

# Veronica Mas

---

## CURRICULUM VITAE

*"Mathematics is the music for reason"*  
*James Joseph Sylvester*

### Education

- 09/2002 **Chemical Engineer**, *University of Buenos Aires*, Buenos Aires, Argentina, .  
Equivalent to degree plus master  
Mark 7.8/10
- 06/2009 **PhD**, *University of Buenos Aires*, Buenos Aires, Argentina, .  
General Engineering  
Mark 10/10
- 09/2015 **Postgraduate Certificate in Learning and Teaching in Higher Education**, *Aston University*, Birmingham, UK.  
**Teacher of English language training course (up to second year)**, *Instituto Superior Joaquin V. Gonzalez*, Buenos Aires, Argentina.

### PhD thesis

- Title *Steam reforming of ethanol. Kinetic study*
- Supervisors Miguel Angel Laborde, Norma Amadeo
- Description Production of hydrogen from ethanol steam reforming was studied over a range of temperatures and concentration of reactants. In accordance with experimental results, different schemes of reactions were proposed using both power law and Langmuir-Hinshelwood. Kinetic parameters of the non linear problem were fitted. Activation energies found were compared with those obtained by other authors. Matlab simulations showed that the models were able to adjust the trends of variation of molar fractions observed experimentally.

*Ehinger Straße 23, 89077, Ulm, Germany*  
*(willing to relocate)*

☎ +49 (0)17686153762 • ✉ [veromasa@gmail.com](mailto:veromasa@gmail.com)  
🌐 [www.linkedin.com/in/veronica-mas-b24a982a/](http://www.linkedin.com/in/veronica-mas-b24a982a/)  
🌐 [www.facebook.com/itfitslikeaglove](http://www.facebook.com/itfitslikeaglove)

---

## Other training

- 2015 **Performance Development Review Skills course**, *Aston University, Birmingham, UK.*
- 2015 **Risk Assessment training**, *Aston University, Birmingham, UK.*
- 2014 **Fire Warden Course**, *Aston University, Birmingham, UK.*
- 2014 **Evacuation Chair Course**, *Aston University, Birmingham, UK.*
- 2007 **System Approach to Design of Chemical/Biochemical Membrane Reactors**, *Pennsylvania State University, Bahia Blanca, Argentina.*
- 2006 **Acid catalytic reactions of interest in the industry**, *University of La Plata, La plata, Argentina.*
- 2005 **Modelling and discrimination of kinetic models in heterogeneous catalysis**, *Argentinian School of Catalysis, Santa Fe, Argentina.*
- 2004 **Tensor analysis**, *University of Buenos Aires, Buenos Aires, Argentina.*
- 2004 **Advance Numerical analysis**, *University of Buenos Aires, Buenos Aires, Argentina.*
- 2003 **Catalytic processes course**, *University of Pais Vasco, Buenos Aires, Argentina.*
- 2003 **Sewage treatment of contaminants from wastewater**, *University of Pais Vasco, Buenos Aires, Argentina.*
- 2000 **Environmental degradation**, *National technical University, Buenos Aires, Argentina.*
- 1998 **Course ISO 9000 standards**, *University of Buenos Aires, Buenos Aires, Argentina.*

*Ehinger Straße 23, 89077, Ulm, Germany  
(willing to relocate)*

📞 +49 (0)17686153762 • ✉ [veromasa@gmail.com](mailto:veromasa@gmail.com)

🌐 [www.linkedin.com/in/veronica-mas-b24a982a/](http://www.linkedin.com/in/veronica-mas-b24a982a/)

🌐 [www.facebook.com/itfitslikeaglove](http://www.facebook.com/itfitslikeaglove)

