

# FINAL PROGRAM



EUROPEAN FUEL CELL  
CONFERENCE & EXHIBITION



# december 13<sup>th</sup>

## LE CELLE A COMBUSTIBILE E L'IDROGENO IN ITALIA - STATO DELL'ARTE E SVILUPPI FUTURI -

08,30 > 18,00

Invited session OPEN TO ALL - in italian

# december 14<sup>th</sup>

## PLENARY SESSION

08,00 > 09,40

**Registration**

▼ location: **Auditorium Loyola**

09,40 > 09,55

**Welcome to the Conference and formal opening** - Angelo Moreno, Conference chairman

09,55 > 10,00

**Welcome and formal opening from Institutions**

### SESSION I ▼ location: **Auditorium Loyola**

10,00 > 11,40

**Policies: World roadmaps and new horizons**

10,00 > 10,20

The Fuel Cell and Hydrogen Joint Undertaking: Towards the deployment of Fuel Cells and Hydrogen Technology, **Bert De Colvenaer** - Executive Director of European Fuel Cells and Hydrogen Joint Undertaking

10,20 > 10,40

U.S. Department of Energy Fuel Cell Development- Recent Progress and Long Term Strategy, **Joseph Stanford**, Policy, Analysis, and International Activities Fuel Cell Technologies Program, U.S. Department of Energy

10,40 > 11,00

Fuel cell development state of the art and long term strategy in Korea, **Seong-Ahn Hong**, Korea Institute of Science and Technology

11,00 > 11,20

Fuel cell development state of the art and long term strategy in Japan, **Ken-Ichiro Ota**, Yokohama National University

11,20 > 11,40

Fuel cell development state of the art and long term strategy in China, **Huamin Zhang**, Dalian Institute of Chemical Physics

11,40 > 12,00

**Coffee Break**

### SESSION II ▼ location: **Auditorium Loyola**

12,00 > 13,00

**Market: Fuel cells and hydrogen, customer outreach and investment returns**

12,00 > 12,20

Fuel cells ready for the market? Timeline and the way to accelerate real market deployment, **Pierre Etienne Franc**, Head of Industry Grouping European Fuel Cells and Hydrogen Joint Undertaking

12,20 > 12,40

The role of the Research community in accelerating FC technology market deployment, **Christian Sattler**, Vice Chair of the Board Research Grouping European Fuel Cells and Hydrogen Joint Undertaking

12,40 > 13,00

Questions and answers

13,00 > 13,30

**Press Briefing**

13,00 > 14,40

**Lunch**

# december 14<sup>th</sup>

## PARALLEL SESSIONS

### SESSION 1a | location: Alghieri

#### SOFC Cell, Stack & System Modeling

- 14,40 > 15,00 EFC11216 **CFD evaluation of SOFC performance with biosyngas**  
Liyuan Fan - *Delft University of Technology*
- 15,00 > 15,20 EFC11173 **Experimental and numerical studies on the experimental and numerical studies on the distributors with various sizes**  
Chia-Ming Huang - *National Central University*
- 15,20 > 15,40 EFC11033 **Modelling and performance of a microtubular YSZ-based anode supported Solid Oxide Fuel Cell Stack and power module**  
Marcos Rupérez Cerqueda - *Fundación Hidrógeno Aragón*
- 15,40 > 16,00 EFC11247 **Effects of composition and oxygen nonstoichiometry on the thermodynamic stability and electrical properties of perovskite-type oxides in the Ba-Sr-Co-Fe-O system**  
Speranta Tanasescu - *Institute of Physical Chemistry "Ilie Murgulescu" of the Romanian Academy*

### SESSION 1b | location: Carducci

#### SOFC Cell, Stack & System Modeling

- 14,40 > 15,00 EFC11090 **Fuel Cell Research in Germany**  
Matthias Laske - *Project Management Jülich Forschungszentrum Jülich GmbH*
- 15,00 > 15,20 EFC11009 **Policy And Programs In Romania, Hydrogen And Fuel Cell Research Center**  
Ioan Iordache - *ICSI*
- 15,20 > 15,40 EFC11029 **Hyprofessionals Project: Development Of Educational Programmes And Training Initiatives Related To Hydrogen Technologies And Fuel Cells In Europe**  
Joaquin Mora Larramona - *Foundation Hydrogen Aragon*
- 15,40 > 16,00 EFC11024 **Could a generic european fuel cell stack be competitive during early market introduction phase and medium term horizon?**  
Thierry Priem - *CEA*

