europass Curriculum Vitae

PERSONAL INFORMATION

Antonio Ficarella

Università del Salento – Dipartimento di Ingegneria dell'Innovazione
Via per Arnesano – I-73100 LECCE (LE)
+39.0832.1835172 +39.339.3719379

antonio.ficarella@unisalento.it

http://www.ingegneriaindustriale.unisalento.it/scheda_personale/-/people/antonio.ficarella, https://sites.google.com/site/greenenginelab2/
skype aficarella01

Sex | Date of birth | Nationality

WORK EXPERIENCE

September 1998 – today

Full Professor of Systems for Energy and Environment at the University of Salento (Lecce, Italy).

Università del Salento, Piazza Tancredi, 7, 73100 Lecce, telefono 0832291111 (www.unisalento.it).

▪ Main activities and responsibilities
Full professor of Energy and Environment Systems at University of Salento (Italy).

Director of the Department of Engineering for Innovation (2013-2015). President of the ITS (High Technical Institute) Aerospace Foundation (since 2013). Dean of the Faculty of Industrial Engineering (2008-2012).

President of the Industrial Engineering School (2012-2013). Delegate of the Rector of the University for the safety of workers (2008-2014).

Coordinator of the Universities activities in the Apulian Aerospace District since 2008, member of the Board of Directors of the Aerospace Technological Cluster (Distretto Tecnologico Aerospaziale, DTA) (2009-2015).
Member of the Advisory Council for Aeronautics Research in Europe (ACARE) (since 2012), and of the Technical Committee of CTNA - Italian Aerospace Technological Cluster (since 2012).
Member of the Board of Directors of the Inter-university Consortium of Apulian Region (Consorzio Internuiversitario Regione Puglia, CIRP) (2005-2016), and of the Board of Directors of the Inter-university Consortium for Research on Sustainable Development (Consorzio Interuniversitario di Ricerca per lo Sviluppo Sostenibile, CIRPS) (since 2011).

Academic member of the Athens Institute for Education and Research (ATINER) since February 2016.
He is involved in EASN (European Aeronautics Science Network) activities since 2014, and in ERCOFTAC (European Research Community on Flow, Turbulence and Combustion) activities since 2014. He participated in the activities of CANNAPE (Canadian Aeronautics Networking Programme for Europe) (2011-2013).

Registered in the Expert List of Italian Ministry of Education, University and Research, for the evaluation of projects regarding the scientific and technological research and the industrial development. Scientific adviser of the Ministry for Economic Development, and of the Italian Regions of Liguria, Marche, Tuscany, Veneto and Bolzano for the evaluation of projects relating to scientific research and technological and industrial development. Member of the Committee for the Development of Aeronautic Industry, at the Ministry of Economic Development, since 2014.

He is a member of the American Society of Mechanical Engineers (ASME), Society of Automotive Engineers (SAE), American Institute for Aeronautics and Astronautics (AIAA). He is Reviewer for SAE, ASME, Elsevier.

Shareholder of the spin-off of the University of Salento ADVANTECH from 2011. The company provides technologies for process management and simulation data in the context of new product development processes that characterize the complex manufacturing sectors. The objective will be implemented through an action of marketing and promotion of small and medium-sized enterprises and public bodies.

He was professor of Machinery, Energy Systems, Aeronautical Propulsion, Design and Management of Energy Systems, Industrial Energy Management, Fluid-dynamics, Sustainability of Propulsion and Energy Systems.

Industrial consultant in the field of energy systems, environmental impact, industrial plants and safety.

In 1992 he received his Ph.D. in Mechanical Engineering, with a thesis on "Conservative and Accurate Simulation Models for the Calculation of Time-varying Phenomena inside the Injection Systems for I.C. Engines", at University of Bologna, Italy. In 1989 he took the Diploma in Industrial Fluid Dynamics, at the Von Karman Institute, Bruxelles, Belgium, with a prize awarded by the Belgian Government,. In 1986 he took his Master of Science in Mechanical Engineering, with a thesis on "Injection Systems for Diesel Engines: Numerical Simulation and Experimental Verification", at University of Bari, Italy.

He was the national scientific coordinator of the Project of National Interest (PRIN) Cycle-Resolved Emissions Control of Internal Combustion Engines by Means of an Innovative Optical Sensor (2006-2008). The research program was devoted to the development of a novel detection system for the cycle resolved measurement of the NOx and CO emissions in internal combustion engines and its related control system. Through the cycle resolved monitoring of the gas exhaust emission, a feedback control and a real time adjustment of the combustion process parameters, such as the number of injections per cycle and their position, the injection pressure, the EGR level, will be possible in order to optimize and minimize the fuel consumption and the emissions. The main problem which has so far prevented the use of optical sensors for the detection of exhaust emissions in the automotive field is the deposition of organic compounds on the active area of the sensors. In this project this problem was solved by using photodetectors based on gallium nitride and related compounds, which exhibit a superior resistance to temperatures higher than the carbon and organic oxidation temperature. The sensor will thus work in-situ in the exhaust manifold of combustion engines, heated at temperature up to 800 K so that all organic compounds will burn, assuring the clear surface needed for an optical sensor. In order to avoid the same problem on the light source, an arc discharge lamp will be developed and used as UV source. A sensor package was also studied and developed to allow an easy installation inside the exhaust manifold of an alternative engine and a fast connection with the signal acquisition and control unit. Finally, a control system was developed in order to use the collected signal to employ a cycle resolved control of the engine.

He is the scientific responsible of the project of network of laboratories "GREEN ENGINE", regarding the technologies of the combustion and of high temperatures (2009-2012).
This laboratory network integrates the following tasks:
-- Combustion propulsion and related chemical and physical issues
-- sensors development
-- Developing materials at high temperatures
The aim of the proposal is to create a network between those skills in order to support the research activities and development of new technologies for green propulsion with low environmental impacts. These activities are organic placement in the proposed “Distretto Aerospaziale Pugliese” (Aerospace District), and in the Competence Center of Transportation.
The tools and technologies that the proposed network intend to develop are:
-- Testing and monitoring instrumental combustion for propulsion applications, but can also test innovative engines for aeronautical propulsion;
– Study of the Construction aspects of the combustion chambers;
-- Development sensors for monitoring combustion and concentration of pollutant emissions to be integrated avionics equipment in the engine control;
-- Development of ceramic materials resistant to high temperatures, for motor applications (increased efficiency of the engine) and for more general applications at high temperatures (for example in Helicopter);
-- Characterisation of the corrosion performance of metallic metarials in propulsion systems.

He is the scientific responsible of the project PON MALET - Development of technologies for propulsion at high altitude and long range of uninhabited aircraft (2011-2015). The project parters are: DTA (Aerospace Technological Cluster), ALENIA, AVIO, CMD, CIRA, University of Salento, Polytechnic of Bari.
The aim of the project is to acquire technologies and their validation in order to develop a propulsion system for Unmanned Aerial Vehicle (UAV) that have a mission at a high altitude for a long duration. The purpose of the research is to find technological solutions that make an internal combustion engine deliver enough power even at a high altitude, respecting the aeronautical constraint of the low value of weight/power ratio. The propulsive system that was suggested, which the technological project derives from, will be based on a two stroke engine with direct injection electronically controlled

(common rail). The choice of the Diesel common rail two stroke engine aims to give the best balance between the structural weight, the required efficiency, the necessity to keep low the thermo-mechanical loads in the combustion chambre and the deliverable power. This engine will be supercharged by a multistage system, which will be light and efficient. In this system an innovative electrical and fluid dynamic machine (MEF) will be integrated, which will recover the overproduced energy, that would be dissipated at low altitude through the wastegate valves, and eventually supply energy in order to compress the air and so aid the supercharging system. The supercharging system with MEF minimizes the use of wastegate valves allowing, when an overuse of overboost is present, the elaboration of supercharged flow and the conversion of mechanical energy in electrical energy available on board. The MEF machine works also as a separated blow for engine ignition, replacing with more lightness and efficiency the classic Roots compressor. All the technologies will be tested at a ground level with the realization of a technological demonstrator, that will be submitted to experimental investigation including simulations at the maximum flight altitude. The tests will provide the characterization of the principal engine parameters together with those characteristic of aeronautical applications. The tests will come to an end with the integration of the demonstrator on an UAV vehicle in order to test out the main features.

He was scientific responsible of research unit in the European Project Renewable energy and forest management (European Project INTERREG) (2004-2007).

He is the scientific responsible of the project PON MEA - Aeronautical Hybrid Energy Management (since 2013). Hybrid Energy Management project aims to arrange, evaluate, analyze and develop hybrid propulsive architectures for UAV and General Aviation able to optimize performances about the management of aircraft energy. This kind of architectures, leveraging innovative solutions and enabling technologies relevant to electromagnetic and electrical aspects, allow to optimize the control of energy fluxes in order to reach high performances (e.g. reduce fuel consumption, power boost,…) with economic returns. The project, aimed to investigate architectures able to optimize the on board energy management and to reduce environmental impacts, deals with system aspects (KPI definition, architecture definition) and with enabling technologies required to realize the selected architectures. In order to reach this goal, the project involves different partners with extensive experience and know how about aerospace systems, electrical machines, power conversion, systems control, energy storage and reciprocating engines. All these partners are able to develop and manage enabling technologies required to realize innovative architectures aimed to optimize the on board energy management.

Scientific coordinator for the University of Salento, since 2016, of the project TECHNOLOGY DEVELOPMENT COMMUNITY, for research, development and innovation in collaboration with GE Avio and several Italian universities. Scientific director, from 2016, of the research and innovation activities aimed at the development and production of new solutions in the field of aeronautical engines, in partnership with GE Avio and the Aerospace Technological Cluster.

He was involved in several basic and applied research and development projects, in collaboration with the industries, often assuming the role of scientific responsible. The projects regard applied fluid-dynamics for industrial design, especially in the field of environmental impact, industrial wastes, renewable energy, agro-food industry, combustion, propulsion. Below is a list of projects in which he served as scientific director.
- ESTABLISHMENT OF A TASK FORCE TO SECURE THE NECESSARY SUPPORT ACTIVITIES RELATING TO SCIENTIFIC AND TECHNICAL ASPECTS OF ENVIRONMENTAL SUSTAINABILITY AND ENVIRONMENTAL PLANNING AND IMPLEMENTATION OF ACTION IN SUPPORT OF REGIONAL ENVIRONMENTAL AUTHORITIES (2005).
- Plan characterization and initial investigation - industrial waste Platform (Brindisi) (2005).
- Project of Offshore Wind Energy, Research, Experimentation, Development - Regione Puglia (2011).
- Numerical Aerodynamics Simulation analysis of the model UAV PYTHAGORAS (2010).
- RESEARCH PROJECT for the DEVELOPMENT OF a HYDRAULIC DEMOLITION (2005).
- Development of a method based on artificial neural networks for forecasting short-term revision of the electric power generated by wind farms (2008).
- APPLICATION OF ARTIFICIAL NEURAL NETWORKS FOR THE FORECAST WIND ENERGY IN MEDIUM TIME PERIOD OF WIND FARM SERRA CORTINA (MT) – 2007.
- Design of new model of coal burner to lower production of NOx (2006).
- Triennial Program for the Environment Conservation of the Puglia Region (2008).
- Program of actions for the Environment of the Puglia Region with reference to the objectives of the intervention, "Adaptation of the Regional Network for Monitoring Air Quality" and "Regional Air Quality Plan." (2005).
- Development of a endothermic heat pump (2007).
- "Design and development of advanced diesel engine for the application of yachting" - CALIBRATION BY DOE and COMBUSTION DIAGNOSTICS (2009).

- Characterization of thermo-fluid dynamics inside a railroad car in the condition of winter heating (2004).
- Competence Center for Innovation in Transportation – CCIT (2007).
- NUMERICAL ANALYSIS OF A HIGH PRESSURE INJECTION VALVE (2007).
- Risk analysis of agricultural areas adjacent to the conveyor belt and the ENEL plant Federico II characterized in "Plan for the characterization of agricultural areas." Activities for the Ministry for the Environment, Land and Sea, coordinated by the Deputy Commissioner "Ad Acta" of the Puglia Region (2008).

