

















**Tuesday November 12<sup>th</sup> – Plenary sessions**

8:15 – 9:00	<b>WELCOME COFFEE</b>	
9:00 – 9:35	Charles Hirsch – <i>NUMECA International</i> <b>Towards the next generation of simulation methodologies</b>	
9:35 – 10:05	Vikram Kumar – <i>Boom Supersonic</i> <b>XB-1 Ejector Nozzle Analysis</b>	
10:05 – 10:30	Benoit Mallol - <i>NUMECA International</i> <b>Technology Deep Dive: CAD preparation and meshing</b>	
10:30 – 11:00	Kilian Claramunt – <i>NUMECA International</i> and Luca Mangani - <i>coupledNumerics</i> <b>Technology Deep Dive: Multiphysics &amp; Combustion</b> <b>coupledNumerics: A new, highly competitive coupled pressure-based solver</b>	
11:00 – 11:30	<b>COFFEE BREAK</b>	
11:30 – 12:00	Michael Bauerheim – <i>ISAE Superaero</i> <b>Recent applications of deep learning for computational fluid dynamics</b>	
12:00 – 12:25	Yannick Baux - <i>NUMECA International</i> <b>Industry focus: Turbomachinery solutions applied to the full-engine simulation</b>	
12:25 – 12:50	Benoit Mallol - <i>NUMECA International</i> <b>Industry focus: Advanced marine solutions</b>	
12:50 – 14:05	<b>LUNCH</b>	














## Tuesday November 12<sup>th</sup> – Parallel sessions

	TURBO, AERO & MULTIPHY SESSIONS	MARINE
14:05 – 14:30	<p>Sébastien Le Martelot – CNES  <b>Using Pumpal® and AxCent® for space engine pump design and analysis. Ongoing studies and feedback.</b></p> 	<p>Jeroen Wackers – ECN  <b>Computing ventilation risks for surface-piercing hydrofoils</b></p> 
14:30 – 14:55	<p>Thiago Ebel – Concepts NREC  <b>OMNIS™/Agile – The new generation of turbomachinery design and analysis</b></p> 	<p>François Rongère – D-ICE  <b>FINE™/Marine Catway: a new cable module towards complex marine system simulations</b></p> 
14:55 – 15:20	<p>Neverov V, Cheglakov I &amp; Liubimov A - Entechmach  <b>Centrifugal compressor with semi-opened axiradial impellers modernization</b></p> 	<p>Maxime Bonin – LMG Marin            &amp; Etienne Fichers – Numflo  <b>Drag reduction for an LNG bunkering vessel with an efficient FINE™/Design3D optimization</b></p> 
15:20 – 15:50	<b>COFFEE BREAK</b>	
15:50 – 16:15	<p>Johannes Ratz – TU Darmstadt  <b>Simultaneous multi-disciplinary optimisation of compressor, bladed diffusor and volute</b></p> 	<p>Jean Claude Monnin – Emirates Team New Zealand  <b>The role of simulation in the America's Cup</b></p> 
16:15 – 16:40	<p>Artem Karpenko – Ivchenko  <b>Conjugate heat transfer analysis for LPC inlet guide vanes</b></p> 	<p>Adam Bekhit – Galati University  <b>An overview of recent CFD studies performed at UGAL</b></p> 
16:40 – 17:05	<p>Ariel Cohen – Bet Shemesh  <b>Advanced combustion modeling for an innovative aero combustion chamber</b></p> 	<p>Lauranne Maisonneuve – EIRL Neuman  <b>Hull form optimization of SAR boats with numerical tools</b></p> 
19:30	<b>NETWORKING DINNER</b>	