### SESSION 1c | location: Foscolo

#### SOFC Cell, Stack & System Modeling

- 14,40 > 15,00 EFC11104 **Study on plasma nitrated CrN coatings for PEMFC bipolar plates**  
Sonja Auvinen - *VTT Technical Research Centre of Finland*
- 15,00 > 15,20 EFC11239 **Gas Diffusion Layer Material Degradation Mechanisms Gas Diffusion Layer Material Degradation Mechanisms Proton Exchange Membrane Fuel Cells**  
Matthew Garofalo - *Rochester Institute of Technology Thermal Analysis, Microfluidics, and Fuel Cell Laboratory*
- 15,20 > 15,40 EFC11184 **Origin of oxygen reduction activity on tantalum oxide-based compounds as non-platinum cathodes for PEFC**  
Akimitsu Ishihara - *Yokohama National University*
- 15,40 > 16,00 EFC11044 **Ta Oxide and Zr Oxide Based Materials for New Cathode of PEFC**  
Ken-ichiro Ota - *Yokohama National University*

## SESSION 2a | location: Alighieri

### SOFC Cell, Stack & System Modeling

- 16,10 > 16,30** EFC11075 **Solid oxide fuel cell stack: temperature regulation**  
Panagiotis Tsiakaras - *University Of Thessaly*
- 16,30 > 16,50** EFC11213 **A new model for the analysis of operating Conditions of micro cogenerations soft Modules**  
Alessandro Mauro - *Università di Napoli "Parthenope"*
- 16,50 > 17,10** EFC11248 **Numerical Modeling of SOFCs Operating on Biogas from Biodigesters**  
Francisco Elizalde-Blancas - *University of Guanajuato*
- 17,10 > 17,30** EFC11038 **Finite volume SOFC model for operation with coal-syngas fuel**  
Vincenzo Spallina - *Politecnico di Milano*

## SESSION 2b | location: Carducci

### Fuel Processing

- 16,10 > 16,30** EFC11121 **Thermodynamic analysis and evaluation of fuel processing**  
Wolfgang Winkler - *HAW Hamburg*
- 16,30 > 16,50** EFC11115 **Catalytic activity and selectivity of CeO<sub>2</sub> supported Pt-Ni and Pt-Co catalysts for bio-ethanol steam reforming**  
Filomena Castaldo - *Università di Salerno - Dipartimento di Ingegneria Industriale*
- 16,50 > 17,10** EFC11141 **Water gas shift reaction in a pss supported palladium membrane reactor**  
Adolfo Iulianelli - *University of Calabria/Institute on Membrane Technology of the National Research Council*
- 17,10 > 17,30** EFC11112 **Fuel cell feed system based on H<sub>2</sub> production by a compact multifuel catalytic ATR reactor**  
Antonio Ricca - *Dipartimento di Ingegneria Industriale - Università degli Studi di Salerno*

## SESSION 2c | location: Foscolo

### PEM Materials

- 14,40 > 15,00** EFC11180 **Pt@Pd/C Core-Shell Nanostructures as Methanol-Tolerant Oxygen Reduction Electrocatalyst**  
Sridhar Parthasarathi - *Central Electrochemical Research Institute*
- 15,00 > 15,20** EFC11168 **Oxygen Reduction Reaction on heteroatom-doped Electrocatalysts in PEMFC**  
Hexiang Zhong - *Dalian Institute of Chemical Physics*
- 15,20 > 15,40** EFC11157 **Performance of PEM-FC based on carbon-cloth Gas Diffusion Electrodes**  
Giovanni Dotelli - *Politecnico di Milano*
- 15,40 > 16,00** EFC11012 **Effect of Nanostructure of Mesoporous Carbons on the Performance of Carbon Supported Pt-based Electrocatalysts**  
Shuqin Song - *Sun Yat-sen University*

### Cocktail

**17,30 >**

### POSTER SESSION

- 17,30 > 19,00**
- :: Materials and Fabrication Processes for Low Temperature Fuel Cells
  - :: Materials and Fabrication Processes for High Temperature Fuel Cells
  - :: Cell, Stack, System Modeling for Low Temperature Fuel Cells
  - :: Cell, Stack, System Modeling for High Temperature Fuel Cells