The main research activities were carried out in the fields of Energy, Fluid Machinery, Environment Impact, Industrial Plants. The main activities topics are Applied and Industrial Fluid-dynamic, Combustion, Turbo-machinery, Environmental Impact, Energy Saving, Pollution Prevention, Waste Recycling, Industrial Safety.

Author of several papers, published in international journals or presented at international congresses and symposia. The scientific activities were developed in the fields of unsteady and two-phase fluid-dynamic inside machines and apparatus, thermo and fluid dynamic applied to industrial processes simulation, Diesel engines and related direct injection systems, Diesel engine control and monitoring, sensor development, innovative monitoring techniques applied to IC engines, industrial energy applications and related environmental subjects, energy recovery from biomass, wastes, industrial processes. In the field of the aerospace propulsion, the research activities were developed in the fields of the active control of flows (for external profiles or inside the turbo-machinery) and of cryogenic fuels, with particular regard to the cavitation effects and the spray and combustion behavior.

In the field of the renewable energy, the research activity was devoted to the forecasting of the power produced by a wind farm. Different forecasting models - Auto Regressive Moving Average (ARMA) models, which perform a linear mapping between inputs and outputs, Artificial Neural Networks (ANNs) and Adaptive Neuro-Fuzzy Inference Systems (ANFIS) – have been analyzed, to perform a non-linear mapping and to provide a robust approach to wind power prediction. Some new hybrid methods were analyzed and proposed, based on the application of the six Daubechies wavelet employed to do the 3rd level discrete wavelet decomposition of the original hourly wind power time series, in combination with ANNs, ARMA and ANFIS models, in order to predict the power production of a wind farm. In particular, the results obtained with and without the wavelet decomposition were compared for each of the aforementioned techniques (ANNs, ARMA and ANFIS), by investigating the error of the different prediction systems for various forecasting horizons; the statistical distributions of the error are calculated and presented.

In the aerospace field, the research activities regarded the combustion phenomena in liquid-propellant rocket engines. The combustion occurs at operating conditions well above of the thermodynamic critical points of the fluid where reactants properties show liquid-like densities, gas-like diffusivity, and pressure-dependent solubility. Actually, there is a great interest in the development of reusable liquid rocket engines that operates with methane and liquid oxygen as propellants. In the carried-out numerical study of LOX/CH4 jet flames, the choice of the combustion model is a critical point: it should be accurate in the phenomena description but it should also characterized by a low computational cost. Different combustion models were used as the Eddy-dissipation finite-rate approach based on Arrhenius chemical kinetics, the equilibrium mixture fraction model (PDF) and the Steady State Flamelet approaches. Different chemical kinetics schemes were used, as the Skeletal mechanism and the Jones- Lindstedt mechanism, that permit to limit the number of reactions and species but taking into account also the intermediate species in the flame. Finally, an Eulerian (i.e., single-phase) methodology by using both ideal gas and real gas equation of state was used as well as a discrete phase approach that uses an Eulerian description of the gas phase and Lagrangian equations for the dilute spray.

The topic of active control of flow has been the subject of studies and research. Particularly, the computational modeling of a single dielectric barrier discharge (SDBD) plasma actuator was carried out; its applications as a flow actuator were studied. The plasma acts as a momentum source to the boundary layer allowing it to remain attached throughout a large portion of the airfoil.
The RANS simulations were performed using a CFD code in which the plasma force have been modeled as paraelectric force acting on the charged particles in the working flow
Using this numerical model, different cases have been simulated on an airfoil, depending on the direction of the force, to study the effect of the force on the flow and on the boundary layer.
The best flow control solutions have been displayed when body force component in the direction straight along the flow is positive and the component normal to the flow is considered. Finally, this numerical simulation methodology has been used for the investigations on the potential of plasma actuators, to suppress the flow separation over a compressor blade.
Specifically, the analysis has been focused to evaluate the increasing of the compressor performance

depending on the actuator strength and position on the blade

Several studies were carried out using a CFD analysis applied to study the suppression of the boundary layer separation into a highly - loaded subsonic compressor stator cascade, by different active flow control techniques. In particular three different techniques have been applied: the actuation by steady jet, by zero net mass flux Synthetic Jet (SJA) and plasma actuator.
Using the numerical model, the effect of plasma actuators to suppress the flow separation over the blade has been investigated, increasing the turbo-machinery performance too. The comparison between the different actuation devices shows that, reducing the secondary flow structures, each actuation technique beneficially affects the performance of the stator compressor cascade, even if in the steady jet the costs are relevant.

Regarding the combustion, the research activities have been focused on the investigation of lean non premixed and premixed methane/air flame with the application of plasma actuator for the flame stabilization. A microburner with plasma actuator device has been designed and tested.
The research topics integrates the following tasks:
-- Combustion propulsion and related chemical and physical issues
-- sensors development
-- Developing materials at high temperatures
The tools and technologies that the proposed research activities intend to develop are:
-- Testing and monitoring instrumental combustion for propulsion applications, but also test innovative engines for aeronautical propulsion;
– Study of the Construction aspects of the combustion chambers;
- Development sensors for monitoring combustion and concentration of pollutant emissions to be integrated avionics equipment in the engine control;
- Development of ceramic materials resistant to high temperatures, for motor applications (increased efficiency of the engine) and for more general applications at high temperatures;
- Characterisation of the corrosion performance of metallic materials in combustion applications.
The activities on plasma actuators also involve the potentiality of lean flame stabilization. Aim of the investigation is the characterization of a non-premixed methane/air microburner, Bunsen-type, equipped with a plasma actuator for the flame stabilization and the blowoff control. The electric field was generated using a fixed configuration of plasma actuator, the Dilectric Barrier Discharge (DBD)but using two different power supplies: a nanosecond repetitively pulsed high voltage (NRPP) and a sinusoidal DBD high voltage (HV).

Business or sector Education and Research

EDUCATION AND TRAINING

[Add separate entries for each course. Start from the most recent.]

1992 **Ph.D. in Mechanical Engineering** EQF level: 8

University of Bologna, Italy

- In 1992 he received his Ph.D. in Mechanical Engineering, with a thesis on "Conservative and Accurate Simulation Models for the Calculation of Time-varying Phenomena inside the Injection Systems for I.C. Engines", at University of Bologna, Italy.

1989 **Diploma in Industrial Fluid Dynamics** EQF level: 8

Von Karman Institute, Bruxelles, Belgium

- In 1989 he took the Diploma in Industrial Fluid Dynamics, at the Von Karman Institute, Bruxelles, Belgium, with a prize awarded by the Belgian Government.

1986 **Master of Science in Mechanical Engineering** EQF level: 7

University of Bari, Italy.

- In 1986 he took his Master of Science in Mechanical Engineering, with a thesis on "Injection Systems for Diesel Engines: Numerical Simulation and Experimental Verification", at University of Bari, Italy.

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1

Replace with name of language certificate. Enter level if known.

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
Common European Framework of Reference for Languages

Communication skills -

Organisational / managerial skills He has been involved in several scientific research programs; moreover he contributed significantly to the activities of the Department involved directly in a number of scientific collaboration projects between the University and industry, taking on the role of scientific coordinator.

Job-related skills The main research activities were carried out in the fields of Energy, Fluid Machinery, Environment Impact, Industrial Plants. The main activities topics are Applied and Industrial Fluid-dynamic, Combustion, Turbo-machinery, Environmental Impact, Energy Saving, Pollution Prevention, Waste Recycling, Industrial Safety.

Digital competence Windows, main applications (Office, OpenOffice, AutoCAD), scientific programming (Fortran, Basic, C +, Mathlab, Simulink).

Other skills Replace with other relevant skills not already mentioned. Specify in what context they were acquired. Example:
- carpentry

Driving licence Driving licence category B.

ADDITIONAL INFORMATION

Please refer to the list attached.

ANNEXES

Annex 1 - Publications.

04/02/2016

Annex 1 - Publications.

1) "Sviluppo di modelli conservativi e accurati per il calcolo dei fenomeni pulsanti negli apparati di iniezione dei m.c.i.", TESI DI DOTTORATO per il conferimento del Dottorato di Ricerca, Università di Bologna, ottobre 1991.
2) "Unsteady Measurements behind a Rotating Wheel with Cylindrical Bars", Ficarella A., C. H. Sieverding, Von Karman Institute Report, Bruxelles (Belgio), novembre 1986.
3) "Fluiddynamische Erscheinungen in Einspritzanlagen", Ficarella A., D. Laforgia, MTZ Motortechnische Zeitschrift, vol. 52/1, pp. 28-34, gennaio 1991.
3B) "Fluid Dynamic Phenomena in Fuel-Injection Systems", Ficarella A., D. Laforgia, Proceedings della II International Conference, Titograd (Yugoslavia), 19-21 maggio 1988.
4) "Contribution to the Simulation of Injection Systems for Reciprocating Internal Combustion Engines", Ficarella A., D. Laforgia, SAE Paper No. 885016, 1988. 22nd Congress FISITA 1988, Dearborn-Washington (USA), 25-30 settembre 1988.
5) "Poppet Valve Flow Characteristics in Internal Combustion Engines", Ficarella A., D. Laforgia, American Society of Mechanical Engineers, Internal Combustion Engine Division (Publication) ICE, Volume 6, Pages 33-43, ASME ICE, Basic Process in Internal Combustion Engines, vol. 6, pp. 33-43, 1988.Issn: 1066-5048, 1988.
5B) "Poppet Valve Flow Characteristics in Internal Combustion Engines", Ficarella A., D. Laforgia, XII Annual Energy Sources Conference, Houston (USA), 22-25 gennaio 1989.
6) "Cavitation Problems of Diesel Engine Injection Systems", Ficarella A., N. Intini e D. Laforgia, ATA, vol. 45, n. 3, pag. 115-122, marzo 1992.
6B) "Cavitation Problems of Diesel Engine Injection Systems", Ficarella A., N. Intini e D. Laforgia, International Conference on Mechanics of Two-Phase Flows, Taipei (Taiwan), 12-15 giugno 1989.
7) "Particle Analysis Using Phase Doppler Systems", VKI Report, Bruxelles (Belgio), ottobre 1989.
8) "Investigation and Computer-Simulation of Diesel Injection System with Rotative Pump", Ficarella A., D. Laforgia e G. Cipolla, ASME Journal of Engineering for Gas Turbine and Power, vol. 112 (3), pag. 317-323, DOI: 10.1115/1.2906497, Jul. 1990.
8B) "Investigation and Computer Simulation of Diesel Injection System with Rotative Pump", Ficarella A., D. Laforgia e G. Cipolla, ASME Conference on Engine Design, Operation and Control Using Computer Systems, Dearborn (USA), (ASME ICE vol. 9, pp. 87-96), Issn: 1066-5048, 16-18 ottobre 1989.
9) "Spray Analysis Using the Phase Doppler System", Ficarella A., J. M. Buchlin, Proceedings del Workshop and Exposition on Fluidmechanics, Combustion and Emissions in Reciprocating Engines, Napoli, 1-5 aprile 1990.
10) "Development of an ENO Scheme for Computing Cavitating-liquid Flows", Ficarella A., M. Napolitano, 4th International Symposium on Computational Fluid Dynamic, 1992.
11) "Feasibility of Biomass-Fuelled Steam Turbine Cogeneration for Olive Oil Pressing Plants", Ficarella A., D. Laforgia e U.Ruggiero, International Journal of Ambient Energy, vol. 15 (1), pp. 27-36. ISSN: 01430750, gennaio 1994.
11B) "Feasibility of Biomass-Fuelled Steam Turbine Cogeneration for Olive Oil Pressing Plants", Ficarella A., D. Laforgia e U.Ruggiero, Cairo International Symposium on renewable Energy Sources, Cairo (Egypt), 30 dicembre - 2 gennaio, 1992-1993.
12) "Injection Characteristics Simulation and Analysis in Diesel Engines", Ficarella A., D. Laforgia, International Journal of Meccanica, vol. 28, pp. 239-248. ISSN: 00256455 DOI: 10.1007/BF00989127, 1993.
13) "Spray Characteristics of Five-Hole V.C.O. Nozzles of a Diesel Electro-Injector", Ficarella A., R. Campanella, V. Damiani e D. Laforgia, SAE Paper No. 940192, SAE 1994 Transactions - Journal of Engines, vol. 103/3, pp. 120-133, 1994.
14) "Diesel Electro-Injector: A Numerical Simulation Code", Ficarella A., G. Bruni, P. DiGesù, D. Laforgia e M. Ricco, SAE Paper No. 940193, 1994. SAE 1994 Transactions - Journal of Engines, vol. 103/3, pp. 100-119, 1994.
15) "Hospital and Special Waste Incineration: Laboratory and Pilot Plant Experimentations", Ficarella A., F. Amodio, G. Blasi, D. Laforgia, G. Morabito, D. Ricci, Journees Internationales su les Flamme, Biarritz (Francia), 16-18 marzo 1994.
16) "3-D Thermal-Fluid Dynamic Study of Hazardous Hospital Waste Incinerator", Ficarella A., G. Blasi, D. Laforgia e N. Stasolla, Journees Internationales su les Flamme, Biarritz (Francia), 16-18 marzo, 1994.
17) "Theoretical and Experimental Study of Post-Combustion Chamber", Ficarella A., F. Amodio, L. Lacquaniti, G. Blasi, D. Laforgia, Journees Internationales su les Flamme, Biarritz (Francia), 16-18 marzo, 1994.
18) "Theoretical Study of Post Combustion Chamber for Hospital and Hazardous Waste", Ficarella A., D. Laforgia, CROCUS (Combustion related Organization Common and Unified Symposium), Salsomaggiore Terme, 20-23 settembre, 1994.
19) "Residence Time Behaviour and Decomposition of Dioxines in Biomedical and Hazardous Waste Incineration Plant", Ficarella A., D. Laforgia, 49° Congresso Nazionale ATI, Perugia, 26-30 settembre 1994.
20) "Analisi della gassificazione delle biomasse per la produzione di elettricità nell'industria agro-alimentare", Ficarella A., D. Laforgia, 49° Congresso Nazionale ATI, Perugia, 26-30 settembre 1994. Impiantistica Italiana, vol. IX, n. 6-7, pp. 37-51, giugno 1996.
21) "Studio termofluidodinamico tridimensionale di un forno termodistruttore", Ficarella A., D. Laforgia, N. Stasolla, G. Blasi, Rifiuti Solidi, vol. IX, n. 3, pp. 177-182, maggio-giugno 1995.