## Wednesday November 13<sup>th</sup> – Plenary sessions

8:30 – 9:00	<b>WELCOME COFFEE</b>	
9:00 – 9:30	Stephane Guilain – <i>Renault &amp; Donavan Dieu - Numflo</i> <b>Aerodynamic effects of upstream EGR injection on automotive compressor efficiency</b>	 <b>RENAULT</b> Passion for life
9:30 – 9:55	Olivier Thiry - <i>NUMECA International</i> <b>Technology Deep Dive: Multiphysics with OMNIS™/LB</b>	
9:55 – 10:20	Laura Trappolini – <i>NUMECA International</i> <b>Industry focus: Aerospace and Defence solutions</b>	
10:20 – 10:45	Dirk Wunsch – <i>NUMECA International</i> <b>Technology Deep Dive: Optimization</b>	
10:45 – 11:15	<b>COFFEE BREAK</b>	
11:15 – 11:45	Bill Dawes – <i>Cambridge Flow Solutions</i> <b>Digital Geometry - the Kodak moment</b>	
11:45 – 12:10	Antoine Tourtelier – <i>Ship-ST</i> <b>Polar Pod Project - Integration of FINE™/Marine into the innovation process</b>	
12:10 – 12:35	Joris Vanherzeele - <i>NUMECA International</i> <b>Industry focus: Automotive solutions</b>	
12:35 – 13:50	<b>LUNCH</b>	

## Wednesday November 13<sup>th</sup> – Parallel sessions

	TURBO, AERO & MULTIPHY SESSIONS	MARINE
13:50 – 14:15	<p>Edward Childs - <i>Concepts NREC</i> &amp; Lieven Baert - <i>Cenaero</i> <b>Optimization of a Two-Stage Refrigeration Compressor</b></p>  	<p>David de Premorel – <i>Finot Cong</i> <b>A VPP within FINE™/Marine - Automatic convergence towards realistic operating points for sailing boats</b></p> 
14:15 – 14:40	<p>Jie Wang – <i>University of Twente</i> <b>CFD simulations of Low-pressure Axial Fan with Low Hub-to-tip Ratio</b></p> 	<p>Eloïse Croonenborghs – <i>SINTEF Ocean</i> <b>Derivation of a manoeuvring model for a vessel</b></p> 
14:40 – 15:05	<p>Guillaume Terlinden – <i>Safran Aero Boosters</i> &amp; Donovan Dieu – <i>NUMFLO</i> <b>Using NLH rank 2 to predict the impact of a 2D distortion on the aerodynamic performance of a low pressure compressor</b></p> 	<p>Scott Terry – <i>Damen Shipyards</i> <b>Full scale verification and validation of performance prediction of a family of standardized vessels</b></p> 
15:05 – 15:35	<b>COFFEE BREAK</b>	
15:35 – 16:00	<p>Dvir Mendler - <i>ORMAT</i> <b>Unusual challenges in mixed-flow pumps design</b></p> 	<p>Marco Meloni – <i>NAOS</i> <b>Estimation of the phenomena involved in a wind &amp; mechanical propelled ship</b></p> 
16:00 – 16:25	<p>Konstantin Fedechkin – <i>Lluyka</i> <b>Blade geometry optimization for a modern high-pressure compressor</b></p> 	<p>Xavier Guisnel – <i>VPLP Design</i> <b>FINE™/Marine in performance prediction of wind assisted ships</b></p> 
16:25 – 16:50	<p>Guillaume Dufour – <i>ISAE Superaero</i> <b>Body force modeling of the aerodynamics of a low-speed fan under distorted inflow</b></p> 	<p>Alex Kruijswijk – <i>Royal IHC</i> <b>CFD simulations for accurate ship performance prediction</b></p> 
17:00	<b>DRINK</b>	



Numeca International  
**USER MEETING 2019**

**TRAINING DAY**

**Thursday November 14<sup>th</sup> – Training sessions**

	TURBOMACHINERY	COMBUSTION, MULTIPHYSICS & EXTERNAL AERO	MARINE
09:00 – 09:30	WELCOME COFFEE		
09:30 – 10:50	Structured meshing - AutoGrid5™ (Advanced)	Combustion - OMNIS™/Open	Unstructured meshing - OMNIS™/Hexpress
10:50 – 11:15	COFFEE BREAK		
11:15 – 12:30	Harmonic analysis - NLH	Automotive CAD preparation and meshing - OMNIS™	Resistance and propulsion
12:30 – 13:45	LUNCH		
13:45 – 15:30	Turbomachinery meshing and simulation - OMNIS™	Automotive external aerodynamics - Demo	Seakeeping, manoeuvring and wind studies
		Aerospace external aerodynamics - Demo	
15:30 – 15:45	COFFEE BREAK		
15:45 – 17:00	Open Discussion	Simulation setup and analysis - OMNIS™/LB	Open Discussion
		Open Discussion	