# december 15<sup>th</sup>

## PARALLEL SESSIONS

### SESSION 3a | location: Alghieri

#### Micro-CHP

- 09,00 > 09,20 EFC11266 **Status report on Development and Manufacturing of Market-oriented SOFC generators at SOFCpower SpA**  
Massimo Bertoldi - *SOFCpower*
- 09,20 > 09,40 EFC11264 **Operational experience of m-CHP systems for residential use**  
Stefano Modena - *SOFCpower*
- 09,40 > 10,00 EFC11252 **LOTUS: a SOFC based microCHP system**  
Dick Liefink - *HyGear Fuel Cell Systems*
- 10,00 > 10,20 EFC11224 **System design and process layout for a SOFC micro-CHP unit with reduced operating temperature**  
Thomas Pfeifer - *Fraunhofer IKTS*
- 10,20 > 10,40 EFC11178 **Initial Deployment and Independent Testing of Micro-Combined Heat and Power Fuel Cell Systems in Light Commercial Buildings**  
Whitney Colella - *Pacific Northwest National Laboratory*

### SESSION 3b | location: Carducci

#### Transport applications

- 09,00 > 09,20 EFC11096 **Hydrogen fuel cell buses for urban transportation in Brazil**  
Ferdinand Panik - *Hochschule Esslingen*
- 09,20 > 09,40 EFC11051 **Tram driven by a fuel cell system**  
Yaiza Merino - *Hynergreen Technologies, S.A.*
- 09,40 > 10,00 EFC11093 **Hybrid PEMFC system experimentation in the sailboat Zero CO2**  
Didier Bouix - *Commissariat à l'Energie Atomique et aux Energies Alternatives*
- 10,00 > 10,20 EFC11183 **ENFICA-FC: Design of Transport Aircraft Powered by Fuel Cell & Flight Test of Zero Emission 2-Seater Aircraft Powered By Fuel Cells fuelled by Hydrogen**  
Giulio Romeo - *Politecnico di Torino*
- 10,20 > 10,40 EFC11018 **Reliability issues in mobile fuel cell applications**  
Gunther Weirum - *AVL List GmbH*

### SESSION 3c | location: Foscolo

#### PEM system design & optimisation

- 09,00 > 09,20 EFC11193 **Power Control of a PEM Fuel Cell System Using Nonlinear Model Predictive Control**  
Chrysovalantou Ziogou - *CPERI / CERTH*
- 09,20 > 09,40 EFC11290 **Proton Exchange Membrane Fuel Cell Stack Combined Heat and Power Prototype System, Mihai Balan, ICSI**  
Mihai Balan - *ICSI*
- 09,40 > 10,00 EFC11218 **Fuzzy logic control of PEMFC hybrid drive train in industrial vehicle applications**  
Timo Keränen - *VTT*
- 10,00 > 10,20 EFC11100 **On the selection of membrane reactor design for PEM based micro-cogeneration systems**  
Leonardo Roses - *Politecnico di Milano*
- 10,20 > 10,40 EFC11149 **Experimental analysis of a high temperature pem fuel cell stack**  
Giacomo Falcucci - *University of Naples "Parthenope"*

- 10,40 > 11,00 **Coffee Break**

**SESSION 4a** | location: Alghieri

**SOFC Manufacturing processes**

- 11,00 > 11,20** EFC11298 **One step production process for large area supporting cathode**  
Angela Gondolini - *ISTEC-CNR*
- 11,20 > 11,40** EFC11158 **Co-precipitation synthesis of SOFC electrode materials**  
Cinzia Cristiani - *Politecnico di Milano*
- 11,40 > 12,00** EFC11263 **Epitaxial thin film electrolytes for Solid Oxide Fuel Cells**  
Silvia Licoccia - *University of Rome Tor Vergata*

**SESSION 4b** | location: Carducci

**Carbon Capture and Storage**

- 11,00 > 11,20** EFC11243 **Experimental test of carbon capture from cogeneration plant with mcfc coupled**  
Gabriele Discepoli - *Università degli Studi di Perugia*
- 11,20 > 11,40** EFC11227 **Molten Carbonate Fuel Cells integration with a Natural Gas Combined Cycle power plant for CO2 capture**  
Barbara Bosio - *Università degli Studi di Genova*
- 11,40 > 12,00** EFC11170 **Power generation from Solid Oxide Fuel Cells (SOFC) in different fuel scenarios and with/without carbon capture**  
Andrea Lanzini - *Politecnico di Torino*

