INTERNATIONAL CAE CONFERENCE 2015 – FINAL UPDATED PROGRAM

First Day

PLENARY SESSION

Time	Session
9.30	**EnginSoft** - Stefano Odorizzi - Welcome
9.50	**European Space Agency** - Cristophe Lasseur - Mars mission and astronauts self-supported life
10.15	**University of Parma** - Davide Cassi - Cooking Hackers. The true story of molecular cuisine
10.40	Coffee Break
11.15	**John Deere** - Peter Pirro - Numerical Simulation and Experimental Testing, two Competitors or Partners?
11.35	**Fraunhofer ITWM** - Peter Klein - EMMC and the value chain: CAE upstream to Materials
11.55	**FCH JU** - Jean-Luc Delplancke - Hydrogen and renewable energies: a love match or a marriage of convenience?
12.15	**ESTECO** - Carlo Poloni - Modularity mastering complexity
12.35	**NAFEMS** - Tim Morris - Predicting the Future of Engineering Simulation
13.00	Business Lunch

Time	Room Arilica — TRANSPORTATION	Room Riva — AEROSPACE&DEFENSE	Room Rocca — ENERGY and OIL&GAS	Room Bardolino — MANUFACTURING	Room Vela — ITC&HPC	Room Gardesana — CIVIL ENGINEERING	Room Cisano — ENABLING TECHNOLOGIES	Room Lacisium — FORGE HANDS-ON
14.00	**FCA** - 1D thermal simulation for automotive engine cooling systems. Elevation profile effectS for track and mountain road investigations	**Lufthansa Technik AG** - Recalculation of the fan design of a classic aero engine with high thrust-class from a maintenance perspective	**SAIPEM** - The structural modelling of pipelay vessels dedicated to the laying of long and deepwater submarine pipelines	**Bonfiglioli Mechatronic Research** - Effect of the machining tolerances on the transmission error of planetary gearboxes: a numerical approach	**HP** - HP & NVIDIA: Accelerating ANSYS workflow	**ENEA** - Protection of High vulnerable statues in their exposition sites and during transportation	**EnginSoft USA** - Design Optimization Process for 3D Printed Designs	FORGE HANDS-ON
14.20	**Magneti Marelli** - New Methodology: Intercooler Integration - Space & Efficiency Optimization	**CNES** - Ariane 6 central skirt Optimization	**Ansaldo Nucleare** - Qualification Drop Tests of a LILW prismatic container performing LS-Dyna analyses	**Brembana&Rolle** - Field tests vs CFD results in gas applications for EMbaffle technology	**E4 Computer Engineering** - Leveraging future HPC technologies to impact industrial development	**Politecnico di Milano** - Teaching becomes fun: experiencing the Uncle Scrooge Money Bin re-design	**VSA/TT3C** - Tolerancemanagement 3.0	
14.40	**Pierburg Pump Technology** - Critical frequencies and acoustic emission of an automotive Variable Displacement Oil Pump: some numerical analyses and validations	**MBDA** - Optimization of detonation point of a blast charge in order to minimize the Collateral Damage ensuring high Lethal effect on target in an urban scenario	**Onet Technologies** - CFD-Assisted design for a supercritical water oxidation reactor - oxidation of different types of waste	**University of Strasbourg** - Optimized Industrial Control in Roll-to-Roll Systems: New Approaches using Finite Element Modeling of the Web	**Eurotech** - New HPC architectures and paradigms for CAE	**University of Padova** - Raising Venice anthropogenically and uncle Scrooge's baloon	**CADFEM** - ANSYS extensions for automated simulation processes: applications in gearbox design	
15.00	**Maserati** - Automotive closures fatigue life prediction; new methodology and ad hoc SW tools improve simulations reliability and reduce the CAE model preparation time	**EnginSoft** - Air Management System of a Greenhouse Module for Space Applications	**VTT Finland** - Advanced thermochemical simulation of Rotary Kilns	**Marchesini** - Innovating packaging through software development	**IBM** - IBM infrastructure solution for High Performance Computing	**Maffeis** - Structural design for tensile structures	**DTECH** -On the Automation of Complex Structure Computer Aided Engineering for Industry Designers	
