

## Prof. Emanuela Colombo

Politecnico di Milano – Department of Energy  
Rector's Delegate to Cooperation and Development  
UNESCO chair in Energy for Sustainable Development

### CV - SHORT VERSION IN ENGLISH

Emanuela Colombo has achieved both a **PhD in Energy Engineering and a Nuclear Engineering MSc at Politecnico di Milano** in Italy where she is currently **Full Professor at the Department of Energy**. At the same university, She has been serving as **Rector's Delegate to Cooperation and Development** since 2005. In 2012 she has been named Chair holder of the **UNESCO CHAIR on Energy for Sustainable Development** assigned to the Department of Energy and **adjunct professor at the Nelson Mandela African Institute of Science and Technology in Arusha (Tanzania)**.



She worked for Ansaldo Energia, ABB Research, Fluent France and Fluent Italia branches of Fluent Inc. (now ANSYS-FLUENT). **In 2001 she moved to an academic career** where her interest was originally focused on heat transfer devices and processes for power generation, turbulence phenomenology and modelling. From the research perspective, she has developed a strong interest in the Energy-Environment-Development nexus **access to energy in developing countries, advanced exergy methodologies and integrated modelling assessment**.

She was the scientific coordinator of **4 European projects** and one international tender on Green Innovation (**Egypt**), Sustainable Energy Engineering (**Kenya, Tanzania and Ethiopia**), Water Energy and Food nexus (**Egypt**), Modern Energy services in refugee camps (**Lebanon, Somalia, RCA and Colombia**) and Capacity Building in Engineering (**Tanzania**). She has managed the **Africa Innovation Leaders Programme** funded by the Italian Agency of Cooperation in Kenya, Ethiopia, Niger, Nigeria, Mozambique and Tunisia). She is scientific leader for Polimi within the **LEAP-RE HORIZON 2020 CSA** and the **HORIZON-CL5-2021-D1-01**. She is also working on consultancy and advocacy projects on energy modelling, scenario and impact assessments for different Italian private players and NGOs active in Italy, Africa and at global level. She is author of more than **250 scientific papers**, 125 of which are ISI or Scopus<sup>1</sup> and co-author of the book *“Renewable Energy for Unleashing Sustainable Development”* by Springer.

In line with this interest in 2004 she was **one of the founders of Engineers Without Border in Milan**. From 2007 to 2019 She coordinated **of a Network of Universities focus on Cooperation and Development (CUCS) and now is a member of the board**. In 2009 she has been awarded by the Club Mille Miglia Foundation in Italy as **“courageous intelligence”** for her research interest and social commitment in developing country.

In 2011 She introduced a new track in the **MSc in Energy Engineering focus on “Energy for Development”** at Politecnico di Milano and she promoted an honours programme for the Schools of Engineering focus on **“Engineering for Sustainable development”** to promote global dimensions within engineering education launched in 2015.

For her experience on energy for sustainable development, she worked as international expert for the United Nation Industrial Development Organisation (**UNIDO**) and served in the Scientific Committee of **UNIDO-ICS** (Trieste). In 2012 she has been named Chair holder of the **UNESCO CHAIR on Energy for Sustainable Development** assigned to the Department of Energy and **adjunct professor at the Nelson Mandela African Institute of Science and Technology in Arusha (Tanzania)**.

She was also Custodian of the Workstream on Efficiency of the **Africa Europe Energy Partnership (AEEP)** and she is working closely with the International Energy Agency (**IEA**) and the World Bank (**ESMAP**). She has been appointed by the Italian Conference of the Rector (CRUI) as the nominated representative of the academic system within the “National Council for Cooperation and Development”.

She was member of the **Sustainable Development panel of Electricité De France (EDF) from 2012 to 2016** and between 2018-2020 she was scientific coordinator for a research line dedicated to Africa in **Fondazione Eni Enrico Mattei (FEEM)**. She is currently member of the **Sustainable Committee of Edison spa** and **member of the Royal Academy of Overseas Science (Belgio)**. From January 2020 is an elected member of the **Academic Senate of Politecnico di Milano**.

**She is currently in the board of director of the Italian Higher Education with Africa and one of the Directors of the Master “Sustainable Management of Natural Resources and Cultural Heritage for local development”** organised by the foundation and supported by The Italian Ministry of Education.

<sup>1</sup> <https://www.scopus.com/authid/detail.uri?authorId=36180684100>