

# EMS Academy – Membrane processes for food and biotech industry: Principles, membranes, applications and design

6. – 7. April 2019

## **Day 1**

**09:00 Registration**

**10:00 Welcome with coffee**

Frank Lipnizki, Lund University, Sweden

**10:15 Introduction to membrane processes with focus on pressure-driven processes**

Susana Luque, University of Oviedo, Spain

**12:00 Lunch**

**13:30 Membranes**

Alberto Figoli, Institute on Membrane Technology, National Research Council, ITM-CNR, Italy

**15:00 Coffee**

**15:30 Membrane applications: Biotechnology**

Cristiana Boi, (University of Bologna, Italy)

**16:30 Membrane applications: Food industry excluding dairy industry**

Frank Lipnizki, Lund University, Sweden

**17:30 Membrane fouling and cleaning**

Frank Lipnizki, Lund University, Sweden

**18:00 End of first day**

**19:00 Dinner**

## **Day 2**

**8:30 Processes design and membrane modules including a spiral autopsy**

Frank Lipnizki, Lund University, Sweden

**10:00 Coffee Break**

**10:30 Plant economics and how to design a membrane plant including an exercise**

Frank Lipnizki, Lund University, Sweden

**12:00 Lunch**

**13:00 Membrane applications: Dairy industry**

Lilia Ahrné, University of Copenhagen, Denmark

**14:00 Membrane applications: Biorefineries**

Lidietta Giorno, Institute on Membrane Technology National Research Council, ITM-CNR, Italy

**15:00 Coffee break**

**15:30 Electro-driven membrane processes**

Marek Bobák, Membrain, Czech Republic

**16:15 Emerging membrane processes including forward osmosis, membrane contactors and pervaporation**

Wojciech Kujawski, Nicolaus Copernicus University Torun, Poland

**17:00 Summing-up and outlook (incl. evaluation)**

Frank Lipnizki, Lund University, Sweden