15.20	**Continental Corporation** - Simulation based Design For Six Sigma methodologies	**OTO Melara** - Structural dynamic behavior of loading tray of new 76/62 Upper Deck	**Process Flow** - Reduced energy consumption and emissions by advanced process simulation	**Ariston Thermo** - Increase performance and reduce noise in the new concept Ariston heat pump	**NICE** - How your Technical Cloud can transform engineering into a powerful, mobile and collaborative experience	**StroNGER** - Back analysis of the collapse of a temporary demountable structure	**Evidence** - Model Based Design in Practice: Simulation, Fast Prototyping and Code Generation of a HVAC Display using E4Coder	
15.40	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break
16.10	**FCA** - Assessment of different numerical techniques for a reliable airbag performances evaluation and calibration	**Aviospace** - Studies of the deployment of net to capture a debris in space environment	**Saipem** - Comparative study on hot plume dispersion from ground flares in an LNG plant: FLACS vs FLUENT	**Benelli Armi** - Structural optimization of the Benelli Progressive Comfort - Overall dimension and weight optimization under the maximum cartridge loads condition	**HPC-Simulation-Software & Services** - Massively Parallel Simulations by Open Source Building Blocks	**Gap Progetti** - Tree of Life - The Impossible Challange		FORGE HANDS-ON
16.30	**CEMCAT** - Reverse identification of the elastic properties of a unidirectional composite	**DTA Distretto Aerospaziale Pugliese** - Grottaglie Test Bed	**Ansaldo Energia** - A 3D FEM approach to evaluate the flux leakage and the magnetic induction in proximity to the end region of turbogenerators	**Solvay** - MMI™ TECHNYL® Design powered by Digimat	**ETP4HPC** - The European HPC Eco-system	**Fincon Consulting Italia** - Numerical modelling of the seismic behaviour of steel silos and tanks	LS-Dyna TRAINING	
16.50	**Johnson Electric** - Modeling and design of automotive axial flow fans: further steps	**CST** - Radiated Emissions from a PCB in an enclosure, a practical case	**DLR** - Application of CAE Tools for design and scaling of a solar reactor and receiver for acid splitting for the HYS process at pilot plant scale	**ABB** - Knowledge management in LVSB R&D (An ABB SACE experience)	**CINECA** - Thermal comfort design for residential spaces and efficient cooling of data center using a cost/effective cloud based CFD service: feasibility, perspectives and performances	**Etsa Sicurezza** - Fire and evacuation CFD simulation in a luxury fashion shop		
17.10	**AVL** - Application example of AVL EXCITE within the development process of a turbocharger	**GOM** - Verification of finite element simulation in automotive crash testing with optical 3D metrology	**Andritz Hydro** - Structural analysis of a Spherical Valve: A smart approach for guarantee mechanical reliability and quick responses	**Eucardia** - Structural analysis of an implantable cardiac device (Heart Damper) for the treatment of advanced heart failure inside a 3D finite element model of the ventricle	**DINCCS-MICADO** - Trade oriented HPC simulation	**University of Padua** - A three-dimensional FEM code for non-linear coupled geomechanical problems		
17.30	**BETA CAE Systems** - Multi objective optimization of a composite material F1 front wing	**Politecnico di Torino** - Numerical modelling for the prediction of aircraft cooled components thermal behavior	**JRC** - 1D CFD Modeling of Uranium enrichment cascades in support of the European Nuclear Safeguards activities	**Mario Frigerio** - Design of a Large Planetary Stranding Machine through MultiBody Simulation and Finite Element Analysis: a Successful Case of Collaboration and Innovation	**Dhitech** - Cloud Workspace based on HPC infrastructure supporting simulations and collaborative engineering	**Master SAFEng** - Performance fire design for industrial structures		
17.50	**SCS Italy** - Virtual wind-tunnel tests and HPC facilities: open-source solutions for massive automotive performance analysis	**DSSEA-IT Army General Staff** - A-CASE "Agile" Computer Aided Software Engineering environment	**Franco Tosi Meccanica** - Fluid dynamics optimization of a Steam Turbine last three low pressure stages	**Piaggio &C** - The added value of Space Claim daily use in the Finite Element modeling metrics in ANSYS		**F&M Ingegneria** - The Floating Roof		

