Wind Turbine Applications** (#37)
- Mihai Valentin Zaharia, Frederic Gillon , Mircea Radulescu , Radhouane Khlissa , Stephane Brisset
- **Fast Determination Of The Optimal Control Parameters Of A Switched Reluctance Machine Using Space Mapping Technique** (#39)
- Jinlin Gong, Frederic Gillon , Nicolas Bracikowski - **Comparison Of Space Mapping Techniques On The Optimization Of A 5-Phase Linear Induction Motor** (#21)
- Stephane Brisset- **Collaborative And Multilevel Optimizations Of A Hybrid Railway Power Substation**(#30)
- HwanKyu Jeong, JungHo Lee, YoungHyun Kim , **Studies Of Holding Torque Output According To The Change Of Energy Storage Device In Induction Motor For Electronic Vehicle** (#59)
- Mirko Barbuto, Alessio Monti, Davide Ramaccia, Antonino Tobia, Stefano Vellucci, Filiberto Bilotti, Alessandro Toscano - **Optimal Design Of Metamaterial-Inspired Devices For Improving The Performances Of Horn Antennas**(#75)
- SangMan Shin, Jung Ho Lee, Young Hyun Kim - **Calculation On Proportion Of Rotor Shape For Torque Ripple Reduction Of Axially Laminated Type Synchronous Reluctance Motor** (#57)
- Zoubida BELLI - **Optimal Design Of Permanent Magnets Machines For Eddy Curent Losses Reduction In Magnets** (#68)(TO BE CONFIRMED)
- Zoubida BELLI , Kheireddine Bourahla - **Application Of Pso And Tlbo Algorithms With Neural Network For Optimal Design Of Electrical Machines** (#69) (TO BE CONFIRMED)
- Zoubida BELLI, Imed Achoui - **Optimal Design Of Reluctance Linear Motor With The Aim Of Copper Losses Reduction** (#82) (TO BE CONFIRMED)
- Anton Duca, Laurentiu Duca, Daniel Ioan - **High Performance Computing Approaches To Accelerate A Ndet Forward Problem** (#95) (TO BE CONFIRMED)

- Houssem Boughedda, Tarik Hacib, Yann Le Bihan - **Improving The Sensitivity Of An Electromagnetic Acoustic Transducer Using Particle Swarm Optimization** (#79) (TO BE CONFIRMED)
- Ahmet Aydoğan, Funda Akleman, Serkan Şimşek - **Determination Of Complex Permittivity Of Arbitrarily Shaped Homogenous Materials Via Waveguide Measurements** (#25) (TO BE CONFIRMED)
- Ahmet Aydoğan, Funda Akleman - **Multimode Extraction From Dielectric Loaded Waveguides Via Moment Method** (#26) (TO BE CONFIRMED)

Social Events 16:30 – 20:00

Conference Dinner from 20:30

15th Septembr 2016

ORAL Session V 09:00 – 10:30

Algorithms and Software Methodologies

- Ermanno Cardelli, Antonio Faba, **Artificial intelligence genetic approach to ferromagnetic material modeling** (#115)
- Roland Eichardt, Jens Haueisen, Alexander Hunold, Uwe Graichen - **Scheduling of Machines with Storage and Limited Availability using a Radom Search Heuristic** (#44)
- David Lowther , Min Li , Arber Caushaj, Rodrigo Silva - **A Neural Network Solution for Electromagnetic Based Ore Sorting on Artificial Rocks** (#71)
- Benoit Delinchant, Guillaume Mandil, Frédéric Wurtz - **Technico Economico Environmental Life Cycle Optimization Of A Low Voltage Dry Type Distribution Transformer** (#84)
- Marcin Ziolkowski, Adam Zywica, Stanislaw Gratkowski - **Analytical And Numerical Models Of The Forward Problem Of Magnetoacoustic Tomography With Magnetic Induction** (#67)

Coffee break 10:30 – 11:00

ORAL Session VI 11:00 – 13:00

Inverse problem and non destructive diagnostic

- Sara Carcangiu, Alessandra Fanni, Augusto Montisci -**Electric Capacitance Tomography For Nondestructive Testing Of Standing Trees** (#80)
- Jaejoon Kim - **Impedance Charactersitcs And Mitigation Of Liftoff Distance Effect On Eddycurrent Nondestructive Testing** (#6)
- Simone Minucci, Raffaele Albanese, Massimiliano De Magistris, Vincenzo Paolo Loschiavo - **Test Of A Novel Technique For The Reconstruction Of 3d Magnetic Fields In Tokamaks** (#14)
- Vinicius Oiring de Castro Cezar, Laure-Line Rouve, Olivier Chadebec , Jean-Louis Coulomb, François-Xavier Zgainski, Bruno Caillau - **Evaluation of the residual flux using the inverse problem method. Application to a single-phase transformer** (#66)
- Judith Mengelkamp, Matthias Carlstedt, Marek Ziolkowski, Hartmut Brauer, Jens Haueisen - **Flaw Identification In GLARE Using Goal Function Scan** (#43)
- Lyes IFREK, Gilles CAUFFET, Olivier CHADEBEC, Yann BULTEL, Sebastien ROSINI, Luc ROUVEYRE - **Comparison Between 3d Current Density Basis Used For Faults Identification In Fuel Cell Stack From External Magnetic Field Measurements** (#63)

Lunch 13:00 – 14:30

ORAL Session VII 14:30 - 16:00

Applications II

- Matthias Ratajczak, Thomas Gundrum, Thomas Wondrak, Robert Martin , Frank Stefani - **New developments in contactless inductive flow tomography** (#64)
- Sergio P Pellegrini , Flávio C Trigo , Raul G Lima - **Solving the Electrical Impedance Tomography inverse problem for logarithmic conductivity: numerical sensitivity** (#36)
- Elisabetta Sieni, Paolo Di Barba, Fabrizio Dughiero, Michele Forzan - **Uncertainty-Tolerant Magnetic Field Synthesi**S (#13)
- Stephane brisset - **Pareto-Based Branch And Bound Algorithm For Multiobjective Optimization Of A Safety Transformer**(#23)
- Guillaume Crevecoeur, Arne De Keyser, Matthias Vandeputte - **Optimal Torque Actuations Of An Electric Drivetrain Using Convex Optimized Power Flows** (#70)

Emerald Award Proclamation 16:00 – 16:15

Recognition Award from OIPE Community 16.15 - 17.00

Closing 17.00 - 17.30

Farewell Toast 17.30 - 18.00