---

## Experience

- 08/2021– Present **Professor at IU International Hochschule.**
- 09/2020– 08/2021 **Independent designer and writer.**
- Knitwear design, writing and marketing.
  - Development of "It Fits Like a Glove", an online marketing platform which provides creative ideas for knitters and general designers. The platform offers positive psychology elements aiming to encourage creative thinking by means of mixing elements of knitting and engineering design as well as maths and science.
  - Development and sell of knitting patterns.
- 06/2019– 09/2020 **Manager and Researcher at Kanano GmbH, Neu-Ulm, Germany.**
- Analysing data from spectrums, fitting and identification of contaminant's fingerprints.
  - Planning, delivery and management of research projects.
- 10/2016– 09/2020 **Academic Supervisor and Module leader at Aston Professional Engineering Centre (APEC), Aston University, Birmingham.**
- Design and development of distance learning modules:
    - Fundamentals of Water Treatment
    - Maths for Engineers
  - Academic supervisor for students in the BEng Programme.
- 10/2016– 06/2019 **Manager Gateway Route of entry to Professional Engineering Program, Aston University, Birmingham.**
- Management, coordination, design and development of distance learning modules.
  - Design and development of distance learning modules:
    - Material Science
    - Maths for Engineers
- 10/2018– 03/2019 **Project Manager, Aston Institute of Photonics Technologies, Birmingham.**
- Engagement with SMEs in order to facilitate collaborative research between academia and business in the topics related to big data.
- Detailed achievements:
- Delivery of outputs;
  - engagement with SMEs:
    - Workshops
    - Masterclasses
    - Exhibitions and forums

*Ehinger Straße 23, 89077, Ulm, Germany  
(willing to relocate)*

📞 +49 (0)17686153762 • ✉ [veromasa@gmail.com](mailto:veromasa@gmail.com)  
🌐 [www.linkedin.com/in/veronica-mas-b24a982a/](http://www.linkedin.com/in/veronica-mas-b24a982a/)  
🌐 [www.facebook.com/itfitslikeaglove](http://www.facebook.com/itfitslikeaglove)

- 03/2018– **Senior Teaching Fellow- Engineering Mathematics**, *Warwick*  
 10/2018 *Manufacturer Group, Coventry.*
- Delivery, planning, design, organisation and development of objectives and materials for courses.
  - Modules:
    - Applied math (calculus, matrices and numerical methods)
    - Probability and statistics
- 10/2016– **Teaching Fellow in Energy Systems**, *Aston University*,  
 03/2018 *Birmingham.*
- Development of work-based learning programmes with organisations such as National Grid, SSE, E.ON UK, Royal Mail, and BP. Modules taught:
- Maths (calculus, matrices and numerical methods)
  - Probability and statistics.
  - Reliability.
  - Numerical methods with an application to network analysis: Lineal method, Newton Raphson and Hardy Cross.
  - Sustainability for engineers.
- 07/2015– **Bioenergy consultant**, *Smart Green-Tech Solutions*, *London.*  
 11/2016
- Market research targeting new potential clients and areas of development for the company.
  - Development and writing of proposals for new clients including estimation of all financial costs, eg, logistics, laboratory services, human resources, etc.
  - Developing of sampling plans in accordance to European and UK standards. Find cost effective services or technologies to deliver the project.
  - Managing technical staff. Monitoring on regular basis progress of projects and their associated costs to ensure projects do not underspend or overspend.
  - Preparing spending forecast based on activities planned for the future periods.
  - Writing of technical reports for clients, interpreting results and informing stages of the projects.
- 09/2012– **Sessional lecturer and laboratory supervisor**, *Aston University*,  
 10/2016 *Birmingham.*
- Process Laboratory course consisting of nine bench scale operation units: heat exchangers, pump rig, distillation column, cooling tower, filtration unit, absorption, control unit, reactor unit and fluidised bed. Involvement:
- Development and designing of experiments for students to perform.
  - Briefing and supervising students.
  - Marking reports.

