

## CV for Ioannis V. Skiadas

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### Degrees:

1991, Diploma (M.Sc.-level) in Chemical Engineering, University of Patras, Greece

1996-98, Military service (mandatory) in Hellenic Air Force.

1998, Ph.D. in Biochemical Engineering and Environmental Technology, Dept. of Chemical Engineering, Univ. of Patras, Greece

### Positions:

1998-99 Research associate (post doctoral appointment), Dept of Chemical Engineering, University of Patras, GR; 1999-2003 Post-doctoral researcher BIOCENTRUM-DTU and KT-DTU, DK; 2003-2006 Research Associate, Dept. of Chemical Engineering, University of Patras, GR; 2005-2006 Scientific Associate (Assistant Prof. level), Dept. of Ecology and Environment, Technological Educational Institute of Ionian Islands, GR; 2006-2008 Associate professor, BIOCENTRUM-DTU, DK; 2008-2015 Associate Professor, Dept. of Chemistry and Bioscience, AAU, DK; 2015 – present Associate Professor, Dept. Chemical and Biochemical Engineering, DTU, DK.

### Research and Scientific focus:

Reactor fermentations, Biorefineries, Liquid and gaseous biofuels production from biomass resources and waste, Anaerobic digestion, Industrial and municipal wastewater treatment, Pre-treatment of biomass, including enzymatic hydrolysis, Wastes, wastewater and biomass characterization, Mass and energy balances, Upstream and downstream processing of biomass effluents, Up-scaling of biotechnological processes and Mathematical simulation of bioprocesses.

### Memberships, scientific committees, review:

Member of the Scientific Committee of the International Conference on Engineering for Waste and Biomass Valorisation. Reviewer for several international scientific journals. Evaluator for the Foundation of Science and Technology, Lisbon, Portugal (2012). Member of: International Water Association (IWA), Marie Curie Fellows Association, Technical Chamber of Greece, The Danish Society of Engineers (IDA).

### Distinctions and academic awards

Marie Curie individual fellowship under E.U. program “Improving Human Potential and Socio-Economic Knowledge Base”. Host Institute: Department of Chemical Engineering, University of Patras (2003 –2004) // Marie Curie individual fellowship under E.U. programme “Environment and Climate”. Host Institute: Department of Biotechnology, the Technical University of Denmark (1999 – 2001) // Graduate research scholarship from the Foundation for Research and Technology – Hellas, Institute of Chemical Engineering and High Temperature Chemical Processes (1991 – 1996) // Ministry of Education Excellency award (Greece) for the academic years 1980-81, 1981-82, 1982-83, 1983-84,

### Published material

*Articles in international refereed scientific journals: 39, International conferences presentations/refereed proceedings: 66, Book chapters: 3, Times cited without self-citations: >1200, h-index: 19 (data taken from “all databases” in the Web of Knowledge).*

### Teaching and Education activities

*General:* Course responsible and teaching in several undergraduate, master and PhD courses at Univ. of Patras and Technological Educational Institute of Ionian Islands in GR, AAU and DTU in DK.

*Current teaching:* 28344 Biotechnology and process design (course responsible for autumn semesters), 28157 Process Design (course responsible for spring semesters), 28122 Chemical Unit Operations Laboratory, 28123 Laboratory in Chemical/Biochemical Engineering.

## Grants 2008 - present

2015-2019: SYNFERON “Optimized syngas fermentation for biofuels production”, Innovationsfond (IF). Workpackage leader: Microbial fermentation of syngas

2013-2017: Participation in GRAIL “Glycerol biorefinery approach for the production of high quality products of industrial value” EC, FP7-Cooperation. Research in applying mixed microbial consortia for cost-efficient fermentation of crude glycerol to 1,3 PDO and PHA.

2013-2016: Coordinator of AMMONOX “Ammonia for enhancing biogas yield & reducing NO<sub>x</sub>, ENERGINET.

2013-2017: Participation in IBISS “Industrial Biomimetic Sensing and Separation”, Innovationsfond (IF). Research in coupling biological production processes to biomimetic membranes for cost-efficient fermentation processes.

2010-2014: Participation in SUPRABIO “Sustainable products from economic processing of biomass in highly integrated biorefineries”, European Commission, FP7-Cooperation.: Research in biological production of butyric acid from wheat straw in lab and pilot scale combined with in-situ product separation.

2009-2013: Participation in RETROGAS “Demonstration of cost-effective production of biogas from manure only comprising new pre-separation technology and enzyme liquefaction” (EUDP). Research in Aqueous Ammonia Soaking as a treatment method for enhancing the methane yield from manure fibers.

## Selected publications

- E. Jurado, G. Antonopoulou, G. Lyberatos, H.N. Gavala and I.V. Skiadas (2016). Continuous anaerobic digestion of swine manure: ADM1-based modelling and effect of addition of swine manure fibers pretreated with aqueous ammonia soaking, *Applied Energy*, 172, 190–198
- A. Burniol-Figols, K. Cenian, I.V. Skiadas and H.N. Gavala (2016). Integration of chlorogenic acid recovery and bioethanol production from spent coffee grounds. *Biochemical Engineering Journal*, 116, 54-64.
- S, Kalafatakis, S. Braekevelt, N.S. Vilhelmsen Carlsen, L. Lange, I.V. Skiadas, H.N. Gavala (2016). On a novel strategy for water recovery and recirculation in biorefineries through application of forward osmosis membranes. *Chemical Engineering Journal* (2016), doi: <http://dx.doi.org/10.1016/j.cej.2016.11.092>
- A. Lymperatou, H.N. Gavala, K. Esbensen and I.V. Skiadas (2015). AMMONOX-Ammonia for enhancing biogas yield & reducing NO<sub>x</sub>: Towards the optimization of Aqueous Ammonia Soaking. *Waste and Biomass Valorization*, 6(4):449–457.
- G.N. Baroi, I.V. Skiadas, P. Westermann and H.N. Gavala (2015). Continuous fermentation of wheat straw hydrolysate by *Clostridium tyrobutyricum* with in-situ acids removal. *Waste and Biomass Valorization*, 6(3), 317-326.
- E. Jurado, I.V. Skiadas and H.N. Gavala (2013) Enhanced methane productivity from manure fibers by aqueous ammonia soaking pretreatment. *Applied Energy*, 109, 104-111.
- Cherubini F., Jungmeier G., Wellisch M., Willke T., Skiadas I., Van Ree R., de Jong E. (2009), Toward a common classification approach for biorefinery systems, *Biofuels Bioproducts & Biorefining-BIOFPR*, 3(5), 534-546.