22) "Energy Conservation in Alcohol Distillery with the Application of Pinch Technology", A. Ficarella, D. Laforgia, Proceedings of ECOS '96, Stockholm, 25-27 giugno 1996. Energy Conversion and Management, n. 40 (14), pp. 1495-1514. DOI: 10.1016/S0196-8904(99)00051-5, Sept. 1999.
23) "Operating Experiences, On-Site Performances and Thermoeconomic Analysis of a 5 MW Combined Cycle Plant in Agrofood Industry", Ficarella A., D. Laforgia, Proceedings of ECOS '96, Stockholm, 25-27 giugno 1996.
24) "Experimental and Numerical Investigation on Cavitating Flows in Diesel Injection Systems", Ficarella A., D. Laforgia. Meccanica, vol. 33 (4), pp. 407-425. DOI: 10.1023/A:1004329902598, Aug. 1998.
24B) "Risultati sperimentali e simulazione numerica di flussi bifase durante rapide depressurizzazioni", Ficarella A., D. Laforgia, 51° Congresso Nazionale ATI, Udine, 16-20 settembre, 1996.
25) "Campagna di prove per un impianto pilota per la termodistruzione di rifiuti ospedalieri e tossico-nocivi", Ficarella A., D. Laforgia, 49° Congresso Nazionale ATI, Perugia, 26-30 settembre 1994.
26) "Dimensionamento di uno filtro ad umido per polveri a servizio di un impianto di essiccazione e combustione di biomasse", Acqua e Aria, n. 5, pp. 87-92, maggio 1999.
26B) "Dimensionamento ed esperienze operative di uno scrubber ad umido e un filtro per polveri a servizio di un impianto di trattamento acque di vegetazione", Ficarella A., D. Laforgia, 51° Congresso Nazionale ATI, Udine, 16-20 settembre 1996.
27) "Experimental Investigation of the Sprays of an Axi-Symmetric Nozzle of a Common-Rail High Pressure Electro-Injector", Ficarella A., D. Laforgia, G. Starace e V. Damiani, SAE Paper 970054, SAE International Congress and Exposition, Detroit (USA), 24-27 febbraio 1997.
28) "Isothermal and Reactive Modeling of a Dry Low NOx Combustor: Computational Study", Ficarella A., D. Laforgia e P. Lonero, Proceedings of Flowers 97, Firenze (Italia), 30 luglio - 1 agosto 1997.
29) "A theoretical code to simulate the behavior of an electro-injector for diesel engines and parametric analysis", Ficarella A., V. Amoia, D. Laforgia, S. De Matthaeis, C. Genco, SAE Paper 970055, SAE International Congress and Exposition, Detroit (USA), 24-27 febbraio 1997.
30) "Evaluation of instability phenomena in a common rail injection system for high speed diesel engines", A. Ficarella, D. Laforgia, V. Landriscina. 1999 SAE International Congress and Exposition, Detroit (USA), 01-04 marzo 1999. SAE Paper 1999-01-0192; SAE 1999 Transactions - Journal of Engines, pp. 322-336, 1999.
31) "Numerical Simulation of Flow-Field and Dioxins Chemistry for Incineration Plants and Experimental Investigation", A. Ficarella, D. Laforgia, Atti del Dipartimento di Ingegneria dell'Innovazione, Università di Lecce, 1999. Waste Management, n. 20 (1), pp. 27-49. DOI: 10.1016/S0956-053X(99)00301-3, Feb. 2000.
32) "Simulazione fluidodinamica del moto delle particelle nelle camere di combustione a letto fluido circolante", Ficarella A., D. Laforgia e S. Martignano, Atti del convegno "Processi termici con recupero di energia per lo smaltimento dei fanghi e dei rifiuti speciali anche pericolosi", Bari, 17 maggio 2000, Quad. Ist. Ric. Acque (IRSA), vol. 115, 2001.
33) "Cavitation Modeling to Understand the Behavior of Control Systems", M. G. De Giorgi, A. Ficarella, D. Laforgia, C. Genco, 5th Biennial Conference On Engineering Systems Design & Analysis ESDA 2000, Montreux, Switzerland, July 10-13, 2000.
34) "Modeling of Cavitation and of the Related Behaviour of the Control Valve in a Fuel Injection System", Ficarella A., M. G. De Giorgi, V. Landriscina, P. Barthelet, C. Genco, 55° Congresso Nazionale ATI, Matera (Italia), 15-20 settembre 2000.
35) "Modelizzazione dell'interazione tra moto delle particelle e la fase gas in un letto fluido", 55° Congresso Nazionale ATI, Matera (Italia), 15-20 settembre 2000.
36) "La reingegnerizzazione di un sistema integrato di gestione dei rifiuti solidi urbani a scala di bacino tramite il linguaggio IDEF0: Il caso della Provincia di Lecce", Ficarella A., S. Martignano, D. Laforgia, T. Piccinno, Atti del IV European Waste Forum, Innovation in Waste Management, Milano (Italia), 30 novembre – 1 dicembre, 2000.
37) "Cavitation Effects and Transient Behavior for the Control Valve of a High-Pressure Diesel Injection System", M. G. De Giorgi, A. Ficarella, H. Breitbach, SAE Paper 2001-01-1979, International Spring Fuels & Lubricants, Orlando, Florida (USA), 7-9 maggio 2001; SAE 2001 Transactions - Journal of Fuels and Lubricants, vol. 110, pp. 1310-1319, 2001.
38) "Study of the Influence of the Injection Parameters on Combustion Noise in a Common Rail Diesel Engine Using ANOVA and Neural Networks", P. Carlucci, A. Ficarella, D. Laforgia, SAE Paper 2001-01-2011, International Spring Fuels & Lubricants, Orlando, Florida (USA), May 7-9, 2001.
39) "Influence of the Injection Parameters on Combustion Pressure and Noise in a Common Rail Diesel Engine", in collaborazioen con P. Carlucci, D. Laforgia, Paper 01A3015, 3rd International Conference on Control and Diagnostics in Automotive Application CD AUTO 01, Sestri Levante, Genova (Italy), 4 – 6 luglio 2001.
40) "Pilot Injection Behavior and Its Effects on Combustion in a Common Rail Diesel Engine", Ficarella A., P. Carlucci, D. Laforgia, International Workshop on Modeling, Emissions and Control in Automotive Engines MECA'01, Fisciano, Salerno (Italy), 9-10 settembre 2001.
41) "Analisi termo-fluidodinamica di un processo di normalizzazione di ruote dentate all'interno di un forno di tempra", Ficarella A., P. Congedo, D. Laforgia, 56° Congresso Nazionale ATI, Napoli (Italia), 10-14 settembre 2001.
42) "Confronto exergoeconomico tra cicli cogenerativi a combustione interna e esterna", Ficarella A., M. Ciani, D. Laforgia, 56° Congresso Nazionale ATI, Napoli (Italia), 10-14 settembre 2001.
43) "Simulazioni fluidodinamiche dello sviluppo dei fumi a seguito di incendi in strutture ospedaliere", Ficarella A., R. Lala, D. Laforgia, Convegno nazionale Sicurezza dei sistemi complessi, Bari, 18-19 ottobre 2001.