*Ehinger Straße 23, 89077, Ulm, Germany*  
*(willing to relocate)*

📞 +49 (0)17686153762 • ✉ [veromasa@gmail.com](mailto:veromasa@gmail.com)  
 🌐 [www.linkedin.com/in/veronica-mas-b24a982a/](http://www.linkedin.com/in/veronica-mas-b24a982a/)  
 🌐 [www.facebook.com/itfitslikeaglove](http://www.facebook.com/itfitslikeaglove)

- 06/2013–07/2015 **Applied Research and Technical Support Officer**, *Aston University*, Birmingham.
- Development of projects which provided services to business.
  - One to one support for business in the form of consultancy services for the development of new innovation and technology research.
  - Responsibility for the academic/scientific and technical parts of the projects in collaboration with industry.
  - Support, writing and preparation of bids for collaborative research and development projects.
  - Development of a broad knowledge of bioenergy technologies especially in relation to commercial and market challenges.
  - Develop general knowledge on fundamental research areas like upgrading of pyrolysis oils, pre-treatment of feedstock, catalytic production of chemicals from biomass, anaerobic digestion, gasification, etc.
  - Managing and delivering workshops.
  - Development of procurement processes related to the project.
- 04/2000–10/2010 **Teaching assistant**, *University of Buenos Aires*, Buenos Aires.
- Probability and Statistics (2010 –2011)
  - Design of chemical reactors I (undergraduate) and II (postgraduate) (2001 – 2011)
  - Unit Operation III (mass transfer) (2000-2001)
- 03/2009–06/2013 **Private English as a second language teacher**, *Buenos Aires, Leicester*.
- Delivery of classes in person and over the internet. Students from Turkey, Russia, Hong Kong, Argentina, Italy and India.
- 04/2000–07/2008 **Research work**, *Laboratory of Catalytic Process, University of Buenos Aires*, Buenos Aires.
- As part of my grant-aided undergraduate thesis program: "Production of  $H_2$  from ethanol steam reforming" (catalysts preparation) and as part of my doctoral thesis.
- 06/2001–03/2002 **Junior Process Engineer**, In *TECNA S.A.*, Engineering Company, Buenos Aires.
- Tecna specializes in the turn-key delivery of gas treatment plants.
- Main tasks:
- Design of operation units.
  - Develop of specification sheets and interpretation.
  - Examination of P&I diagrams.

## Supervised Thesis

- German Di Batista, Bachelor degree. University of Tres de Febrero (2010). "Control of explosive atmospheres in silos".
- Academic supervision of students under work-based programs: Mohammod, Taher, James Tonks, Sarah Malkin and Gkriziotis, Dimosthenis. Aston University (2017-2019).

*Ehinger Straße 23, 89077, Ulm, Germany*  
(willing to relocate)

📞 +49 (0)17686153762 • ✉ [veromasa@gmail.com](mailto:veromasa@gmail.com)  
 🌐 [www.linkedin.com/in/veronica-mas-b24a982a/](http://www.linkedin.com/in/veronica-mas-b24a982a/)  
 🌐 [www.facebook.com/itfitslikeaglove](http://www.facebook.com/itfitslikeaglove)

- Assessor for Master thesis. Sena Kalkavan. MSc Innovation and Entrepreneurship, WMG.

## Patent

- Catalyst for the decomposition of hydrocarbon, a process to obtained the mentioned catalyst and the process to produce hydrogen and syngas with the mentioned catalyst. Inventors: N. Amadeo, P. Arena, G. Baronetti, M. Jobbagy, M. Laborde, F.Mariño, V. Mas, R. Tejada. Nº AR062824. Applicant Institute: CONICET4

## Grants awarded

PhD grants	Peruilh Foundation and University of Buenos Aires	<i>fully funded PhD</i>
Undergraduate grant	University of Buenos Aires	<i>Funding of undergraduate research work</i>

## Participation in tenders

- Acting as technical advisor in the proposal to develop a methodology for the evaluation of In-Situ performance of solid fuel biomass boilers for the Department of Energy and Climate Change (DECC). Tender Reference TRN29/11/2014.
- Acting as technical advisor in the development of proposal for Greater Birmingham and Solihull LEP Heat Network Project Manager.




