PERSONAL INFORMATION

HENRIQUE JOAQUIM DE OLIVEIRA PINHO

ESCOLA SUPERIOR DE TECNOLOGIA DE TOMAR
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Sex Male | Date of birth 14/07/1966 | Nationality Portugal

WORK EXPERIENCE

Since 1999 — Higher Education Teacher

INSTITUTO POLITÉCNICO DE TOMAR, PORTUGAL

- Assistant Professor
- Instituto Politécnico de Tomar Engineering Department council member
- Escola Superior de Tecnologia de Tomar, IPT, ECTS and Erasmus coordinator
- IPT Bioenergy and Applied Biotechnology Lab Director
- IPT Chemical Technology Master's coordination team member
- Coordinator of the IPT Bioprocess Technology intermediate level course (TeSP)
- Researcher at CERENA (Natural Resources and Environment Research Centre), Energy Group, Instituto Superior Técnico

From 1986 to 2003 — Customs Broker Assistant

AAS – Sociedade de Despachos Aduaneiros, Lda.

- Commodities classification coordinator
- IT coordinator
- Operations Management Officer

HIGHER EDUCATION

2012 — PhD in Chemical Engineering

INSTITUTO SUPERIOR TÉCNICO

UNIVERSIDADE DE LISBOA, formerly Universidade Técnica de Lisboa, PORTUGAL

- Chemical Processes; Mass Transfer; Process Modelling; Environmental Technology

2000 — Master in Business and Administration

INSTITUTO SUPERIOR DE ECONOMIA E GESTÃO

UNIVERSIDADE DE LISBOA, formerly Universidade Técnica de Lisboa, PORTUGAL

- Benchmarking; Chemical Industry; R&D management

1991 — Graduate course in Chemical Engineering

INSTITUTO SUPERIOR TÉCNICO

UNIVERSIDADE DE LISBOA, formerly Universidade Técnica de Lisboa, PORTUGAL

- Chemical Processes; Biotechnology

PERSONAL SKILLS

Digital competence

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Proficient user	Proficient user	Independent user	Independent user	Proficient user

- Advanced user of office suites (word processor, spread sheet, presentation software)
- Independent user of Chemical Processes Design and Simulation software (AspenTech software; DWSIM; CoCo)
- Independent user of Relational Database management environments
- Independent user of IBM's SPSS statistical software
- Independent user of MATLAB, OCTAVE and other math and numerical software

TEACHING SUBJECTS AND ACTIVITIES

Curricular units topics and levels (last five years)

- Mass and Energy transport phenomena (2nd cycle)
- Chemical Processes Design and Operation (2nd cycle)
- Bioenergy (2nd cycle)
- Material and Energy balances fundamentals (1st cycle)
- Bioseparations (1st cycle)
- Economics and management (1st cycle)
- Production and operations management (1st and 2nd cycle)
- Food Technology (Undergraduate level)
- Environmental Chemistry (Undergraduate level)

Master's and Bachelor's thesis supervisions (last five years)

- Preliminary design of lignocellulosic ethanol production plant (2016, Master´s thesis)
- Preliminary design of polypropylene production plant (2015, Master's thesis)
- Evaluation of used vegetable oils recovery process (2015, Master's thesis)
- Preliminary design of bioethanol dehydration plant (2015, Bachelor's thesis)
- Guidelines for the Implementation of a sewage sludge management system for agriculture valorisation (2014, Master's thesis))
- Conception of tartaric acid recovery process from wine waste (2014, Bachelor's thesis)
- Industrial and pilot-scale constructed wetlands monitoring (2014, Bachelor's thesis)
- Production of algae on wastewaters as biofuel raw biomass (2013, Master's thesis)
- Gas-liquid oxygen transfer in stirred liquid-liquid emulsions (2013, Master's thesis)
- Aquaculture wastewater treatment and recovery (2013, Bachelor's thesis)
- Design of a lab-scale biodiesel plant (2012, Master's thesis)
- Design of an autonomous biogas plant (2012, Master's thesis)
- Evaluation of bioethanol production from algae biomass (2012, Master's thesis)