44) "A Combined Optimization Method for Common Rail Diesel Engines", P. Carlucci, A. De Risi, T. Donateo, A. Ficarella, Proceedings of the Spring Technical Conference of the ASME Internal Combustion Engine Division 2002, Pages 243-250, 2002 Spring ASME ICE Conference, Rockford (Illinois-USA), April 14-17, 2002. ISSN: 15296598 ISBN: 0791816885;978-079181688-2. (American Society of Mechanical Engineers, Internal Combustion Engine Division (Publication) ICE, Volume 38, Pages 243-250, ISSN: 10665048). Issn: 1066-5048, 2002.
45) "Fluid Dynamic Investigation of the Extrusion Process in Cereals Productions and Analysis of the Parameters that Affect Product Quality", A. Ficarella, M. Milanese e D. Laforgia, 15th International Conference on Efficiency, Costs, Optimization, Simulation and Environmental Impact of Energy Systems, ECOS 2002, Berlin, Germany, July 3-5, 2002.
45B) "Physical-behaviour Model and Numerical Simulation of Cereals Extrusion Process", Ficarella A., L. Barone, D. Laforgia, M. Milanese, P. Talmesio, FIDAP and POLYFLOW European Users' Group Meeting 2001, Chateau de Limelette, Beelgium, 13-14 settembre 2001.
46) "Thermo-Fluid-Dynamic Investigation of a Dryer, Using Numerical and Experimental Approach", A. Ficarella, A. Perago, G. Starace, D. Laforgia, 15th International Conference on Efficiency, Costs, Optimization, Simulation and Environmental Impact of Energy Systems, ECOS 2002, Berlin, Germany, 3-5 luglio 2002. Pubblicato nel Journal of Food Engineering, n. 59 (4), pp. 413-420. DOI: 10.1016/S0260-8774(02)00500-9, Oct. 2003.
47) "Sperimentazioni di incendi su scala reale in un edificio", Ficarella A., R. Lala, A. Perago, D. Laforgia, S. Buffo, Convegno dell'Istituto Superiore Antincendio "Vigili del Fuoco: Soccorrere in sicurezza", Roma, 18-20 aprile 2002.
48) "Analisi numerica della distribuzione dell'aria indotta da sistemi meccanici di ventilazione", Ficarella A., A. Perago, D. Laforgia, Convegno AICARR "Distribuzione e movimento dell'aria nell'ambiente confinato: Energia, benessere e rumore", Padova, 18 giugno 2002.
49) "Sperimentazioni di incendi su scala reale in un edificio residenziale e analisi della propagazione dei fumi", Ficarella A., A. Ficarella, R. Lala, A. Perago, D. Laforgia, S. Buffo, Convegno VGR 2002, Palazzo dei Congressi, Pisa, 15 – 17 Ottobre 2002.
50) "Simulazione numerica del processo di estrusione dei cereali", Ficarella A., M. Milanese e D. Laforgia, Pubblicazione su Tecnica Molitoria, vol. 54, pp. 9-24, gennaio 2003.
50B) "Studio numerico del processo di estrusione dei cereali ed analisi dei parametri che influenzano la qualità del prodotto estruso", Ficarella A., M. Milanese e D. Laforgia, Congresso ATI, Pisa, 17-20 settembre 2002.
51) "Analisi numerica delle prestazioni di uno scambiatore compatto a flussi incrociati per uso industriale", A. Ficarella, E. Carluccio, D. Laforgia, G.Starace, Congresso ATI, Pisa, 17-20 settembre 2002.
52) "Analisi fluidodinamica di ali per grandi unità navali veloci", A. Ficarella, R. Lala e D. Laforgia, Congresso ATI, Pisa, 17-20 settembre 2002.
53) "Studio del transitorio nella valvola di controllo di un sistema di iniezione Diesel in presenza di cavitazione: indagine sperimentale e teorica", A. Ficarella, M.G. De Giorgi, D. Laforgia, Congresso ATI, Pisa, 17-20 settembre 2002.
54) "Ottimizzazione di motori alternativi con controllo elettronico dell'iniezione", A. Ficarella, P. Carlucci, A. De Risi, T. Donateo, Congresso ATI, Pisa, 17-20 settembre 2002.
55) "Testing di un sistema di misura del particolato basato su tecniche laser", A. Ficarella, P. Carlucci, D. Laforgia, A. L. Ekuakille, A. Pascali, Congresso ATI, Pisa, 17-20 settembre 2002.
56) "Analisi sperimentale dell'influenza dell'iniezione pilota sulla combustione, sulle emissioni inquinanti e sui consumi per un motore Diesel common rail", A. Ficarella, P. Carlucci, D. Laforgia, A. Pascali, Congresso ATI, Pisa, 17-20 settembre 2002.
57) "Indagine termofluidodinamica di un essiccatore industriale, con approccio numerico e sperimentale", A. Ficarella, A. Perago. G. Starace, D. Laforgia, Congresso ATI, Pisa, 17-20 settembre 2002. Pubblicato su Tecnica Molitoria, n. 9, p. 874-887, settembre 2002.
58) "Analisi della propagazione dei fumi e della composizione chimica del particolato", A. Ficarella, R. Lala, A. Perago, D. Laforgia. Pubblicato sulla rivista Antincendio, vol. 54, pp. 59-89, 2002.
58B) "Analisi della propagazione dei fumi e della composizione chimica del particolato", A. Ficarella, R. Lala, A. Perago, D. Laforgia. Congresso ATI, Pisa, 17-20 settembre 2002.
59) "Fluid-dynamic Analysis and Optimization of the Quenching Process for Hardening of Change-Speed Gears using DOE – ANOVA method", P. M. Congedo, A. Ficarella, D. Laforgia, ASME Journal of Heat Transfer, vol. 126 (3), pp. 365-375. DOI: 10.1115/1.1731355, June 2004.
60) "Sol-gel TiO2 thin film sensor for lambda measurement", D. S. Presicce, A. Ficarella, D. Laforgia, L. Francioso, R. Rella, P. Siciliano, 2003 EUROSENSOR XVI, The 16th European Conference on Solid-State Transducers, Prague (Czech Republic), 15-18 settembre 2002.
60B) "Sol-gel TiO2 thin film-based sensor for lambda measurement", D. S. Presicce, A. Ficarella, D. Laforgia, L. Francioso, R. Rella, P. Siciliano, congresso AISEM, Trento, febbraio 2004.
61) "Measurements of opacity at exhaust of Diesel engine using extinction laser thecnique", A. Lay-Ekuakille, P. Carlucci, A. Ficarella, D. Laforgia, A. Pascali, Proceedings of SPIE - The International Society for Optical Engineering, Volume 4915, 2002, Pages 199-201, Photonics Asia, Shangai (China), Oct. 14-18. ISSN: 0277786X DOI: 10.1117/12.482887, 2002.
62) "Effects of Pilot Injection Parameters on Combustion for Common Rail Diesel Engines", P. Carlucci, A. Ficarella, D. Laforgia, The SAE 2003 World Congress, Cobo Center in Detroit, MI-USA, 3-6 marzo 2003. SAE Paper 2003-01-0700. Published on SAE 2003 Transactions, Journal of Engines, vol. 6, pp. 722-735, September 2004.
63) "Investigation on Realizing Fuel Rate Shaping Using a Common Rail Injector ", P. Carlucci, A. Ficarella, A. Giuffrida, R.

Lanzafame, Proceedings of the Spring Technical Conference of the ASME Internal Combustion Engine Division 2003, Pages 127-136, ASME Internal Combustion Engine Division, 2003 Spring Technical Conference, Salzburg, Austria, 11-14 maggio 2003. ASME Paper ICES 2003-599. ISSN: 15296598 ISBN: 0791836789;978-079183678-1. (American Society of Mechanical Engineers, Internal Combustion Engine Division (Publication) ICE, Volume 40, Pages 127-136, ISSN: 10665048). Issn: 1066-5048, 2003.
64) "Quel modello matematico può tenere a bada l'incendio in ospedale", Ficarella A., R. Lala, A. Perago, D. Laforgia, S. Buffo, Antincendio, vol. 55, pag. 79-91, febbraio 2003.
65) "Sulla modulazione della portata di un elettroiniettore per sistemi di alimentazione Common Rail – Studio teorico-Sperimentale", A. Ficarella, P.Carlucci, A. Giuffrida, R. Lanzafame, Atti del 58° Congresso Nazionale ATI, Padova-San martino di Castrozza, 9-12 settembre 2003.
66) "Study on the modulation of the Fuel Rate of a Common Rail Injector", P. Carlucci, A. Ficarella, A. Giuffrida, R. Lanzafame, Proceedings of the 6th International Conference on Engines for Automobile ICE03, Capri, Sept. 14-19. SAE-NA Paper 2003-01-78, 2003.
67) "Il tempo di esodo in caso di incendio: Analisi numerica e sperimentale", A. Ficarella, R. Lala, A. Perago, D. Laforgia, S. Buffo, Atti del Convegno Sicurezza nei Sistemi Complessi, Bari, 16-17 ottobre 2003.
68) "Analisi Sperimentale degli Effetti di Differenti Strategie di Iniezione Sulle Emissioni e le Prestazioni di un Motore Diesel Common Rail", A. Ficarella, P. Carlucci, P. Febbraro, D. Laforgia, Atti del 58° Congresso Nazionale ATI, Padova-San martino di Castrozza, 9-12 settembre 2003.
69) "Improvements in Diesel Engine Combustion by Using both Early and Pilot Injections", P. Carlucci, A. Ficarella, D. Laforgia, Proceedings of the 6th International Conference on Engines for Automobile ICE03, Capri, Sept. 14-19. SAE-NA Paper 2003-01-72, 2003.
70) "Cavitating Flow Simulations in Turbopumps", A. Ficarella, M. G. De Giorgi, D. Laforgia, Atti del 58° Congresso Nazionale ATI, Padova-San martino di Castrozza, 9-12 settembre 2003.
71) "Termofluidodinamica di uno scambiatore di calore compatto a Flussi incrociati per uso veicolistico", A. Ficarella, E. Carluccio, G. Starace, D. Laforgia, Atti del 58° Congresso Nazionale ATI, Padova-San martino di Castrozza, 9-12 settembre 2003.
72) "Sol-gel TiO2 Thin Film sensors for combustion control in automotive applications", D. S. Presicce, A. Ficarella, D. Laforgia, L. Francioso, R. Rella, P. Siciliano, Proceedings of the 6th International Conference on Engines for Automobile ICE03, Capri, Sept. 14-19. SAE Paper SAE-NA 2003-01-83, 2003.
73) "A TiO2 Sensor Probe for Monitoring the Exhaust Gas for Automotive Application", D. S. Presicce, L. Francioso, A. Ficarella, D. Laforgia, R. Rella, P. Siciliano, E-MRS Spring Meeting, Strasbourg (France), June 10-13, 2003.
73B) "Microsensore allo stato solido per il controllo della combustione di un motore", A. Ficarella, D. S. Presicce, L. Francioso, A. Ficarella, D. Laforgia, R. Rella, P. Siciliano, Atti del 58° Congresso Nazionale ATI, Padova-San Martino di Castrozza, 9-12 settembre 2003.
74) "Impianti di riscaldamento e condizionamento negli edifici residenziali", A. Perago, D. Laforgia, A. Ficarella, Maggioli Editore, Santarcangelo di Romagna (RN) (Italia), pp.347, ISBN: 88-387-3472-0, 2004.
75) "Automotive Application of Sol-gel TiO2 Thin Film-based Sensor for Lambda Measurement", L. Francioso, D. S. Presicce, A. M. Taurino, R. Rella, P. Siciliano, A. Ficarella, Sensors & Actuators B: Chemical, n. 95 (1-3), pp. 66-72. DOI: 10.1016/S0925-4005(03)00405-2, Oct. 2003.
76) "Experimental Comparison of Different Strategies for Natural Gas Addition in a Common Rail Diesel Engine", P. Carlucci, A. Ficarella, D. Laforgia, Proceeding of the FISITA 2004 Congress, Barcelona (Spain), paper F2004V136, 23-27 maggio 2004.
77) "Preliminary Studies on the Effects of Injection Rate Modulation on the Combustion Noise of a Common Rail Diesel Engine", P. Carlucci, A. Ficarella, F. Chiara, A. Giuffrida, R. Lanzafame, SAE Fuel and Lubricant 2004, Tolosa (Francia), 8-10 giugno 2004, SAE Paper 2004-01-1848. - pubblicato in New Combustion Systems in SI & Diesel Engines, and Combustion & Emission Formation Processes in Diesel Engines, SP-1890, ISBN 0-7680-1484-0 (pagg. 129-141), 2004.
78) "Applications and Impacts of a Real Fire in a Residential Building for Analysis the Level of Risk for Life", A. Ficarella, R. Lala, A. Perago, D. Laforgia, Proceedings of the Conference on Probabilistic Safety Assessment, Berlin (Germany), June 2004. PROBABILISTIC SAFETY ASSESSMENT AND MANAGEMENT, VOL 1- 6, pp. 745-750, 2004.
79) "Performance Comparisons between Commercial and TiO2 Thin Film Lambda Probes", L. Francioso, D. S. Presicce, M. Epifani, R. Rella, P. Siciliano, D. Laforgia, A. Ficarella, Eurosensor XVIII, Roma, 12-15 September 2004.
80) "Monitoring the Drying Process of Lasagna Pasta throught A Novel Sensing Device-Based Method", A. Sannino, S. Capone, P. Siciliano, A. Ficarella, L. Vasanelli, A. Maffezzoli, Journal of Food Engineering, Vol. 69 (1), pp. 51-59. DOI: 10.1016/j.jfoodeng.2004.07.009, 2005.
81) "Effects on Combustion and Emissions of Early and Pilot Fuel Injections in Diesel Engines", P. Carlucci, A. Ficarella, D. Laforgia, International Journal of Engine Research, Vol. 6, No. 1, pp. 43-60. ISSN: 14680874 DOI: 10.1243/146808705X7301, 2005.
82) "Control of the Combustion Behaviour in a Diesel Engine Using Early Injection and Gas Addition", P. Carlucci, A. Ficarella, D. Laforgia, "4th Workshop – Fuel Injection – Spray – Combustion: Experimental and Modelling, Modena, 27-28 maggio, 2004. Journal of Applied Thermal Engineering, Vol. 26, Issue: 17-18, pp. 2279-2286. DOI: 10.1016/j.applthermaleng.2006.03.016, Dec. 2006.
83) "Numerical Study of the Extrusion Process in Cereals Production: Part I. Fluid-dynamic Analysis of the Extrusion Systems", A. Ficarella, M. Milanese e D. Laforgia, Journal of Food Engineering, Vol. 73, Issue: 2, pp. 103-111. DOI:

