



EDITORIAL – Feedback on the 1st annual e-conference

The first annual e-conference of the EM3E-4SW programme took place on January 30th, 2018, at the European Institute on Membranes, University of Montpellier, France. It was dedicated to “New scientific trends and new technological opportunities in membranes and water treatment”. All of the EM3E-4SW first year students of the 2017-2019 edition from both study tracks (Montpellier and Toulouse) were united. They gave oral presentations in the frame of their individual



projects. These high-quality presentations dealt with various subjects related to the general topic of the e-conference: water permeation across aquaporin - transfer mechanism; membrane processes, a solution for the removal of micropollutants; carbon-based membranes for water treatment; membranes for the filtration of aqueous based-emulsions; coupling membrane bioreactors, nanofiltration and advanced oxidation processes for safe and sustainable urban wastewater reuse.

Representatives of each EM3E-4SW full partner attended this meeting and gave short presentations about the offered curricula during the 2nd and 3rd semesters. This gave the students the opportunity to discuss with them and to later make a well-informed decision about their study track choice for the second year.

The invited speaker was Dr. Hervé BUISSON, Vice President - Process Engineering at Veolia Water Solutions & Technologies, USA. He gave a highly appreciated lecture on Water treatment and Membrane E Technologies.

Click on the following link to watch the replay:

<https://video.umontpellier.fr/video/1812-institut-europeen-des-membranes-de-montpellier-em3e-4sw-conference-water-treatment-membrane-technologies/>

Required password: IEM

SPECIAL EVENT – Change of project manager for our programme

Since February 1st, 2018, Karin KARLZEN replaces Elena VALLEJO as EM3E-4SW project manager. Elena passed a competition and has now joined the headquarters of a new institution in charge of the coordination of the universities in the Languedoc-Roussillon region. Karin has a background in law and international project management and has cooperated on several projects financed by the European Union. She comes from a position at the National Institute of Further Education in Agricultural Science (Montpellier SupAgro). You can reach her at em3e-4sw-project@umontpellier.fr



TESTIMONIALS FROM OUR GRADUATES

Cheryl KARMAN, Indonesia - EM3E Edition 2 (2012-2014)

Currently a post-doctoral researcher in Antwerp X-ray analysis, Electrochemistry and Speciation (AXES) and Ecosystem Management (ECOBE) Research Groups of the University of Antwerp, Belgium.

When I finished my bachelor's degree back in my home country, Indonesia, I had a vision to enrich my knowledge in science and technology to be able to compete in the Indonesian industry. It seemed that a European master programme in membrane engineering was the path to take to reach that goal. Never had it crossed my mind that I would end up working as an academic researcher.

It all started during the first semester in Montpellier. As a chemical engineering graduate, learning material science and characterizations was at the same level as discovering *croissants* and *pains au chocolat* to add to my breakfast menu! I am not saying that learning all these new things was easy at all! See, I had to retake two exams! Even so, I had fun learning about inorganic, organic, and especially hybrid and composite materials. This enjoyment brought me to choose the Nanotechnology track in Universidad de Zaragoza, where I proudly finished my master's thesis working on metal organic framework-based thin films.

Contact: cheryl.karman@gmail.com

My research experience in thin films led me a position as a PhD student in France, where I had the chance to discover one more time a new scientific field: electrochemistry. EM3E courses in nanofabrication and nanostructuring of porous material, as well as in charge/mass transport through membranes were extremely helpful for the completion of my doctoral studies. Now, I have just started my first post-doctoral research fellow, venturing to a new field of electrochemistry in a microbiological membrane.

At the end, joining EM3E opened my mindset and opportunity to new scientific fields. Plus, there was a big bonus that came in hand. From EM3E, I have gained and maintained great friendships with students from so many different cultures and learnt to be a humble person that is ready to adapt to changes and accept challenges.



Vinit MITTAL, India - EM3E Edition 2 (2012-2014)

Starting a MA in Mathematics of Finance at Columbia University, New York in the autumn of 2018.

