

Tiziano FARAVELLI

(<http://creckmodeling.chem.polimi.it/>)

EDUCATION

1990 PhD. Chemical Engineering, Politecnico di Milano, Italy.

1986 M.S. Chemical Engineering, Politecnico di Milano, Italy.

CURRENT POSITION

2004- Full Professor, Politecnico di Milano, Italy.

PREVIOUS POSITIONS

1998-2004 Associate Professor, Politecnico di Milano, Italy.

1993-1998 Assistant Professor, Politecnico di Milano, Italy.

1990-1993 Senior Engineer in the R&D department at KTI, Italy.

RESEARCH ACTIVITIES

Chemical reaction engineering of complex systems: pyrolysis, partial oxidation and combustion modeling of gas, liquid and solid fuels, both fossil and renewable fuels. Pollutant formation (NO_x, SO_x, PAH and soot) from combustion processes. Mechanism validation and reduction.

Heterogeneous combustion of liquids (droplets) and solids (detailed modeling at the particle size).

Numerical fluidynamics of reactive flows. Turbulence/kinetics interactions.

INSTITUTIONAL RESPONSIBILITIES

2010 – Head of Chemical Engineering Section of Chemistry, Materials and Chemical Engineering Department, Politecnico di Milano.

2010 – 2015 Coordinator of PhD school in Industrial Chemistry and Chemical Engineering at Politecnico di Milano.

FELLOWSHIPS AND AWARDS

2019 Fellow of the Combustion Institute

2012 **Sugden Award 2012**, from British Section of the Combustion Institute, for the paper: G. Dixon-Lewis, P. Marshall, B. Ruscic, A. Burcat, E. Goos, A. Cuoci, A. Frassoldati, **T. Faravelli**, P. Glarborg "Inhibition of hydrogen oxidation by HBr and Br₂", Combustion and Flame, vol. 159 pp. 528-540.

SUMMARY OF ACADEMIC ACHIEVEMENTS

- Tiziano Faravelli's research has led to 216 refereed journal or book publications, 2 co-edited books, 1 patent. His papers are published in combustion, chemistry and engineering journals.
- Citation Data (July 2019): Total Citations > **7900**; H-index = **49** (Scopus). 19 papers over 100 citations.

TEACHING ACTIVITIES

1998 – 2014 Theory of Errors and Applied Statistics.

1998 – 2012 Transport Phenomena.

2009 – 2012 Pollutant Formation from Combustion Processes.

2011 - Fluid-mechanics and chemical engineering fundamentals

SELECTED EVALUATION SERVICE, EDITORIAL & CONFERENCE ORGANIZATION ACTIVITIES

2009 - Member of the Editorial Board of the Proceedings of Combustion Institute

2016 - Associate Editor of Combustion and Flame

- 2013 Member of the Silver medal committee of the Combustion Institute
- 2010 - 2014 Member of the management committee of the COST Action CM0901
- 2015 - 2019 Member of the management committee of the COST Action CM1404
- 2016 - 2018 Member of the committee of ASN (Scientific National Habilitation)

Granted patent

Tiziano Faravelli, Alessio Frassoldati, Alessio Visentin “Flameless boiler for producing hot water”, 15 May 2013, European patent, nr. EP 2592362 A1

Invited presentations to internationally established conferences and/or international Advanced School

- 2008 Invited plenary lecture at XXXI Combustion Meeting of the Italian Section of the Combustion Institute, Turin.
- 2011 Invited plenary lecture at 5th European Combustion Meeting (ECM2011) Cardiff (Wales).
- 2013 Invited plenary lecture at 14th International Conference on Numerical Combustion, San Antonio (Texas).
- 2014 Invited lecture at 2nd International Conference of the Cluster of Excellence Tailor-Made Fuels from Biomass, Aachen (Germany).
- 2015 Invited lecture at 1st General Meeting & Smart Energy Carriers for Power, Industry and Engines Workshop, CERTH Conference center Thessaloniki (Greece) 26–28 AUGUST
- 2016 Invited Lecture at KAUST Future Fuel Workshop, KAUST (Saudi Arabia) 7-9 March
- 2016 Invited Keynote at 21st International Symposium on Analytical and Applied Pyrolysis (PYRO 2016), Nancy, (France) 9-12 May
- 2017 Invited Lecture at International Bunsen Discussion Meeting: “Chemistry and Diagnostics for Clean Combustion”, Bielefeld (Germany), June 21–23
- 2017 Invited Lecture at Tenth Mediterranean Combustion Symposium, Napoli (Italy), 17 – 21 September
- 2018 Invited Keynote lecture at 2nd International Workshop on Oxy-Fuel Combustion, Bochum (Germany), 14 – 15 February
- 2018 Invited Lecture at ICONBM - International Conference on Biomass 17 - 20 June, 2018 – Bologna (Italy)
- 2019 Invited Lecture at international conference “STATISTICAL THERMODYNAMICS AND CHEMICAL KINETICS: FAR AWAY FROM EQUILIBRIUM”, 25-26 June, ACCADEMIA NAZIONALE DEI LINCEI (Rome)