10.1016/j.jfoodeng.2004.11.034, Mar. 2006.
84) "Numerical Study of the Extrusion Process in Cereals Production: Part II. Analysis of Variance", A.Ficarella, M. Milanese e D. Laforgia, Journal of Food Engineering, Vol. 72, Issue: 2, pp. 179-188. DOI: 10.1016/j.foodeng.2004.11.035, Jan. 2006.
85) "Diesel Combustion Enhancement through an Early Injection-Based Injection Strategy", P. Carlucci, A. Ficarella, D. Laforgia, Beograd 2005 EAEC Congress, May 30 – June 1, 2005.
86) "Comparison of Different Physical Models for Simulation of Cavitating Flows around a Hydrofoil", M. G. De Giorgi, A. Ficarella, D. Laforgia, Asme Paper FEDSM2005-77142, Proceedings of the American Society of Mechanical Engineers Fluids Engineering Division Summer Conference, Volume 1 PART A, 2005, Article number FEDSM2005-77142, Pages 797-805 ASME Fluids Engineering Summer Conference, Houston (USA), June 19-23. ISBN: 0791841987;978-079184198-3, 2005.
87) "Experimental and Numerical Investigations of Cavitating Flows", M. G. De Giorgi, A. Ficarella, F. Chiara, D. Laforgia, 35th AIAA Fluid Dynamics Conference and Exhibit, Toronto (Canada), June 6-9, 2005.
88) "Thermo-Dynamic Analysis of CHCP Microturbines", M. Milanese, A. Ficarella, D. Laforgia, ECOS 2005 Conference, Trondheim (Norway), June 20.23, 2005.
89) "Numerical Investigations on the Working Cycle of a Hydraulic Breaker: Off-Design Performance and Influence of Design Parameters", A. Giuffrida, A. Ficarella, D. Laforgia, International Journal of Fluid Power, 7, No. 3, pp. 41-50. ISSN: 14399776, 2006.
90) "Results of the evaluation of environmental technological risk of an Italian region (Puglia) [Risultati della valutazione del rischio tecnologico ambientale di una regione italiana (Puglia).]", R. Gagliano-Candela, A. Ficarella, A. P. Colucci, Annali di igiene: medicina preventiva e di comunità, Volume 18, Issue 6, Pages 521-533. ISSN: 11209135, November 2006.
91) "Experimental Study Of Thermal Cavitation In An Orifice", M.G. De Giorgi, F. Chiara, A. Ficarella, ASME Paper ESDA 2006-95406, Proceedings of 8th Biennial ASME Conference on Engineering Systems Design and Analysis, ESDA2006, Volume 2006, 2006, 7pProceedings of ESDA2006 8th Biennial ASME Conference on Engineering Systems Design and Analysis, July 4-7, Torino, Italy. ISBN: 0791837793;978-079183779-5, 2006.
92) "Optimization Of An Industrial Coal Pulvirezed Swirled Burner By Cfd Modelling", M.G. De Giorgi, A. Ficarella, D. Laforgia, Atti del 61° Congresso Nazionale ATI, Perugia, 12-15 Settembre 2006.
92B) "Optimization Of A Coal Pulvirezed Swirled Burner By Cfd Modelling", A. Ficarella, M.G. De Giorgi, D. Laforgia, M.G. Rodio, Fluent Forum 2006, Milano, 21 Novembre 2006.
94) "Analisi termofluidodinamica di un impianto di incenerimento rifiuti con tecnologia al plasma"; P.M. Congedo, A. Ficarella – ATI 2006.
95) "Investigation of Short Injections Using Standard and Modified Common Rail Injectors", A. Ficarella, A. Giuffrida, R. Lanzafame, International Journal of Automotive Technology, Vol. 8, No 2, pp. 155-263, April 2007.
96) "Investigation on the Impact Energy of a Hydraulic Breaker", A. Ficarella, A. Giuffrida, D. Laforgia, (SAE paper 2007-01-4229), 2007 SAE Commercial Vehicle Engineering Conference, Rosemont, Illinois (USA), Oct. 30th – Nov. 1st, 2007.
97) "Combined Effect of Exhaust Gas Recirculation and Partially Premixed Charge on Performance and Emissions of a Direct Injection Diesel Engine", P. Carlucci, F. F. Chiara, A. Ficarella, T. Giuranna, D. Laforgia, Proceedings of 7th International Conference on Engines for Automobile, Capri (Napoli), September 11-16, 2005.
98) "Neural network for modeling and optimization of internal combustion engines", P. Carlucci, A. Ficarella, D. Laforgia, Proceedings of TNC CAE 2005 International Conference on CAE and Computational Technologies for Industry, Lecce, October 4-6, 2005.
99) "Application of Multiphase CFD Modeling to Naval Design in Presence of Cavitation", M.G. De Giorgi, A. Ficarella, D. Laforgia, TCN CAE 2005 International Conference on CAE and Computational Technologies for Industry, October 5-8, Lecce, Italy, 2005.
100) "Modeling Nucleation Phenomena in Cavitating Flow", M.G. De Giorgi, A. Ficarella, D. Laforgia, AIAA 2007-4459, Collection of Technical Papers - 18th AIAA Computational Fluid Dynamics Conference, Volume 2, 2007, Pages 1711-172618th AIAA Computational Fluid Dynamics Conference, Miami, FL. ISBN: 1563478994;978-156347899-4, 25 - 28 June 2007.
100B) "Nucleation effects on modeling of cavitating flows", M.G. De Giorgi, A. Ficarella, D. Laforgia, Ansys Fluent Users' Meeting2007, Stezzano (BG), October 25-26, 2007.
101) "Performance Optimization Of A PEM Fuel Cell By A CFD Analysis", M.G. De Giorgi, D. Fanelli, A. Ficarella, ASME Paper EFC2007-39158, Proceedings of EFC2007 Second European Fuel Cell Technology and Applications Conference, December 11-14, Rome, Italy, 2007.
102) "Common Rail Injector Modified to Achieve a Modulation of the Injection Rate", A. Ficarella, A. Giuffrida, R. Lanzafame, Intl. J. of Automotive Technology, Vol. 6, Issue 4, pagg. 305-314, August 2005.
103) "Numerical Analysis of a Cross-Flow Compact Heat Exchanger for Vehicle Applications", E. Carluccio, G. Starace, A. Ficarella, D. Laforgia, Applied Thermal Engineering, 25 (13), p.1995-2013. DOI: 10.1016/j.applthermaleng.2004.11.013, Sep 2005.
104) "Response evaluation of TiO2 sensor to flue gas on spark ignition engine and in controlled environment", L. Francioso, D. S. Presicce, M. Epifani, P. Siciliano, A. Ficarella, Sensor and Actuators, B-CHEMICAL, 107 (2), 563-571. DOI: 10.1016/j.snb.2004.11.017, Jun. 2005.
105) "Combustion Conditions Discrimination Properties of Pt-doped TiO2 Thin Film Oxygen Sensor", L. Francioso, D.S. Presicce, P. Siciliano, A. Ficarella, Sensors and Actuators B: Chemical, Volume 123, Issue 1, Pages 516-521. DOI: 10.1016/j.snb.2006.09.037, 10 April 2007.

106) "CFD Modeling of PEM Fuel Cell's Flow Channels", M.G. De Giorgi, A. Ficarella, ASME ES2008 Energy Sustainability 2008, paper ES2008-54197, 2008 Proceedings of the 2nd International Conference on Energy Sustainability, ES 2008, Volume 1, Pages 537-547August 10-14, 2008, Jacksonville, Florida USA. ISBN: 978-079184319-2, 2009.
107) "Cavitation Modeling in Cryogenic Fluids for Liquid Rocket Engine Applications", M.G. De Giorgi, A. Ficarella, M.G. Rodio, AIAA-2008-3842, AIAA 38th Fluid Dynamics Conference and Exhibit, Seattle, USA, 2008. ISBN: 978-156347942-7, 23-26 giugno 2008.
108) "Shape Optimization For Cryogenic Cavitating Flows Past An Isolated Hydrofoil" M.G. De Giorgi, M.G. Rodio, P. M. Congedo, A. Ficarella, FEDSM 2008 ASME Fluids Engineering Conference, paper FEDSM2008-55119, 2008 Proceedings of the ASME Fluids Engineering Division Summer Conference, FEDSM 2008, Volume 1, Issue PART A, 2009, Pages 75-85 - August 10-14, Florida, USA. ISBN: 978-079184841-8, 2008.
109) "Studio sperimentale dell'influenza della qualità dell'acqua sull'innesco del fenomeno della cavitazione nei circuiti idraulici", M.G. De Giorgi, A. Ficarella, D. Fraccalvieri, D. Laforgia, 63° Congresso Nazionale ATI, Palermo, 23-26 settembre 2008.
110) "Modellazione ed analisi sperimentale di flussi bifase criogenici", M.G. De Giorgi, M.G. Rodio, A. Ficarella, 63° Congresso Nazionale ATI, Palermo, 23-26 settembre 2008.
111) "Flow Visualization Study on Two-Phase Cryogenic Flow", M.G. De Giorgi, A. Ficarella, M.G. Rodio, D. Laforgia, 22nd European Conference on Liquid Atomization and Spray Systems ILASS 2008, Sep. 8-10, Como Lake, Italy, 2008.
112) "PRESTAZIONI ED EMISSIONI INQUINANTI PRODOTTE DA UN MOTORE DIESEL ALIMENTATO CON VARI TIPI DI COMBUSTIBILE LIQUIDO", P. Carlucci, A. Ficarella, R. Fiorillo, D. Laforgia, 63° Congresso Nazionale ATI, Sept. 23-26, Palermo, Italy, 2008.
112B) "Performance and exhaust emissions of a di diesel engine fueled with a blend of biodiesel and diesel fuel", A. CARLUCCI; FICARELLA A; FIORILLO R; LAFORGIA D, 63° Congresso Nazionale ATI, Palermo (Italy), Sept. 23-26, 2008.
113) "Analisi di scenario per la riduzione delle emissioni inquinanti nella Regione Puglia"; A. Ficarella, M. Milanese, A. Trevisi, M. G. Rodio, D. Laforgia, 63° Congresso Nazionale ATI, Sept. 23-26, Palermo, Italy, 2008.
114) "Simulation and Optimization of a Combined Cycle Power Plant Including CO2 Sequestration", T. Donateo, A. Ficarella, M. G. Russo, 63° Congresso Nazionale ATI, Sept. 23-26, Palermo, Italy, 2008.
115) "Microgenerazione di energia elettrica e calore attraverso un motore Stirling alimentato con biomasse", A. Ficarella, M. Milanese, P. De Vito, D. Laforgia, 63° Congresso Nazionale ATI, Sept. 23-26, Palermo, Italy, 2008.
116) "CFD Modeling of Two Phase Cryogenic Flow in an Internal Orifice", M.G. De Giorgi, A. Ficarella, M.G. Rodio, ANSYS Italy Conference 2008 - Mestre (VE), 16-17 Ottobre 2008.
117) "The Effects of Distributor and Striking Mass on the Performance of a Hydraulic Impact Machine", A. Ficarella, A. Giuffrida, D. Laforgia, SAE PAPER 2008-01-2679, Commercial Vehicle Engineering Congress & Exhibition, Chicago, IL, USA, October 2008.
118) "Temperature and doping effects on performance of titania thin film lambda probe", D.S. Presicce, L. Francioso, M. Epifani, P. Siciliano, A. Ficarella, Sensors and Actuators B: Chemical, Volume: 111 Special Issue: SI, Pages 52-57. DOI: 10.1016/j.snb.2005.07.050, 11 November 2005.
119) "Numerical Study And Experiments Of Cryogenic Cavitating Flows", MG. De Giorgi, A.Ficarella, Festival dell'innovazione- Giornata Sulla Ricerca Nel Settore Aerospaziale In Puglia, Bari (Italy), Dec. 4th, 2008.
120) "Study Of Supercritical Cryogenic Spray", MG. De Giorgi, A. Ficarella, A. Leuzzi, Festival dell'innovazione- Giornata Sulla Ricerca Nel Settore Aerospaziale In Puglia, Bari (Italy), Dec. 4th, 2008.
121) "Study of the Delivery Behaviour of a Pump for Common Rail Fuel Injection Equipments", A. Ficarella, A. Giuffrida, D. Laforgia, PROCEEDINGS OF THE INSTITUTION OF MECHANICAL ENGINEERS PART I-JOURNAL OF SYSTEMS AND CONTROL ENGINEERING, Vol. 223 Part I4: J. Systems and Control Engineering, pp. 521-535, IMechE 2009. DOI: 10.1243/09596518JSCE612, 2009.
122) "Simulazione del ciclo di lavoro di un martello demolitore oleoidraulico", A. Ficarella, A. Giuffrida, D. Laforgia, OLEODINAMICA PNEUMATICA, n. 4 – April 2009.
123) "Simulation Of Cryogenic Cavitation By Using Both Inertial And Heat Transfer Control Bubble Growth", M. G. De Giorgi, A. Ficarella, AIAA 39th Fluid Dynamics Conference and Exhibit, San Francisco, USA. ISBN: 978-156347975-5, June 2009.
124) "Short-term wind forecasting using artificial neural networks (ANNs)", M.G. De Giorgi, M.G. Russo, A. Ficarella, Second International Conference on Energy and Sustainability, Bologna, Italy, June 23 – 25, 2009. WIT Transactions on Ecology and the Environment, Volume 121, Pages 197-208. ISSN: 17433541 ISBN: 978-184564191-7 DOI: 10.2495/ESU090181, 2009.
125) "An Experimental Investigations Of The Influence Of Thermal Effects On Inception Of Cavitation In Sharp-Edged Orifices", M.G. De Giorgi, M. Tarantino, A. Ficarella, ExHFT, 7th World Conference on Experimental Heat Transfer, Fluid Mechanics and Thermodynamics, Krakow, Poland, June 28 - July 03, 2009.
126) "Real Fluid Modelling of Supercritical Reacting Flows in Liquid Rocket Engine", M.G. De Giorgi, A. Ficarella, 3rd European Conference For Aero-Space Sciences EUCASS 2009, Versaille (France), Yuly 2009.
127) "Analysis of Thermal Effects in a Cavitating orifice Using Rayleigh Equation and experiments", M.G. De Giorgi, D. Bello, A. Ficarella, ASME Internationa Journal Of Gas Turbine And Power - -TRANSACTIONS OF THE ASME, VOL. 132 ISSUE 9, pp. 092901-1, 092901-10. Article Number: 092901 DOI: 10.1115/1.4000367, September 2010.
127B) "Analysis of Thermal Effects in a Cavitating orifice Using Rayleigh Equation and experiments", M.G. De Giorgi, D. Bello, A. Ficarella, Paper number ICONE17-75960, ASME CONFERENCE ICONE17-75960, International Conference on Nuclear Engineering, Proceedings, ICONE, Volume 3, 2009, Pages 763-774, Brussels, Belgium, July 12-16. ISBN: 978-079184353-6,