Time	Session
18.10	HP&Nvidia Evening Welcome
18.30	Poster Award
19.30	Dinner and enterteinment

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Second Day

PLENARY SESSION

Time	Session
9.00	**DASSAULT** - Gérard Poirier - Extensive use of numerical models and simulation, for all the phases of product lifecycle, keys drivers for risk management and enterprises competitiveness: Dassault experience and Systematic Cluster roadmap
9.30	**SINMEC Computational Fluid Dynamics Lab** - Clovis R. Maliska - Coupling fluid flow and geomechanics – trends and recent developments
9.50	**Konzept-X** - Alfred J. Svobodnik - The Next Generation of Engineering Analysis Software: Simulation Process Modeling
10.10	**EnginSoft USA** -Andreas Vlahinos - Enabling Digital Twins with CAE and IoT
10.30	**Lenovo** - Lenovo innovation never stands still
10.50	Coffee Break

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11.00	**Pierburg Pump Technology** - Analysis of a vane oil pump mechanism failure: Multibody, fluid-dynamic and validation	**Umbra Cuscinetti** - Finite element analysis support to design of electromechanical systems	**Ansaldo Nucleare** - Theory, design and CFD analysis of a Multi-Blade screw pump evolving liquid for a GEN-IV LFR Nuclear Power Plant	**FunctionBay** - One step closer to reality with Multi-body dynamic simulation	**MAGMA** - Robust cast product design driven by virtual experimentation and optimization with MAGMA5 – baseline technology for a resource efficient product development	**Vimi Fasteners** - Finite Element Analysis in Fastener industry	**INFN** - Design of the brazing cycle for the IFMIF/EVEDA-RFQ (Radio Frequency Quadrupole) modules using coupled thermal-structural finite element analyses
11.20	*Piaggio &C - The added value of Space Claim daily use in the Finite Element modeling metrics in ANSYS*	*Sapienza University of Rome - Multi-Disciplinary and Multi-Objective Optimization of an Unconventional Aircraft Concept using modeFRONTIER*	**Aresys** - Simulation of control policies for new pipeline inspection tools	**Prometech** - Latest Application Examples of MPS Method in Various Industries	**SACMI** - Comparison of casting simulation results and experimental data in heavy section ductile iron production	**GIVA Group** - The use of simulation with Forge Nxt in the feasibility analysis to forge nickel-alloy parts with a 100.000 tons press for Power Generation Industry	**Scuola Superiore Sant'Anna** - Development of a numerical/experimental methodology to evaluate the comfort level of high-heeled shoes
11.40	**Luna Rossa Challenge** - Preliminary Design Investigation for the development of new hull shapes for America's Cup Class catamaran AC-62	**JSC Russian Helicopters** - Blade element theory in the UAV multirotor Blade Optimization	**C.S.T. Compression Service Technology** - New Method for Current Pulsation Calculation in Induction Machines Driving Reciprocating Compressor	**Sigmetrix** - Leveraging Model-Based Definition (MBD) for Fast and Accurate Tolerance Analyses	**University Padova** - Analytical computation of the plunger kinematic parameters affecting quality in HPDC	**University Padova** - Influence of forging temperature on solid lubricants behaviour in cold forging	**University of Ferrara** - CFD Analysis of a Rotary Bread-Backing Oven
12.00	**ATIEVA** - Multi-Objective Design Optimization of an Inverter for Electric Vehicles	**DTA Distretto Aerospaziale Pugliese** - CAE instruments application in DTA (Apulian Aerospace Technological District) research projects	**Elica-FIME Divisione Motori** - Very compact and efficient centrifugal blower for gas boilers with an innovative gas intake system integrated	**ESTECO** - Multidisciplinary Design Optimization from an Enterprise Perspective	**Teksid** - Identification of optimal runner and vacuum design through MAGMA simulation	**Riganti** - Automatic forging: an example of integration between simulation and numerical control in the forging process	**University UNION – Nikola Tesla, Belgrade** - On a new unconditionally stable and fast finite element approach in thermoelasticity ready for one-to-one bridging with atomistic scale simulation procedures
12.30	Business Lunch						
