



The Riemann International School of Mathematics (RISM) in cooperation with Università degli Studi dell'Insubria, Politecnico di Milano, ICAP Sira, Mettler Toledo, DEKRA (Italia) and Istituto Marcelline Tommaseo organizes the 1<sup>st</sup> Congress on:

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## ***Mathematical Methods in Chemical Engineering and Beyond (MMCEB 2018)***

13 and 14 December 2018, Villa Toeplitz, Varese

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### **Schedule: December 13**

09:15 - 9:45	Registration
09:45-10:00	Opening at the presence of the Deputy Rector Prof. S. Serra Capizzano and the Head of the Department of Science and High Technology Prof. U. Piarulli.
10:00-10:40	"Flow Chemistry Engineering: Innovations, Sustainability, and Real-World Opportunities with Outlook on Process Automation and Machine Learning"; <b>University of Adelaide</b> ; V. Hessel
10:45-11:25	<b>Break</b>
11:30-12:10	"The GLT class as a Generalized Fourier Analysis and applications"; <b>Università degli Studi dell'Insubria</b> , S. Serra Capizzano <a href="http://www.rism.it/doc/abs-glt-model_2018.pdf">http://www.rism.it/doc/abs-glt-model_2018.pdf</a>
12:15-12:55	"APPLICATION OF NEURAL NETWORKS IN CHEMICAL ENGINEERING: new concept or old approach"; <b>Warsaw University of Technology</b> , E. Molga
13:00-14:25	<b>Lunch</b>
14:30-15:10	"A constrained model for MEMS with varying dielectric properties"; <b>Leibniz Universität Hannover</b> , C. Walker
15:15-15:35	"From semi-batch to continuous processes: an analytical solution for copolymerisation"; <b>Politecnico di Milano</b> , F. Florit
15:35-15:55	"Dust severity and safety issues as a function of the particles diameter"; <b>DEKRA Italia</b> , A. Fumagalli
16:00-16:40	<b>Break</b>
16:45-17:05	"An effective numerical approach for Dual Reflux Pressure Swing Adsorption detailed modelling"; <b>Politecnico di Milano</b> , E. Rossi

17:05-17:25	"Simulation of Runaway Phenomena in Controlled Plug Flow Reactors"; <b>Università degli Studi dell'Insubria, M. Barozzi</b>
17:25-17:40	<b>Conclusions</b>
19:30	<b>Social Trip &amp; Dinner</b>

**Schedule: December 14**

09:15 - 9:55	"Generalized solutions for strongly singular problems", <b>Accademia dei Lincei – Univ. Pisa</b> ; V. Benci
10:00-10:40	"Non-Parametric Kinetics (NPK) as an original way of thinking in process modelling"; <b>IQS</b> ; R. Nomen & J. Sempere
10:45-11:25	<b>Break</b>
11:30-12:10	"Mathematical modelling of complex reacting systems", <b>Politecnico di Milano</b> ; E. Ranzi
12:15-12:55	"Positive solutions of weakly coupled systems with critical growth in dimension two", <b>Chongqing Jiaotong University</b> , J. Zhang
13:00-14:25	<b>Lunch</b>