**SESSION 4c** | location: Foscolo

**PEM Materials**

- 11,00 > 11,20** EFC11199 **Novel synthesis of hollow core mesoporous shell carbon (HCMSC) as a promising catalyst support for FCs application**  
Juqin Zeng - *Politecnico Di Torino*
- 11,20 > 11,40** EFC11271 **Innovative catalyst supports to address fuel cell stack durability**  
Isotta Cerri - *Toyota Motor Europe*
- 11,40 > 12,00** EFC11041 **Different anode catalysts for High Temperature PBI-based DEFC**  
José Joaquín Linares León - *Instituto de Química de São Carlos-Universidade de São P*

**SESSION 5a** | location: Alghieri

**Diagnostic tools & methods for Fuel Cells**

- 12,10 > 12,30
**EFC11279 Simulation, fabrication and evaluation of an external-manifold 3-cell SOFC stack**  
Dong Yan - *Huazhong University of Science and Technology*
- 12,30 > 12,50
**EFC11125 A High-Pressure Double-Chamber SOFC Platform for Cell Performance Measurements Using Different Flow Distributors**  
CM Huang - *National Central University Taiwan*
- 12,50 > 13,10
**EFC11128 Analysis of capillary flow driven model for water transport in pefc cathode catalyst layer: consideration of mixed wettability and pore size distribution**  
Vincenzo Mulone - *University of Rome Tor Vergata*
- 13,10 > 13,30
**EFC11273 Thermal fluid dynamics of a solid oxide fuel cells tubular stack**  
Emanuela Brunetti - *Università Politecnica delle Marche - Dip. Energetica*

**SESSION 5b** | location: Carducci

**MCFC and biofuels**

- 12,10 > 12,30
**EFC11086 Porous Ni-Cr catalyst for internal reforming of biogas in MCFC**  
Changwon Yoon - *Korea Institute of Science and Technology*
- 12,30 > 12,50
**EFC11053 Impact of H<sub>2</sub>S on molten carbonate fuel cell fed with biogas: effect of ceria and zirconia addition to Ni-Cr traditional anode**  
Elisabetta Simonetti - *ENEA*
- 12,50 > 13,10
**EFC11117 H<sub>2</sub>S adsorption on activated carbons for MCFC applications**  
Valentina Naticchioni - *ENEA CR Casaccia - Università la sapienza, Ingegneria Chimica*
- 13,10 > 13,30
**EFC11055 Molten carbonate fuel cells to improve the performance of chp in wastewater treatment facilities**  
David Sánchez - *Universidad de Sevilla*

**SESSION 5c** | location: Foscolo

**PEM Materials**

- 12,10 > 12,30
**EFC11007 Durability in PEM Polymers**  
David Schiraldi - *Case Western Reserve University*
- 12,30 > 12,50
**EFC11176 Development of Pd-composites membranes for hydrogen production in membrane reactors**  
Pietro Pinacci - *RSE*
- 12,50 > 13,10
**EFC11209 Palladium Nanostructures with Dendritic Morphology for Oxygen Reduction Reaction**  
Kranthi Kumar Maniam - *Indian Institute of Technology, Madras*
- 13,10 > 13,30
**EFC11237 Thermal Management Considerations in the Design of an Experimental Fuel Cell with Material Evaluation**  
Evan See - *Rochester Institute of Technology - Thermal Analysis, Microfluidics, and Fuel Cell Lab*

13,30 > 14,40 **Lunch**



**SESSION 6a** | location: Alghieri

**SOFC Materials**

- 14,40 > 15,00** EFC11088 **Elaboration and characterization of P2O5 containing Aluminosilicate Glasses developed for sealing of SOFC**  
Lionel Montagne - *University of Lille*
- 15,00 > 15,20** EFC11037 **Defect structure, thermodynamic stability and cathodic behavior of double perovskite REBaCo<sub>2-x</sub>MxO<sub>6-d</sub> (RE=Gd, Pr, Nd; M=Fe,Cu; x=0-0.6) in Ce<sub>0.8</sub>Sm<sub>0.2</sub>O<sub>2</sub> based SOFC**  
Dmitry Tsvetkov - *Ural State University*
- 15,20 > 15,40** EFC11071 **Degradation Mechanisms of Ni-based SOFC under direct dry reforming**  
Pierluigi Leone - *Politecnico di Torino*
- 15,40 > 16,00** EFC11039 **Performance of a glass ceramic sealant in a SOFC short stack**  
Federico Smeacetto - *Politecnico di Torino*