2009.
128) "Analisi dell'influenza degli effetti termici sulla formazione di flussi cavitanti in ugelli". Maria Grazia De Giorgi, Bello Daniela, Antonio Ficarella, 64° CONGRESSO NAZIONALE ATI, L'Aquila, Sept. 8-11, 2009.
129) "PRESTAZIONI DI UNA FUEL CELL A SERVIZIO DI UN EDIFICIO CIVILE", Maria Grazia De Giorgi, Paolo Maria Congedo, Antonio Ficarella, 64° CONGRESSO NAZIONALE ATI, L'Aquila, Sept. 8-11, 2009.
130) "Stima della producibilità a breve termine di impianti eolici mediante sistemi statistico/neurali", Maria Grazia De Giorgi, Paolo Maria Congedo, Antonio Ficarella, 64° CONGRESSO NAZIONALE ATI, L'Aquila, Sept. 8-11, 2009.
131) "Progettazione di un Modulo Abitativo di Emergenza", BONFANTINI L; P. CONGEDO; TARANTINO L; FICARELLA A., 63° Congresso Nazionale ATI, Palermo, Italy, 23-26 settembre 2008.
132) "MODELLAZIONE DI UNA POMPA DI CALORE AD ASSORBIMENTO ELIO ASSISTITA", A. Moscaggiuri, P.M. Congedo, A. Ficarella, G. Starace, 64° Congresso Nazionale ATI, L'Aquila (Italy), Sept. 8-12, 2009.
133) "Numerical modelling of high-pressure cryogenic sprays", MG. De Giorgi, L. Tarantino, A. Ficarella, D. Laforgia. AIAA 2010-5007, AIAA 40th Fluid Dynamics Conference and Exhibit, Chicago, USA, June 28 – July 1. ISBN: 978-160086745-3, 2010.
134) "Simulazione Numerica Del Controllo Attivo Del Flusso Tramite Attuatori Al Plasma", M.G. De Giorgi, S. Traficante, A. Ficarella, 65° Congresso Nazionale ATI, Domus de Maria, Cagliari, 13-17 Settembre, 2010.
135) "Thermodynamic effects on cavitation in water and cryogenic fluids", De Giorgi M.G., M. G. Rodio M. G., Ficarella, A., ESDA2010-24694, 10th Biennal Conference on Engineering Systems Design and Analysis ESDA 2010, ASME 2010 10th Biennial Conference on Engineering Systems Design and Analysis, ESDA2010, Volume 1, 2010, Pages 105-113, Istanbul, 12-14 Luglio. ISBN: 978-079184917-0 DOI: 10.1115/ESDA2010-24694, 2010.
136) "Comparisons Of Different Wind Power Forecasting Systems", MG. De Gorgi, M. Tarantino, A. Ficarella, ESDA2010-24262, ASME 2010 10th Biennial Conference on Engineering Systems Design and Analysis (ESDA 2010), ASME 2010 10th Biennial Conference on Engineering Systems Design and Analysis, ESDA2010, Volume 1, 2010, Pages 105-113, Istanbul, 12-14 Luglio. ISBN: 978-079184915-6 DOI: 10.1115/ESDA2010-24262, 2010.
137) "Error analysis of short term wind power prediction models", M. G. De Giorgi, A. Ficarella, M. Tarantino, Applied Energy 88 1298–1311. DOI: 10.1016/j.apenergy.2010.10.035, 2011.
138) "A DATA ACQUISITION SYSTEM TO DETECT BUBBLE COLLAPSE TIME AND PRESSURE LOSSES IN WATER CAVITATION", M. G. De Giorgi, A. Ficarella, M. Tarantino, International Journal on Measurement Technologies and Instrumentation Engineering (IJMTIE), Vol. 1 n. 1, Jan.-Mar. 2011.
139) "Assessment of the benefits of numerical weather predictions in wind power forecasting based on statistical methods", Maria Grazia De Giorgi*, Antonio Ficarella, Marco Tarantino, Energy 36 3968-3978. DOI: 10.1016/j.energy.2011.05.006, 2011.
140) "A New Hybrid Method for Wind Power Forecasting Based on Wavelet Decomposition and Artificial Neural Networks", Maria Grazia De Giorgi, Marco Tarantino, Antonio Ficarella, GT2011-46382, Proceedings of ASME 2011 Turbo Expo: Turbine Technical Conference and Exposition (GT2011) Volume 1: Aircraft Engine; Ceramics; Coal, Biomass and Alternative Fuels; Wind Turbine Technology, ISBN: 978-0-7918-5461-7, pp. 889-900; http://dx.doi.org/10.1115/GT2011-46382 - June 6-10, Vancouver, Canada, 2011.
141) "ACTIVE FLOW CONTROL USING PLASMA ACTUATORS IN GAS TURBINE ENGINE", Maria Grazia De Giorgi, Stefania Traficante, Antonio Ficarella, ISABE-2011-1732, 20th ISABE Conference, September 12-16, Gothenburg, Sweden, 2011.
142) "Performance Improvement of Turbomachinery Using Plasma Actuators", M. G. De Giorgi, S. Traficante, A. Ficarella, GT2011- 46413, Proceedings of ASME 2011 Turbo Expo: Turbine Technical Conference and Exposition (GT2011), Volume 7: Turbomachinery, Parts A, B, and C, ISBN: 978-0-7918-5467-9, June 6-10, Vancouver, Canada, 2011.
143) "Comparisons between different combustion models for Highpressure LOX/ CH4 jet flames", M. G. De Giorgi, A. Sciolti, A. Ficarella, 41st AIAA Fluid Dynamics Conference and Exhibit, Honolulu, Hawaii, USA, 27-30 June 2011.
144) "Different Combustion Models Applied to High Pressure LOX/CH4 Jet Flames", M. G. De Giorgi, A. Sciolti, A. Ficarella, 4th European Conference for Aerospace Sciences , July 4, 2011 – July 8, Saint Petersburg, Russia, 2011.
145) "Performance evaluation of hybrid wind power forecasting models based on the wavelet decomposition techniques", M.G. DE GIORGI, A. FICARELLA, M. TARANTINO, Third International Conference on Applied Energy, Perugia, Italy, 16-18 May, 2011.
146) "Attuatori a fluido per il controllo attivo di flussi aerodinamici", M. G. De Giorgi, C. De Luca, A. Ficarella, ATI 2011, 66° Congresso Nazionale ATI – Rende (Cosenza), 5 - 9 Settembre 2011.
147) "Modellazione numerica degli effetti da scarica a barriera per il controllo attivo del flusso su profili alari", M. G. De Giorgi, S. Traficante, A. Ficarella, ATI 2011, 66° Congresso Nazionale ATI – Rende (Cosenza), 5 - 9 Settembre 2011.
148) "SPRAY AND COMBUSTION MODELING IN HIGH PRESSURE CRYOGENIC JET FLAMES", Maria Grazia De Giorgi, Aldebara Sciolti, Antonio Ficarella, GT2012-69544, Proceedings of ASME Turbo Expo 2012 - GT2012, June 11-15, Copenhagen, Denmark, Europe, 2012.
149) "ACTIVE FLOW CONTROL TECHNIQUES ON A STATOR COMPRESSOR CASCADE: A COMPARISON BETWEEN SYNTHETIC JET AND PLASMA ACTUATORS", Maria Grazia De Giorgi, Stefania Traficante, Carla De Luca, Daniela Bello, Antonio Ficarella, GT2012-69535, Proceedings of ASME Turbo Expo 2012 - GT2012, June 11-15, Copenaghen, Denmark, 2012.
150) "A NEURAL NETWORK APPROACH TO ANALYSE CAVITATING FLOW REGIME IN AN INTERNAL ORIFICE", M.G. De Giorgi, D. Bello, A.Ficarella, ESDA2012-82205, Proceedings of The ASME 2012), Biennial Conference On Engineering Systems Design And Analysis, ESDA 2012, July 2-4, Nantes, France, 2012.