## Languages

Spanish	Mother tongue
English	Bilingual level
French	Elementary
German	Elementary

## Computer skills

Word processor	Latex	<i>Eg Writing complex equations</i>
Teaching Platforms	Blackboard, Moodle	<i>Eg: Design online assessments</i>
Microsoft Office	Word, Excel, Power Point, MS Project	<i>Eg: Coding VBA macros</i>
Data analysis	Origin	<i>Eg: plotting, peak fitting, statistical analysis,</i>

*Ehinger Straße 23, 89077, Ulm, Germany  
(willing to relocate)*

 +49 (0)17686153762 • 
  [veromasa@gmail.com](mailto:veromasa@gmail.com)  
 [www.linkedin.com/in/veronica-mas-b24a982a/](http://www.linkedin.com/in/veronica-mas-b24a982a/)  
 [www.facebook.com/itfitslikeaglove](http://www.facebook.com/itfitslikeaglove)

Teaching tools	Geogebra, Jupyter Notebook	<i>Eg: Animated visualisation of resolution of differential equations</i>
Polling platforms	Responseware, Kahoot	<i>Eg: Use of Power Point with polling interactive sessions</i>
Programming Language	Matlab/simulink, Python, Visual Basic	<i>Eg Using ODE45 to solve systems of non linear differential equations</i>
Simulator	Multisim, Aspen-Hysys, Agilent	<i>Competent</i>
Other	Solis Andor, Basler, Avantes, Stitch Needle	<i>Competent</i>
Industrial design	Freecad	<i>Competent</i>

## Artistic skills

Knitting	Knit and crochet wear design. Pattern making, hand and machine knitting.
Sewing	Pattern making, hand and machine sewing. Sustainable fashion designer.
Instruments	Piano, violin, dgembe
Dancer	Classical ballet
Writing	Short stories, poems and stand up comedy

## Other skills

Speed Cuber	Fast solving Rubik's Cube
-------------	---------------------------





## Other interests

- Maths behind Rubik's cube.
- Maths behind beauty
- Sustainability in fashion.

## Publications in international journals

- Bio-ethanol steam reforming on Ni Based catalyst. Kinetic Study. I. Llera, V. Mas, M.L. Bergamini, M. Laborde, N. Amadeo. Chem. Eng. Sci. 71, (2012) 356–36.
- Ethanol steam reforming using Ni(II)-Al(III) layered double hydroxide as catalyst precursor. Kinetic study. Mas Verónica, Baronetti Graciela, Amadeo Norma, Laborde Miguel. Chem. Eng. J. 138 (2008) 602-607.

*Ehinger Straße 23, 89077, Ulm, Germany  
(willing to relocate)*

 +49 (0)17686153762 • 
  veromasa@gmail.com  
 [www.linkedin.com/in/veronica-mas-b24a982a/](http://www.linkedin.com/in/veronica-mas-b24a982a/)  
 [www.facebook.com/itfitslikeaglove](https://www.facebook.com/itfitslikeaglove)

- A kinetic study of ethanol steam reforming using a nickel based catalyst. V. Mas, M.L. Bergamini, G. Baronetti, N. Amadeo, M. Laborde. *Top. Catal.* 51, (2008) 39-48.
- Ni(II)-Al(III) layered double hydroxide as catalyst precursor for ethanol steam reforming: Activation treatments and kinetic studies. V. Mas, M. L. Dieuzeide, M. Jobbágy, G. Baronetti, N. Amadeo, M. Laborde. *Catal. Today* 133–135 (2008) 319–323.
- Thermodynamic analysis of ethanol/water system with the stoichiometric method. V. Mas, R. Kipreos, N. Amadeo, M. Laborde. *Int. J Hydrogen Energy*, 31 (2006) 21-28.

*Ehinger Straße 23, 89077, Ulm, Germany  
(willing to relocate)*

☎ +49 (0)17686153762 • ✉ [veromasa@gmail.com](mailto:veromasa@gmail.com)  
🌐 [www.linkedin.com/in/veronica-mas-b24a982a/](http://www.linkedin.com/in/veronica-mas-b24a982a/)  
🌐 [www.facebook.com/itfitslikeaglove](http://www.facebook.com/itfitslikeaglove)