**SESSION 6b** | location: Carducci

**Biofuels**

- 14,40 > 15,00** EFC11231 **Operation of a biogas processing plant for electrical energy generation based on dry reforming and low temperature fuel cells**  
Antonio José Martín - *CIEMAT*
- 15,00 > 15,20** EFC11095 **Possibilities and limitations of sewage biogas-powered SOFC systems**  
Alex Hornero - *CETaqua*
- 15,20 > 15,40** EFC11165 **SOFC fuelling by integrated Biomass Gasifier: study of the effect of operating conditions on system performance**  
Vincenzo Mulone - *University of Rome Tor Vergata*
- 15,40 > 16,00** EFC11230 **Pd-based membrane reactors for producing ultra pure hydrogen: oxidative reforming of bio-ethanol**  
Silvano Tosti - *ENEA*

**SESSION 6c** | location: Foscolo

**PEM Materials**

- 14,40 > 15,00** EFC11275 **Advances in Digital Microstructure Generation of a PEMFC GDL with Localized Binder and PTFE Distributions**  
Michael Mario Daino - *Mechanical Engineering Department, Rochester Institute of Technology*
- 15,00 > 15,20** EFC11140 **Improvement of contact resistance between bipolar plates on the polymer composite coated metal bipolar plate for high efficiency PEM fuel cell**  
Yang-Bok Lee - *Korea University*
- 15,20 > 15,40** EFC11011 **Plasmachemical methods of electrocatalyst synthesis**  
Vladimir Fateev - *NRC "Kurchatov institute"*
- 15,40 > 16,00** EFC11013 **Designed Electrocatalysts for High Temperature PEMFCs**  
Antonino Salvatore Aricò - *CNR-ITAE*

**SESSION 7a** | location: **Alghieri**

**HTFC Materials**

- 16,10 > 16,30**    **EFC11099**    **An overview on carbonate/oxide composite materials for high-temperature fuel cells applications: key points and breakthroughs**  
Michel Cassir - *Chimie ParisTech ENSCP*
- 16,30 > 16,50**    **EFC11242**    **Interfacial phenomena of ceria-molten carbonate composite electrolytes studied by Raman spectroscopy**  
Minoru Mizuhata - *Kobe University*
- 16,50 > 17,10**    **EFC11244**    **Investigation of long-term hydrothermal stability of nano 3YSZ at operating temperatures of SOFCs**  
Jung-Sik Kim - *Loughborough University*
- 17,10 > 17,30**    **EFC11301**    **Neutron diffraction study of Ni-Cr/CeO<sub>2</sub> electrodes for innovative fuel cell systems**  
Laetitia Laversenne - *Institut NEEL CNRS/UJF*

**SESSION 7b** | location: **Carducci**

**Impurities: removal and effects**

- 16,10 > 16,30**    **EFC11030**    **Desulphurization of natural gas for fuel cell - based micro combined heat and power applications**  
Elena Sisani - *Università degli Studi di Perugia*
- 16,30 > 16,50**    **EFC11116**    **Screening of catalysts for H<sub>2</sub>S abatement from biogas to feed MCFC**  
Daniela Barba - *Dipartimento di Ingegneria Industriale - Università di Salerno*
- 16,50 > 17,10**    **EFC11159**    **Hydrogen fuel impurities: The effect of CO<sub>2</sub> and hydrocarbons at the anode of a PEM fuel cell**  
Katrín Kortsdóttir - *KTH - Royal Institute of Technology*
- 17,10 > 17,30**    **EFC11256**    **HCl removal from biogas for feeding MCFCs: adsorption on microporous materials**  
Maria Turco - *Dipartimento di Ingegneria Chimica-Università di Napoli*