151) "Cheap silicon technology integrated sol-gel combustion sensor", Francioso, L., Presicce, D.S., Epifani, M., Siciliano, P., Ficarella, A., Proceedings of SPIE - The International Society for Optical Engineering, Volume 5836, 2005, Article number 27, Pages 255-262, Smart Sensors, Actuators, and MEMS II; Seville; Code 66130. ISSN: 0277786X DOI: 10.1117/12.608565; 9 May 2005 through 11 May 2005.
152) "Evaluating cavitation regimes in an internal orifice at different temperatures using frequency analysis and visualization", M.G. De Giorgi, A. Ficarella, M. Tarantino, International Journal of Heat and Fluid Flow, Volume 39, Pages 160–172. http://dx.doi.org/10.1016/j.ijheatfluidflow.2012.11.002, February 2013.
153) "Chemical Kinetics and Injection Modeling for HP LOX/CH4 Jet Flames", Maria Grazia De Giorgi, Aldebara Sciolti, Antonio Ficarella, 67° Congresso Annuale ATI, Trieste (Italy), Sept. 11-14, 2012.
154) "EFFECT OF THE CHARGE PREPARATION IN A COMPRESSION IGNITION DUAL FUEL ENGINE - COMPARISON BETWEEN METHANE AND HYDROGEN", A.P. Carlucci, A. Coricciati, A. Ficarella, D. Laforgia, D. Mauro, A. Orlando, G. Spedicato, L. Strafella, 67° Congresso Annuale ATI, Trieste (Italy), Sept. 11-14, 2012.
155) "NUMERICAL INVESTIGATIONS OF AFC METHODS ON HIGHLY LOADED COMPRESSOR CASCADE", M.G. De Giorgi, S. Traficante, D. Bello, A. Ficarella, 67° Congresso Annuale ATI, Trieste (Italy), Sept. 11-14, 2012.
156) "COMPUTATIONAL MODELING OF THERMO AND FLUID DYNAMIC EFFECT IN CAVITATING NOZZLES AND EXPERIMENTAL CHARACTERIZATION", M.G. De Giorgi, D. Bello, A. Ficarella, 67° Congresso Annuale ATI, Trieste (Italy), Sept. 11-14, 2012.
157) "Influence of convective heat transfer modeling on the estimation of thermal effects in cryogenic cavitating flows", M. G. Rodio, M. G. De Giorgi, A. Ficarella, INTERNATIONAL JOURNAL OF HEAT AND MASS TRANSFER (ISSN 0017-9310), Volume 55, Issues 23–24, pp. 6538-6554. DOI 10.1016/j.ijheatmasstransfer.2012.06.060, 2012.
158) "Experimental and Numerical Study of Particle Ingestion in Aircraft Engine", Maria Grazia De Giorgi, Stefano Campilongo, Antonio Ficarella, Mauro Coltelli, Valerio Pfister, Francesco Sepe, ASME Paper GT2013-95662, Proceedings of ASME Turbo Expo 2013: Turbine Technical Conference and Exposition, GT2013, June 3-7, San Antonio, Texas, USA, 2013.
159) "APPLICATION OF THE GOUY-CHAPMAN THEORY TO ANALYZE THE DEFORMATION OF THE CAPROCK DURING THE INJECTION OF CO2 IN DEEP SALINE AQUIFERS", A. Cocozza, M.A. Aiello, A. Ficarella, 7° Congresso Nazionale AIGE – Rende (Cosenza), 10-11 Giugno 2013.
160) "MICROSCALE DIELECTRIC BARRIER DISCHARGE PLASMA ACTUATORS: EXPERIMENTAL CHARACTERIZATION", Elisa Pescini, Maria Grazia De Giorgi, Luca Francioso, and Antonio Ficarella, 4th Imeko TC19 Symposium on Environmental Instrumentation and Measurements, Protecting Environment, Climate Changes and Pollution Control, June 3-4, Lecce, Italy, 2013.
161) "ENHANCED GEOTHERMAL SYSTEM GEOPRESSURIZED WITH CO2 IN DEEP SALINE AQUIFERS", A. Cocozza, A. Ficarella, 4th Imeko TC19 Symposium on Environmental Instrumentation and Measurements, Protecting Environment, Climate Changes and Pollution Control, June 3-4, Lecce, Italy, 2013.
162) "AN ARTIFICIAL NEURAL NETWORK APPROACH TO INVESTIGATE CAVITATING FLOW REGIME AT DIFFERENT TEMPERATURES", M.G. De Giorgi, D. Bello, A.Ficarella, 4th Imeko TC19 Symposium on Environmental Instrumentation and Measurements, Protecting Environment, Climate Changes and Pollution Control, June 3-4, Lecce, Italy, 2013.
163) "Potentialities of a common rail injection system for the control of dual fuel biodiesel-producer gas combustion and emissions", A.P. Carlucci, A. Ficarella, D. Laforgia, Journal of Energy Engineering Volume 140, Number 3 A4014011-1 — A4014011-8 (DOI: 10.1061/(ASCE)EY.1943-7897.0000150), 2014.
164) "Comparing Plasma Actuator Models And Application On A Compressor Cascade", D. Bello, M.G. De Giorgi, S. Traficante, A. Ficarella, ISABE2013-21st ISABE Conference, Busan Korea, 9-13 September 2013.
165) "Electrical Resistivity Measures in Cohesive Soils for the Simulation of an Integrated Energy System Between CCS and Low-Enthalpy Geothermal", A. Cocozza; A. Ficarella, INTERNATIONAL JOURNAL OF MEASUREMENT TECHNOLOGIES AND INSTRUMENTATION ENGINEERING, 3 (1), 48-68, 2013.
166) "Application and Comparison of Different Combustion Models of High Pressure LOX/CH4 Jet Flames", A. Sciolti, M.G. De Giorgi, A. Ficarella, Energies, 7, 477-497. ISSN 1996-1073, 2014.
167) "An artificial neural network approach to investigate cavitating flow regime at different temperatures", D. Bello, M.G. De Giorgi, A. Ficarella, Measurement, Volume 47, Pages 971-981, ISSN 0263-2241, http://dx.doi.org/10.1016/j.measurement.2013.09.011, January 2014.
168) "Effect of a micro dielectric barrier discharge plasma actuator on quiescent flow", E. Pescini, L. Francioso, M.G. De Giorgi, A. Sciolti, A. Ficarella, IET Science, Measurement & Technology, Volume 8, Issue 3, pp. 135 – 142; DOI: 10.1049/iet-smt.2013.0131, May 2014.
169) "Experimental and Numerical Analysis of a Micro Plasma Actuator for Active Flow Control in Turbomachinery", E. Pescini, M.G. De Giogi, F. Marra; A. Ficarella. Proceedings of ASME Turbo Expo 2014: Turbine Technical Conference and Exposition GT2014, June 16 – 20, Düsseldorf, Germany GT2014-25337, 2014.
170) "Frequency Analysis And Predictive Identification Of Flame Stability By Image Processing", E. Pescini, A. Sciolti, A. Ficarella. Proceedings of the ASME 2014 8th International Conference on Energy Sustainability & 12th Fuel Cell Science, Engineering and Technology Conference ESFuelCell2014; June 30-July2, Boston, Massachusetts ES-FuelCell2014-6599, 2014.
171) "Assessment of the combustion behavior of a pilot-scale gas turbine burner using image processing", A. Sciolti, S. Campilongo, M.G. De Giorgi, A. Ficarella. Proceedings of the ASME 2014 Power Conference Power 2014, July 28-31, Baltimore, Maryland, USA. Power2014-32022, 2014.
172) "A General Platform for the Modeling and Optimization of Conventional and More Electric Aircrafts", T. Donateo, M.G. De

Giorgi, A. Ficarella, E. Argentieri, E. Rizzo, SAE Technical Paper 2014-01-2187, doi:10.4271/2014-01-2187, 2014.
173) "Aircraft Distributed Flow Turbulence Sensor Network with Embedded Flow Control Actuators", Luca Francioso;Chiara De Pascali;Pietro Siciliano;Maria Grazia De Giorgi;Elisa Pescini;Antonio Ficarella, Institute of Electrical and Electronics Engineers Inc, New York, , 1, 185-192, 2014.
174) "Comparison Between Wind Power Prediction Models Based on Wavelet Decomposition with Least-Squares Support Vector Machine (LS-SVM) and Artificial Neural Network (ANN)", S. Campilongo, M.G. De Giorgi, A. Ficarella, P. Congedo, Energies; 7(8):5251-5272. (http://www.mdpi.com/1996-1073/7/8/5251), 2014.
175) "Improvements in Dual-Fuel Biodiesel-Producer Gas Combustion at Low Loads through Pilot Injection Splitting", A. P. Carlucci;G. Colangelo;A. Ficarella;D. Laforgia;L. Strafella, JOURNAL OF ENERGY ENGINEERING, 141, C4014006-C4014006, 2014.
176) "Air/methane mixture ignition with Multi-Walled Carbon Nanotubes (MWCNTs) and comparison with spark ignition", Carlucci, A.P.; Carnevale, F.; Ciccarella, G.; Ficarella, A.; Filippo, E.; Laforgia, D.; Mussardo, F.; Strafella, L., Nanofim 2015, Lecce, 101-106, 2015.
177) "An easy and inexpensive way to estimate the trapping efficiency of a two stroke engine", Carlucci, A.P.; Ficarella, A.; Laforgia, D.; Longo, M.P., ATI 2015, Roma, 2015.
178) "An improved parameter identification schema for the dynamic model of LD converters", Antonio Paolo Carlucci; Antonio Ficarella; Giovanni Indiveri⁎; Paolo Presicce, JOURNAL OF PROCESS CONTROL, 31, 64-72, 2015.
179) "Behaviour of a compression ignition engine fed with biodiesel derived from cynara cardunculus and coffee grounds", Carlucci, A.P.; Ficarella, A.; Strafella, L.; Tricarico, A.; Domenico, S. De; D'Amico, L.; Santino, A., ASICI - Italian Section of the Combustion Institute, Lecce, 2015.
180) "Cavitation Regime Detection by LS-SVM and ANN with Wavelet Decomposition Based on Pressure Sensor Signals", DE GIORGI, Maria Grazia; FICARELLA, Antonio; LAY EKUAKILLE, Aime, IEEE SENSORS JOURNAL, Volume 15, Issue 10, 5701-5708, 2015.
181) "Comparison between synthetic jets and continuous jets for active flow control: Application on a NACA 0015 and a compressor stator cascade", De Giorgi M.G.; De Luca C.G.; Ficarella A.; Marra F., AEROSPACE SCIENCE AND TECHNOLOGY, 43, 256-280, 2015.
182) "Definition and optimization of the supercharging architecture for an aircraft two stroke diesel engine", Carlucci, A. Paolo; Ficarella, Antonio; Laforgia, Domenico; Trullo, Gianluca, AIDAA 2015, Torino, 1-20, 2015.
183) "Dissipated power and induced velocity fields data of a micro single dielectric barrier discharge plasma actuator for active flow control", Pescini, Elisa; Martínez, David S; De Giorgi, Maria Grazia; Francioso, Luca; Ficarella, Antonio,DATA IN BRIEF, 5, 65-70, 2015.
184) "Embedded sensor/actuator system for aircraft active flow separation control", Francioso, L.; De Pascali, C.; Casino, F.; Siciliano, P.; De Giorgi, M.G.; Campilongo, S.; Ficarella, A., IEEE - Institute of Electrical and Electronics Engineers, New York, 1-4, 2015.
185) "Ignition of a homogeneous gaseous air/methane mixture through a flash light", Carlucci, A.P.; Ficarella, A.; Laforgia, D.; Strafella, L., ASICI - Italian Section of the Combustion Institute, Lecce, 2015.
186) "Investigation of a Micro Dielectric Barrier Discharge Plasma Actuator for Regional Aircraft Active Flow Control", Pescini, E. ; Francioso, L. ; De Giorgi, M.G. ; Ficarella, A., IEEE TRANSACTIONS ON PLASMA SCIENCE, 43, 3668-3680, 2015.
187) "Monitoring Cavitation Regime from Pressure and Optical Sensors: Comparing Methods Using Wavelet Decomposition for Signal Processing", De Giorgi, M.G.; Ficarella, A; Lay Ekuakille, A., IEEE SENSORS JOURNAL, 15, 4684-4691, 2015.
188) "Multiobjective optimization of the breathing system of an aircraft two stroke supercharged Diesel engine", Carlucci, A.P.; Ficarella, A.; Laforgia, D.; Trullo, G., ATI 2015, Roma, 2015.
189) "Optimization of micro single dielectric barrier discharge plasma actuator models based on experimental velocity and body force fields", Pescini, Elisa; Martínez, David S.;De Giorgi, Maria Grazia; Ficarella Antonio, ACTA ASTRONAUTICA, 116, 318-332, 2015.
190) "Predictions of Operational Degradation of the Fan Stage of an Aircraft Engine Due to Particulate Ingestion", Maria Grazia De Giorgi;Stefano Campilongo;Antonio Ficarella, JOURNAL OF ENGINEERING FOR GAS TURBINES AND POWER, 137, 052603-1-052603-15, 2015.
191) "Sizing and Simulation of a Piston-Prop UAV", Donateo, T.; Spedicato, L.; Trullo, G.; Carlucci, A.P.; Ficarella, A., ATI 2015, Roma, 2015.
192) "Supercharging system behavior for high altitude operation of an aircraft 2-stroke Diesel engine", Carlucci, Antonio Paolo; Ficarella, Antonio; Laforgia, Domenico; Renna, Alessandro, ENERGY CONVERSION AND MANAGEMENT, 101, 470-480, 2015.
193) "Ultra Lean Combustion Characterization in a Pilot-Scale Gas Turbine Burner Using Image Processing Techniques", De Giorgi, Maria Grazia; Sciolti, Aldebara; Campilongo, Stefano; Ficarella, Antonio., asme, New York, 4a, 1-14, 2015.
194) "Image processing for the characterization of flame stability in a non-premixed liquid fuel burner near lean blowout", De Giorgi, Maria Grazia; Sciolti, Aldebara; Campilongo, Stefano; Ficarella, Antonio, AEROSPACE SCIENCE AND TECHNOLOGY, 49, 41-51, 2016.
195) "Strategic Research & Innovation Agenda - Italia - Executive Summary", Advisory Council for Aviation Research and Innovation in Europe - Italia, Ass. Italiana di Aeronautica e Astronautica, ROMA, , , 1-8, 2014.