RESEARCH ACTIVITIES AND RESULTS

International peer-review publications

Scopus Author ID 36187146500

- Mateus, R., Vaz, M., Pinho, H. (2016). Valorisation of phosphorus-saturated constructed wetlands for the production of sugarcane. Journal of Technology Innovations in Renewable Energy, 6 (1), 1-6.
- Mateus, R., Vaz, M., Capela, I., Pinho, H. (2016). The potential growth of sugarcane in constructed wetlands designed for tertiary treatment of wastewater. Water, 8, 93, 1-14.
- Pinho, H., Alves, S. (2016) Semi-empirical modelling of gas-liquid mass transfer in gas-liquid-liquid systems in stirred tanks. Chemical Engineering Communications, 203 (1), 94-102.
- Mateus, D., Vaz, M., Capela, I., Pinho, H. (2014) Sugarcane as constructed wetland vegetation: preliminary studies. Ecological Engineering, 62 (1), 175-178.
- Alves, S., Pinho, H. (2013) Gas absorption in stirred gas-liquid-liquid systems: effect of transferred solute solubility and of oil phase spreading characteristics. Chemical Engineering Communications, 200 (11), 1425-1442.
- Mateus, D., Vaz, M., Pinho, H. (2012) Fragmented limestone wastes as a constructed wetland substrate for phosphorus removal. Ecological Engineering, 41 (1), 65-69.
- Pinho, H., Alves, S. (2010) Effect of spreading coefficient on gas-liquid mass transfer in gas-liquid-liquid dispersions in a stirred tank. Chemical Engineering Communications, 197 (12), 1515-1526.
- Mateus, D., Pinho, H. (2010) Phosphorous removal by expanded clay - six years of pilot-scale constructed wetlands experience. Water Environmental Research, 82 (2), 128-137.

Research projects

- Evaluation of light weight expanded clays aggregates as constructed wetland fillers. Supported by Leca Portugal, S.A., 2002-2003 (Collaborator researcher).
- Monitoring of nutrients removal in pilot-scale constructed wetlands. Supported by Maxit, S.A., 2005 (Collaborator researcher).
- Análises laboratoriais de índole hidráulica e de solos (Soils hydraulic permeability essays), no âmbito do projecto “Optimização de sistemas de tratamento de águas residuais por plantas hidrófitas”. Supported by Comissão de Coordenação e Desenvolvimento Regional do Centro, 2006 (Collaborator researcher).
- Indirect gas-liquid mass transfer through a second immiscible liquid phase. Supported by FCT, POCI/EQU/59782/2004 (Collaborator researcher from 2005 to 2009).

Conferences (last five years)

- Mateus, D., Pinho, H. Valorização de águas residuais tratadas por leitos de macrófitas através da produção integrada de microalgas, 1º Simpósio Luso-Brasileiro sobre Modelos e Práticas de Sustentabilidade, Lisboa, Portugal, 2016.
- Vaz, M., Mateus, D., Pinho, H. Incremento da sustentabilidade de zonas húmidas construídas através da produção de cana-de-açúcar, 1º Simpósio Luso-Brasileiro sobre Modelos e Práticas de Sustentabilidade, Lisboa, Portugal, 2016.
- Mateus, D., Vaz, M., Pinho, H. Improving the sustainabilty of CW for wastewater treatment, 6th International Symposium on Wetland Pollutant Dynamics and Control (WetPol), York, UK, 2015.
- Vaz, M., Mateus, D., Pinho, H., Capela, I. Educação Ambiental e para a Sustentabilidade: O projeto “Mini-ETARs de plantas macrófitas”. 1st International Congress on Education, Environment and Development, Leiria, Portugal, 2015
- Pinho, H., David, H., Alves, S. The effect of spreading coefficient on oxygen mass transfer in gas-liquid-liquid systems. 10th International Chemical and Biological Engineering Conference, Porto, Portugal, 2014.
- Mateus, D., Vaz, M., Capela, I., Pinho, H. Use of sugarcane as constructed wetland vegetation. 10th International Chemical and Biological Engineering Conference, Porto, Portugal, 2014.
- Pinho, H. Valorização da biomassa florestal. Jornadas de Engenharia Química e do Ambiente, Instituto Politécnico de Tomar, Tomar, Portugal, 2014.
- Vaz, M., Branco, R., Pinho, H., Capela, I., Mateus, D. Zonas húmidas construídas para tratamento terciário de efluentes: uma tecnologia ecológica e sustentável. XII Congresso Nacional de Engenharia do Ambiente e 10ª Conferência Nacional do Ambiente, Aveiro, Portugal, 2013.
- Pinho, H., Duarte, S., Granchinho, P., Mateus, D., Integração da produção de algas para fins energéticos no tratamento biológico de efluentes líquidos. XII Congresso Nacional de Engenharia do Ambiente e 10ª Conferência Nacional do Ambiente, Aveiro, Portugal, 2013.
- Mateus, D., Pinho, H., Vaz, M. Zonas húmidas construídas: uma alternativa sustentável para tratamento de águas residuais. XIX Congresso da Ordem dos Engenheiros, Lisboa, Portugal, 2012.
- Mateus, D., Pinho, H. Plants contribution for phosphorus removal in a well-established constructed wetland. 11th International Chemical and Biological Engineering Conference, Almada, Portugal, 2011.
- Mateus, D., Fernandes, C., Almeida, M., Pinho, H. Pilot-scale constructed wetlands hydrodynamics modeling from tracer experiments. 11th International Chemical and Biological Engineering Conference, Almada, Portugal, 2011.