**SESSION 7c** | location: **Foscolo**

**PEM characterization**

- 16,10 > 16,30**    **EFC11219**    **Experimental analysis of a pem fuel cell performance at variable load with anodic exhaust management optimization**  
Roberta Vecci - *University of Bologna - Faculty of Engineering - DIEM*
- 16,30 > 16,50**    **EFC11226**    **Investigation of pinhole effect on pemfc mea ageing**  
Huang Botao - *Laboratoire Réaction et Génie des procédés*
- 16,50 > 17,10**    **EFC11022**    **Research and Development of Key Materials for Proton Exchange Membrane Fuel Cell**  
Huamin Zhang - *Dalian Institute of Chemical Physics, Chinese Academy of Sciences*
- 17,10 > 17,30**    **EFC11050**    **Durability of membrane electrode assemblies under severe operating conditions**  
Viktor Hacker - *Graz University of Technology*

**17,30 >**    **Cocktail**

**17,30 > 19,00**    **POSTER SESSION**

- :: System and Balance of Plant Design and Optimization
- :: Lab and Field Tests and Market or Real-life Applications
- :: Fuel Processing and Non-Conventional Fuels
- :: New ideas, Non-conventional Fuel Cells and Niche Applications
- :: Policy and Cross-cutting Issues on Fuel Cells

# december 16<sup>th</sup>

## PARALLEL SESSIONS

**SESSION 8a** | location: Alghieri

### SOFC Materials

- 09,00 > 09,20** EFC11269 **Keynote Speach - Proton Conducting Ceramics for Energy Conversion, Jianhua Tong, Colorado School of Mines**  
Jianhua Tong - *Colorado School of Mines*
- 09,20 > 09,40** EFC11164 **Synthesis of LaCo0.6Ni0.4O3 as a cathode contact material for IT-SOFC**  
Fangzhong Wang - *Huazhong University of Science & Technology*
- 09,40 > 10,00** EFC11113 **Low Temperature Solid Oxide Fuel Cells Fabricated Using All Nano-composite Materials**  
Liangdong Fan
- 10,00 > 10,20** EFC11265 **High Performing SOFC Materials for Low Temperature Operation**  
Dario Montinaro - *SOFCPOWER*

**SESSION 8b** | location: Carducci

### New ideas & applications

- 09,00 > 09,20** EFC11097 **Molten carbonates for fuel cells, CO2 capture and as reaction media: a strategy**  
Michel Cassir - *Chimie ParisTech ENSCP*
- 09,20 > 09,40** EFC11085 **Design and Evaluation of a Passive Self-Breathing Micro Fuel Cell for Autonomous Portable Applications**  
Matthias Weiland - *Technische Universität Berlin*
- 09,40 > 10,00** EFC11155 **Conception and test of a 10 kg magnesium hydride tank**  
Baptiste Delhomme - *CNRS - Institut Néel - CRETA*
- 10,00 > 10,20** EFC11089 **Portable power technologies for the dismantled soldier**  
Carmen M. Rangel - *LNEG*

**SESSION 8c** | location: Foscolo

### High-Temperature PEMFC

- 09,00 > 09,20** EFC11072 **Experimental characterization of a fuel processor of a 30 kW-PEFC CHP system**  
Fausto Bresciani - *Politecnico di Milano - Dipartimento di Energia*
- 09,20 > 09,40** EFC11148 **Three-dimensional numerical analysis and experimental characterization of a High Temperature-PEM fuel cell**  
Giacomo Falcucci - *Department of Technologies - University of Naples "Parthenope"*
- 09,40 > 10,00** EFC11120 **Experimental Performance Analysis of a HT PEM Fuel Cell System Fed with Biogas**  
Rodolfo Taccani - *University of Trieste*
- 10,00 > 10,20** EFC11109 **Development Work for the 130°C-PEFC-Stack**  
Torsten Knöri - *German Aerospace Center*

**10,20 > 10,40** Coffee Break

FCHE FINAL PROGRAM

**SESSION 9a** | location: Alghieri

**SOFC system design & optimisation**

- 10,40 > 11,00** EFC11118 **Single component fuel cell (SCFC): material and technology**  
Rizwan Raza - *KTH*
- 11,00 > 11,20** EFC11035 **Durability Improvement of Flatten Tubular Segmented-in-Series Type Cell-Stacks for SOFC m-CHP**  
Takuya Ito - *Tokyo Gas Co., Ltd.*
- 11,20 > 11,40** EFC11212 **From windpower and biogas to SNG via SOEC and back to power and heat via SOFC**  
John Bøgild Hansen - *Haldor Topsøe*
- 11,40 > 12,00** EFC11027 **2R-Cell™: A universal cell for an easy and safe SOFC operation**  
Raphael Ihringer - *Fiaxell*