195B) "Strategic Research & Innovation Agenda - Italia - Volume 1", Advisory Council for Aviation Research and Innovation in Europe - Italia, Ass. Italiana di Aeronautica e Astronautica, ROMA, , , 1-120, 2014.
195C) "Strategic Research & Innovation Agenda - Italia - Volume 2", Advisory Council for Aviation Research and Innovation in Europe - Italia, Ass. Italiana di Aeronautica e Astronautica, ROMA, , , 1-112, 2014.
196) "Development and Validation of a Software Tool for Complex Aircraft Powertrains", T. Donateo, A. Ficarella, L. Spedicato, Advances in Engineering Software, pp. 1-13, DOI 10.1016/j.advengsoft.2016.01.001, 2016.
197) "Plasma Assisted Flame Stabilizationin a Non-Premixed Lean Burner", Maria Grazia De Giorgi, Aldebara Sciolti, Stefano Campilongo, Elisa Pescini, Antonio Ficarella, Luca Matteo Martini, Paolo Tosi, Giorgio Dilecce, Energy Procedia, Volume 82, Pages 410–416, 70th Conference of the Italian Thermal Machines Engineering Association, ATI2015, doi:10.1016/j.egypro.2015.11.825, December 2015.
198) "Experimental data regarding the characterization of the flame behavior near lean blowout in a non-premixed liquid fuel burner", Maria Grazia De Giorgi, Aldebara Sciolti, Stefano Campilongo, Antonio Ficarella, Data in Brief 6 189–193. DOI http://dx.doi.org/10.1016/j.dib.2015.11.051, 2016.
199) "A comparison between micro linear plasma synthetic jets and conventional dbd plasma actuators for separation control in a low pressure turbine", De Giorgi Maria Grazia, Ficarella Antonio, Marra Fedele, Pescini Elisa, Traficante Stefania. ASME-ATI-UIT 2015 Conference on Thermal Energy Systems: Production, Storage, Utilization and the Environment. p. 1-8, Napoli:asme-ati-uit, ISBN: 978-88-98273-17-1, Napoli, 17-20 Maggio 2015.
200) "Effect of Actuation Parameters on Stabilization of Methane Diffusive Flames Using Plasma Actuators", De Giorgi Maria Grazia, Ficarella Antonio, Sciolti Aldebara, Campilongo Stefano, Pescini Elisa, DilecceGiorgio. In: XXXVIII Meeting of the Italian Section of the Combustion Institute. p. 1-7, napoli:ASICI - Associazione Sezione Italiana del Combustion Institute, ISBN: 978-88-88104-25-6, Lecce, September 20-23, 2015, doi: 10.4405/38proci2015.I5, 2015.
201) "Experimental characterization of near-blowout instabilities in a lean liquid-fuelled combustor", De Giorgi Maria Grazia, Sciolti Aldebara, Campilongo Stefano, Ficarella Antonio. In: Proceedings of the conference ASME-ATI-UIT 2015 Conference on Thermal Energy Systems: Production, Storage, Utilization and the Environment. p. 1-6, Napoli:asme-ati-uit, ISBN: 978-88-98273-17-1, Napoli (Italy), 17-20 May 2015.
202) "Flame Instability in A Liquid Fuel Burner: Comparisons Between Single And Multipoint Injections", De Giorgi Maria Grazia, Ficarella Antonio, Sciolti Aldebara, Campilongo Stefano. In: PROCEEDINGS of XXXVIII Meeting of the Italian Section of the Combustion Institute, Lecce, Italy, September 20-23, 2015, ISBN: 978-88-88104-25-6. p. 1-6, Napoli:Italian Combustion Institute, ISBN: 978-88-88104-25-6, Lecce, 20-23 Settembre 2015, doi: 10.4405/38proci2015.X2, 2015.
203) "Flame characterization in ultra-lean liquid fueled combustion regimes in the visible and UV spectra", Maria Grazia De Giorgi, Aldebara Sciolti, Stefano Campilongo, Antonio Ficarella, ISABE2015-22128, 2015.
204) "Biodiesel production from Cynara cardunculus L. and Brassica carinata A. Braun seeds and their suitability as fuels in compression ignition engines", De Domenico S., Strafella L., D'Amico L., Mastrorilli M., Ficarella A., Carlucci A.P., Santino A. ITALIAN JOURNAL OF AGRONOMY, vol. 11-1, p. 47-56, ISSN: 1125-4718, doi: 10.4081/ija.2016.685, 2016.
205) "Performance optimization of a Two-Stroke supercharged diesel engine for aircraft propulsion", Carlucci A.P., Ficarella A., Trullo G. ENERGY CONVERSION AND MANAGEMENT, vol. 122, p. 279-289, ISSN: 0196-8904, doi: 10.1016/j.enconman.2016.05.077, 2016.
206) "Flow separation control on a compressor-stator cascade using plasma actuators and synthetic and continuous jets", Traficante S., De Giorgi M.G., Ficarella A., Journal of Aerospace Engineering, vol. 29 n. 3, 10.1061/(ASCE)AS.1943-5525.0000539, 2016.
207) "Lean Blowout Sensing and Plasma Actuation of Non-Premixed Flames", De Giorgi, MG; Sciolti, A; Campilongo, S; Pescini, E; Ficarella, A; Lovascio, S; Dilecce, G, IEEE SENSORS JOURNAL, vol. 16 n. 10, pag. 3896-3903, 10.1109/JSEN.2016.2538970, 2016.
208) "Plasma actuator scaling down to improve its energy conversion efficiency for active flow control in modern turbojet engines compressors", De Giorgi M.G., Pescini E., Marra F., Ficarella A., Applied Thermal Engineering, vol. 106, pag. 334-350, 10.1016/j.applthermaleng.2016.05.186, 2016.
209) "INVESTIGATIONS OF THE ACTUATION EFFECT OF A SINGLE DBD PLASMA ACTUATOR FOR FLOW SEPARATION CONTROL UNDER SIMULATED LOWPRESSURE TURBINE BLADE CONDITIONS", Elisa Pescini, Fedele Marra, Maria Grazia De Giorgi, Luca Francioso, Antonio Ficarella, GT2016 - 57432, Proceedings of ASME Turbo Expo 2016: Turbine Technical Conference and Exposition, GT2016, June 13-17, 2016, Seoul, South Korea, 2016.
210) "COMPARING SPRAY AND FLAME BEHAVIOR IN A SWIRL LIQUID FUELED LEAN BURNER WITH SINGLE AND MULTIPOINT INJECTIONS", M.G. De Giorgi, Aldebara Sciolti, S. Campilongo, A. Ficarella, GT2016-57353, Proceedings of ASME Turbo Expo 2016: Turbomachinery Technical Conference and Exposition, GT2016, June 13 – 17, 2016, Seoul, South Korea, 2016.
211) "THE NEW FRONTIERS FOR THE CONTROL OF COMBUSTION IN GAS TURBINES", Antonio Ficarella, Invited Lecture at NexTurbine 2016, 12th-13th May 2016, Shanghai, China, 2016.
212) "FLAME IMAGE PROCESSING AND ANALYSIS IN AN ULTRA-LEAN LIQUID FUELED COMBUSTOR", Maria Grazia De Giorgi, Aldebara Sciolti, Stefano Campilongo, Antonio Ficarella, 23rd Conference of the Italian Association of Aeronautics and Astronautics, AIDAA2015, Politecnico di Torino, 17-19 November 2015.
213) "INVESTIGATION OF PLASMA ACTUATORS FOR FLOW SEPARATION CONTROL ON A LOW PRESSURE TURBINE BLADE AT LOW REYNOLDS NUMBER", Maria Grazia De Giorgi, Elisa Pescini, Fedele Marra, Antonio Ficarella, Luca Francioso, 23rd Conference of the Italian Association of Aeronautics and Astronautics, AIDAA2015, Politecnico di Torino, 17-19 November

2015.
214) "Detecting environmental features in an experimental combustion chamber of gas turbine: Advanced imaging process and accuracy", Lay-Ekuakille, A., De Giorgi, M.G., Ficarella, A., Urooj, S., Bhateja, V., 6th IMEKO TC19 Symposium on Environmental Instrumentation and Measurements 2016, pag. 56-59, 2016.
215) "A new approach to calculating endurance in electric flight and comparing fuel cells and batteries", Donateo, T., Ficarella, A., Spedicato, L., Arista, A., Ferraro, M., Applied Energy, Vol. 187, pp. 807-819, 10.1016/j.apenergy.2016.11.100, 2017.
216) "Investigation of the boundary layer characteristics for assessing the DBD plasma actuator control of the separated flow at low Reynolds numbers", Pescini, E., Marra, F., De Giorgi, M.G., Francioso, L., Ficarella, A., Experimental Thermal and Fluid Science, Vol. 81, pp. 482-498, 10.1016/j.expthermflusci.2016.09.005, 2017.
217) "Micro DBD plasma actuators for flow separation control on a low pressure turbine at high altitude flight operating conditions of aircraft engines", De Giorgi, M.G., Ficarella, A., Marra, F., Pescini, E., Applied Thermal Engineering, Vol. 114, pp. 511-522, 10.1016/j.applthermaleng.2016.11.198, 2017.
218) "Plasma Assisted Flame Stabilization in a Non-Premixed Lean Burner", Maria Grazia De Giorgi, Aldebara Sciolti, Stefano Campilongo, Elisa Pescini, Antonio Ficarella, Luca Matteo Martini, Paolo Tosi, Giorgio Dilecce, Energy Procedia, Volume 82, Pages 410-416, ISSN 1876-6102, http://dx.doi.org/10.1016/j.egypro.2015.11.825, December 2015.
219) "Experimental and Numerical Characterization of Single and Multipoint Injection Strategies in a Swirl Liquid Fueled Lean Combustor", Maria Grazia De Giorgi, Aldebara Sciolti, Stefano Capilongo, Antonio Ficarella, 71st Conference of the Italian Thermal Machines Engineering Association, ATI2016, Turin, Italy, 14-16 September 2016.
220) “Experimental and Numerical Study of Plasma Based Flow Control for Low Pressure Gas Turbines Operating at Low Reynolds Numbers”, E. Pescini, D. S. Martinez, M. G. De Giorgi, Antonio Ficarella, 6th EASN International Conference on Innovation in European Aeronautics Research, Porto, Portugal, 18-21 October 2016.
221) "Plasma Actuation to Enhance the Flame Stabilization in a Non-Premixed Lean Microburner", Stefano Campilongo, Maria Grazia De Giorgi, Antonio Ficarella, Elisa Pescini, Aldebara Sciolti, Giorgio di Lecce, 1st Workshop on Nanotechnology in Instrumentation and Measurement (NANOfIM 2015), Lecce, Italy, ISBN: 978-1-5108-1501-8, http://toc.proceedings.com/28513webtoc.pdf, 24-25 July 2015.
--) “Photo-Induced Ignition of different Gaseous Fuels using Carbon Nanotubes mixed with metal nanoparticles as Ignitor Agents”, P. Carlucci, P. Visconti, P. Primiceri, L. Strafella, A. Ficarella, D. Laforgia, accepted for publication on Combustion Science and Technology.