

# Press release

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<http://www.efce.org>

## Dr. Lena Hohl and Dr. Francesco Maluta win 2021 Young Researcher Award in Mixing

### Two exceptional PhD theses jointly earn prestigious EFCE Award

**Dr. Lena Hohl** and **Dr. Francesco Maluta** have won the European Federation of Chemical Engineering's 2021 Young Researcher Award in Mixing for outstanding PhD theses. Dr. Hohl's thesis covered "*Dispersion and phase separation in liquid multiphase systems: Influence of three phase conditions on drop size distributions*". Dr. Maluta's thesis encompassed "*CFD models for the simulation of chemical and process equipment*".

**Dr. Hohl's** PhD supervisor, Professor Matthias Kraume, commented: "The challenges of her work arose from the difficult phase behaviour of microemulsion systems. Therefore, the identification of the continuous and the dispersed phases was a tricky task. Lena developed an appropriate method to determine the phases accurately." Professor Kraume added, "Lena developed a mathematical simulation that successfully described the phase separation of the two-phase systems. She analyzed in more detail how the changing droplet sizes during the phase separation influence the separation process. From the corresponding results, she developed a modification of the Henschke model with improved description accuracy. Finally, the knowledge obtained was combined to describe the separation of three-phase systems. Here, too, there was overall good agreement between the calculations and the measured separation processes".



**Dr. Maluta's** Master's co-supervisor, Professor Giuseppina Montante commented, "During his PhD, Francesco has given a valuable and enthusiastic contribution to the experimental and computational research of the group and after three years brilliantly defended his PhD, obtaining the maximum possible score from the committee". She added, "Francesco has mainly based his modelling activity on the adoption of RANS Two Fluid Model methodologies as applied to solid-liquid mixing of dense suspensions, gas-liquid model bioreactors and liquid-liquid systems, implementing new models in commercial and open source finite volume CFD software. The validation required by the intrinsic limitations of these modelling approaches, particularly in the field of turbulent multiphase systems, has also pushed Francesco to contribute to the



experimental activity of our laboratory, by gaining expertise also in the adoption of the PIV and ERT techniques and providing a valuable contribution also on data analysis".

The judging committee of EFCE's Mixing Working Party was highly complementary of Dr. Hohl's and Dr. Maluta's work and their impact in advancing the knowledge of their respective specialisations. The committee was particularly complimentary of Dr. Hohl's support of mixing research and application in Berlin and the wider German chemical engineering community. The committee also lauded Dr. Maluta's ability to bring his modelling and CFD skills to Canada and France.

The Young Researcher Award sponsored by EKATO consists of a cash prize of €1500 plus the opportunity to attend a special event organised by the EFCE Working Party on Mixing, where the award will be presented to Dr. Hohl and Dr. Maluta. The event will take place as an online conference over two half-days on 29<sup>th</sup> June (afternoon) and 30<sup>th</sup> June (morning) 2021.

Commendations must be given to the nominees for this year's award as they were all truly excellent. The runners-up are Dr. Margarida de Brito from the University of Porto and Dr. Jasmine Sarmaras from University College London.

The Award is generously sponsored by **EKATO**.



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## Related links

EFCE media centre (<https://www.efce.info/News>)

EFCE Working Party on Mixing ([https://efce.info/WP\\_Mixing.html](https://efce.info/WP_Mixing.html))

## Notes to media

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## About EKATO

In the past 85 years EKATO has developed to world market leader in stirring and mixing technology for all process-oriented industries.

The EKATO GROUP companies offer optimized mixing technology, from modular, robust and rapidly available industrial agitators over individual solutions for reactor agitators in sophisticated mixing process up to complete process plants including automation. EKATO has been family-owned since its founding in 1933 and is represented worldwide with subsidiaries in Europe, Asia, Australia, South America, South Africa and the USA as well as a network of trading partners.

At the state-of-the art research and development centre in Schopfheim, EKATO offers engineering services from process development to process optimization to make customer processes and mixing procedures more reliable and efficient.

## **About chemical engineers**

Chemical, biochemical and process engineering is the application of science, maths and economics to the process of turning raw materials into everyday products. Professional chemical engineers design, construct and manage process operations all over the world. Oil and gas, pharmaceuticals, food and drink, synthetic fibres and clean drinking water are just some of the products where chemical engineering plays a central role.

## **About EFCE**

Founded in 1953, The European Federation of Chemical Engineering (EFCE) is a non-profit-making association, whose object is to promote co-operation in Europe between non-profit-making professional scientific and technical societies in 30 countries for the general advancement of chemical engineering and as a means of furthering the development of chemical engineering. See [www.efce.org](http://www.efce.org)