**SESSION 9b** | location: Carducci

**Microbial Fuel Cells**

- 10,40 > 11,00** EFC11217 **Urine as a suitable fuel for Microbial Fuel Cells**  
Ioannis Ieropoulos - *University of the West of England, Bristol*
- 11,00 > 11,20** EFC11171 **Power generation of microbial fuel cells (MFCs) with low cathodic platinum loading**  
Carlo Santoro - *University of Connecticut*
- 11,20 > 11,40** EFC11192 **Relation of anodic and cathodic performance to pH variations in membraneless microbial fuel cells**  
Pierangela Cristiani - *RSE-Ricerca sul Sistema Energetico*
- 11,40 > 12,00** EFC11201 **Power enhancement in microbial fuel cells by parallel and series connection**  
Daniele Finarelli - *University of Pavia*

**SESSION 9c** | location: Foscato

**PEMFC Cell, Stack & System Modeling**

- 10,40 > 11,00** EFC11065 **Effects of flooding on DMFC performance: 1D+1D model development and experimental validation**  
Matteo Zago - *Politecnico di Milano, Department of Energy*
- 11,00 > 11,20** EFC11276 **The effect of anisotropic GDL on the performance of PEM fuel cell**  
Nahla Alhazmi - *University of Leeds*
- 11,20 > 11,40** EFC11084 **Impedance data analysis of a pem fuel cell using a distribution of relaxation times approach**  
Carmen M. Rangel - *LNEG*
- 11,40 > 12,00** EFC11146 **Modelling Study of Time Domain Current Distribution from Frequency Domain Electrochemical Impedance Spectrum in PEMFCs**  
Rui Chen - *Loughborough University*

**SESSION 10a** | location: **Carducci**

**General Issues on Fuel Cells**

- 12,10 > 12,30** EFC11161 **An LCA evaluation of MCFCs, SOFCs and PEMFCs, Towards Product Category Rules and Environmental Product Declaration**  
Sergio Ulgiati - *Parthenope University*
- 12,30 > 12,50** EFC11267 **Estimating power generation costs by fuel cell using montecarlo methods**  
Marco Rao - *ENEA*
- 12,50 > 13,10** EFC11295 **Research and Development Activities of Fuel Cells at POSTECH**  
Nigel M. Sammes - *Pohang University of Science and Technology*
- 13,10 > 13,30** EFC11300 **Hydrogen fuel cell vehicles for light duty urban transport: experiences from hychain project**  
Maria Yetano Roche - *Wuppertal Institute for Climate, Environment and Energy*

**SESSION 10b** | location: **Foscolo**

**Hybrid fuel cell systems**

- 12,10 > 12,30** EFC11139 **Role of fuel cells in PV-based systems for remote sites**  
Frano Barbir - *FESB University of Split*
- 12,30 > 12,50** EFC11123 **Emergency Shutdown Strategies for Fuel Cell Turbine Hybrid**  
Paolo Pezzini - *NETL and University of Genoa*
- 12,50 > 13,10** EFC11064 **Performance analysis of hybrid systems based on externally heated closed-cycle engines**  
David Sánchez - *Universidad de Sevilla*
- 13,10 > 13,30** EFC11076 **Fuel cell minibus analysis after 2 years operation period**  
Paola Artuso - *CIRPS-Sapienza university of Rome*

**SESSION 10c** | location: **Alighieri**

**SOFC characterization**

- 12,10 > 12,30** EFC11255 **Experimental analysis of SOFC fuelled with ammonia**  
Giovanni Cinti - *Università degli Studi di Perugia*
- 12,30 > 12,50** EFC11110 **Design and testing of metal-supported sofc on compressed ni-al foam substrates**  
Vladislav Sadykov - *Boreskov Institute of Catalysis*
- 12,50 > 13,10** EFC11250 **Characterization of 300W SOFC stack fed by different fuels**  
Daniele Penchini - *Università degli Studi di Perugia*