14.00	**AVL** - Solutions for multi-physics problems application examples	**ESTECO** - Innovative methodologies for Robust Design Optimization with large number of uncertainties using modeFRONTIER	**ITACAE** - Simulation of blasting phenomena in the void	**INAS SA** - Connecting technologies - How close simulation is to reality	**ECA** - Simulazione & Controllo di processo in steel foundry	**EnginSoft –** A Winning Synergy between Multibody Simulation and Finite Element Analysis to Design Mechanical Presses	**Università Salento** - Civil steel frame design, numerical techniques to reach the best design
14.20	**Valeo Transmissions Centre Technique** - Flexible Multi Body simulation for pendulum components in dual mass flywheel	**EnginSoft** - Towards food production in space missions: engineering the hydroponic system of the plant growth unit	**Franco Tosi Meccanica** - Crack Propagation in a Steam Turbine Rotor and its Influence on the Rotor Vibrations	**CG CAE** -Back to Basics	**Avio Aero** - Analysis of sensitivity of material properties on Aluminum sand casting samples according to different solidification trends	**TRANSVALOR –** FORGE Roadmap	**Sapienza University of Rome** - Multi-Disciplinary and Multi-Objective Optimization of an Unconventional Aircraft Concept using modeFRONTIER
14.40	**BETA CAE Systems** - The influence of mesh characteristics on OPENFOAM simulations of the DrivAer model	**ITACAE** - DFAM: Design For Additive Manufacturing of the case for a rugged pc for aeronautical applications	**SIMIC** - The ITER TFC project: SIMIC's response to technological challenges	**Vanderplaats Research & Development** -Five decades of structural synthesis: some reflections from a discipline of schmit	**Studio DSM** - Cost Reduction using virtual Optimization for Automotive component	**TRANSVALOR –** FORGE NxT : latest features about graphical user interface	**University of Udine** - Simplified numerical approach for the thermo-mechanical analysis of a steelmaking component under cyclic loading
15.00	**Maserati** - Optimization of the torsional mode of a car body using modeFRONTIER	**Politecnico di Torino** - Influence of Turbulence Modeling on Velocity Profiles for Cyclone Separators	**ZECO** - The Fortissimo Sure_HPC project: turbine CFD optimization on Cloud infrastructure	**QFP service** - 3D digitalization of your product to simulate its behaviour	**Swerea SWECAST** - Roger Svenningsson Residual stresses in high pressure die castings	**TRANSVALOR –** Models for phase transformations	**INFN** - Design and development of a flexible transmission joint
15.20	**Magneti Marelli** - Vibroacoustic analysis of a PRP Pump assembly	**D'Appolonia** - Icing simulation through the RBF4AERO Benchmark Technology	**GE** - Productivity and Accuracy for the Analysis of piping installations of Gas Turbines	**Granta Design** - Supporting ANSYS Workbench with a single view of materials data across CAD and CAE	**EnginSoft** - Weight and Process Production Optimization for an Iron casting through the integrated approach of virtual simulation - Design Chain		**University of Padova** - The application of the peak stress method to assess the fatigue strength of steel welded joints
15.40	**D'Appolonia** - Structural optimization of an automotive wheel rim through an RBF mesh morphing technique	**Aviospace** - Analysis of morphing multilayer inflatable wings for hypersonic vehicle	**SUPSI** - CSP piping modeling with gaseous HTF in Simscape	**Modutech** -Chaos Thery and convergence in CFD simulation: a different approach in turbulence analisys	**EnginSoft** - Core production assisted by virtual simulation		**Università di Parma** - High performance linear solvers for large scale problems in multibody dynamics
16.00	**Qpunkt** - An Innovative Approach for Liquid Fluid Flow Simulations	**EnginSoft** - An overview of the FIRST project: CFD can be a valuable tool for a deeper understanding of the atomization process	**Ricerca sul Sistema Energetico – RSE** - Numerical modelling for geological reservoir characterization	**KARALIT** - Moving Surface with the IB technology			**Università Padova** - Non-steady flow in compressor pipes simulated by a modified inverse method of characteristics
16.20			**EnginSoft** - SOL2HY2 - Solar to Hydrogen Optimization Process	**EnginSoft** -A method for advanced stochastic generation of particles in granular flow simulations and its practical applications in industry			**University of Verona** - Scilab for uncertainty in simulations: some numerical applications of the Polynomial Chaos Expansion method

Last changes speeches