Before joining EM3E, I worked as a research assistant at Max Planck Institute, Germany. I had some experience of mathematical modeling and simulation and at that time I was very much fascinated with fuel cells and wanted to study membranes in depth, which would provide a strong foundation for further research. EM3E provided me with a high quality education, and imparted with the skill sets and knowledge which can be applied to any other field. In addition to courses on membrane and chemical engineering, there were courses related to probability and statistics, entrepreneurship and environmental regulations and laws. Moreover, there were courses based on mathematical modeling and simulation and provided an opportunity of learning and implementing these models on MATLAB. Each of these provided stepping stones for my future endeavors. After the second semester at ICT Prague, I was able to get a summer internship at EPFL Lausanne, Switzerland. The flexibility of EM3E also allowed me to do my master's thesis at IBM research in collaboration with ETH Zurich, Switzerland. After finishing EM3E, I got a PhD position at ETH Zurich. Even though my PhD topic was not related to membranes, the topics covered in EM3E such as mass transfer, heat transfer, modeling, simulation, statistics and others were applicable. I discontinued my PhD after one year and shifted to the USA and started working as an ORISE graduate at the US Environmental Protection Agency and I'm currently working here since a couple of years. During all these years, my major focus has been learning skills which can be used in diverse fields and EM3E provided solid foundation for that. Eventually, I also developed an interest in stock markets and finance and I decided to pursue a career in this field and applied for a MA in Mathematics of Finance and have got accepted to Columbia University, New York. It is a 1 year program and will start in the autumn of 2018.

Contact: vinit40226@gmail.com



Syed Usman TAQUI, India - EM3E Edition 2 (2012-2014)

Currently a PhD student in the frame of the Erasmus Mundus Doctorate in Membrane Engineering (EUDIME) at Nova University of Lisbon (Portugal) with mobility periods at the University of Zaragoza (Spain) and at the University of Calabria (Italy).

The three hall-marks of Europe are harmony, history and heritage. My reminiscence of two years of student life in Europe as an Erasmus Mundus Master student in Membrane Engineering in harmony with academics, society and environment has left deep impressions on my mind and heart. The novel concept of collaboration, coordination and mobility to enhance quality of higher education imparted has resulted in an innovative mindset. My father, an academician and an administrator, encouraged me to take up project work at the renowned Indian Institute of Technology (IIT) Bombay, India as part of a Bachelor of Engineering in Biotechnology at P.A. College of Engineering, Mangalore, India. My research topic focused on synthesis of lead nanoparticles for cellular membrane toxicology studies coupled with my elder brother's rich and varied experience in Europe under the Erasmus Mundus Master MUNDUSFOR strongly drove me to apply for EM3E.

During the EM3E Master, I was greatly influenced by the innovative ideas of teachers and students coming from different parts of the world. The programme prepared us to be on our toes as it was highly competitive, channelized and intensive. It encompassed the industrial outlook, academic perspective and managerial prowess required for separation processes. It further enhanced our multi-dimensional personality amalgamated with higher levels of adaptability, trained us to perform multilayered tasks and balance multiple projects concurrently and efficiently. The EM3E consortium rendered us the right launchpad to get the exposure of outstanding multidisciplinary and trans-disciplinary educational system in membranes and the modern technological equipment.

My insatiable fervor towards membranes was further bolstered by the courses taught during EM3E wherein I read about and worked diligently on various assignments and projects related to membranes. My clear career goal to be in academics and research invariably made me feel contented that my perpetual journey in the field of membranes resulted in being selected for the Erasmus Mundus Doctorate in Membrane Engineering (EUDIME). Presently, as a final year EUDIME student, I am enjoying being a part of the mobility stream which is facilitating the flow of ideas through organizational and collaborative affiliations which helps me to broaden the perspective for cognitive development and academic success. EM3E was the right foundation stone for me.

No matter how exhaustive and hard was the EM3E journey; upon successful completion backed by my parents and brothers, I feel great. To my personal satisfaction, I was the youngest to be selected during the EM3E and EUDIME programmes at the age of 21 and 24 years respectively. Probably one of the reasons, I was much pampered by my colleagues and teachers. The Schengen visa that melts the European borders allowed me to travel across 18 European countries in the last 5 years and winning friends for life. In brief, it is an enthralling experience to witness Europe's rich cultural heritage which is also referred to as 'the cradle of modern civilization'.

Contact: usmansyed.90@gmail.com



Call for application for admission to the master edition 2019-2021: Deadline for submission of applications: January 31st 2019 (admission with scholarship) and May 31st 2019 (admission without scholarship).

Sponsoring opportunities: EM3E-4SW offers you the possibility to sponsor the programme. We welcome contact from your organisation and are happy to discuss any idea which could facilitate the recruitment of EM3E-4SW students. Moreover, the second year of the master is open as vocational and education training (VET). Please contact us by e-mail: em3e-4sw-project@umontpellier.fr

More information on: <http://em3e-4sw.eu>