

# Janire Pascual González, PhD

**Professional profile** Chemical and environmental engineer specializing on climate, energy, & sustainability transition policy and strategy solutions.

## Academic Preparation

October 2012-October 2015

**PhD in Chemical, Environmental and Process Engineering** [Doctor cum Laude]

Department of Chemical Engineering, Universitat Rovira i Virgili

September 2009 – June 2011

**Master in Chemical Engineering and Processes** [Class Salutatorian]

Universitat Rovira i Virgili

September 2009 – June 2011

**Chemical Engineering Degree** [Class Valedictorian]

Universitat Rovira i Virgili

September 2006 – June 2009

**Industrial Technical Engineering Specializing in Industrial Chemistry Degree** [Class Valedictorian]

Universitat Rovira i Virgili

## Professional Experience

May 2024 – Present **Research Assistant Professor**, Public Administration & International Affairs Department, Maxwell School of Citizenship & Public Affairs (Syracuse University)

August 2023 – Present **Senior Project Manager**, Dynamic Sustainability Lab (Syracuse University)

September 2022 – August 2023 **Post-doctoral Researcher**, Center for Sustainable Energy and Environmental Engineering, Department of Engineering (East Carolina University)

September 2017 – August 2023 **Post-doctoral Researcher**, Division of Research, Economic Development, and Engagement (East Carolina University)

October 2015 - April 2016 **Post-doctoral Researcher**, SUSCAPE Research Group, Chemical Engineering Department (Universitat Rovira i Virgili)

August 2012- September 2015 **Researcher**, SUSCAPE Research Group, Chemical Engineering Department (Universitat Rovira i Virgili)

July 2011- June 2012 **Safety Technician**, INERCO Ingeniería, Tecnología y Consultoría, S. A.

June 2010 – April 2011 **Researcher**, CREVER Research Group, Mechanical Engineering Department (Universitat Rovira i Virgili)

## Personal skills and competences

Professional Academic Researcher	<p>Teamwork and adaptability to multidisciplinary academic research environments.</p> <p>Proposal development and grant management as a lead researcher acquire from time working with the Vice Chancellor of Research.</p> <p>Written and verbal communications as represented by publications in peer-review journals, government agency reports, industry reports, as well as conference talks and presentations.</p>
Organizational skills and competences	<p>Project management and leadership in a number of federal, state and industry research projects.</p>
Computer skills and competences	<p>Microsoft Office (Word, Excel, PowerPoint, Project, Visio), PowerBi, Auto CAD, HYSYS, Aspen Process Explorer, GAMS, Matlab, EES, Polymath, Bloomberg Terminals and numerous research databases for energy, chemicals, agriculture, fuels and transportation.</p>

## Awards

2019	<b>Centennial Award for Excellence in Spirit</b> East Carolina University
2015	<b>Doctor <i>cum laude</i> by unanimous decision</b> University Rovira i Virgili
2011	<b>Top student award in Chemical Engineering</b> University Rovira i Virgili
2010	<b>DOW Award for best project integrated 1<sup>st</sup>-4<sup>th</sup>. (Role: project leader)</b> University Rovira i Virgili
2009	<b>Top student award in Industrial Technical Engineering Specializing in Industrial Chemistry</b> University Rovira i Virgili

## Sponsored Research

2023-2028	<b>Climate Smart Commodities</b> US-Department of Agriculture, \$60,000,000 - awarded Role: Sr. Project Manager
2020-2021	<b>2021 Indicators of the U.S. Biobased Economy</b> US-Department of Agriculture, \$75,000 - awarded Role: Postdoctoral researcher
2019-2020	<b>Biogas Optimization Modeling</b> Research Triangle Institute (RTI International), \$165,000 - awarded Role: Co-Principal Investigator
2019-2020	<b>2018 Indicators of the U.S. Biobased Economy - awarded</b> US-Department of Agriculture, \$60,000 Role: Co-Principal Investigator
2019	<b>US BioProducts 2019 Report - awarded</b> Supply Chain Redesign LLC, \$30,000 Role: Co-Principal Investigator
2013-2015	<b>Integrated system for management of chemical processes and related: process intensification, improvement of energy efficiency and sustainability (CTQ2012-37039-C02-01)</b> MEYC – Ministry of Economy and Competitiveness, 103.000€ - awarded Role: Researcher

## Teaching & Student Mentoring Experience

- 2024-2025 **Introduction to Sustainability Trends**  
Syracuse University
- 2024 **Sustainable Enterprise / Capstone**  
Syracuse University
- 2023 **Data Management (MeRG Workshop)**  
East Carolina University
- 2021 & 2022 **Introduction to Data Visualization (Guest Lecture)**  
Syracuse University
- 2017- 2019 **Golden Sustainability Lab (student researcher mentoring)**  
East Carolina University
- 2018 - 2019 **Sustainable Systems & Organizations**  
East Carolina University
- 2014 - 2015 **Transport Phenomena in Chemical Engineering degree**  
Universitat Rovira i Virgili
- 2014 - 2015 **Fundamentals of chemical engineering in Electronic Engineering degree**  
Universitat Rovira i Virgili
- 2014 - 2015 **Statistics in Biochemistry, Biotechnology, Oenology and Chemistry degrees**  
Universitat Rovira i Virgili
- 2013 - 2014 **Statistics in Biochemistry, Biotechnology, Oenology and Chemistry degrees**  
Universitat Rovira i Virgili
- 2012 - 2013 **Project management in Chemical Engineering degree**  
Universitat Rovira i Virgili

## Peer-Reviewed Research Articles

Sitzman, K., Oehlert, J.K., **Pascual-Gonzalez, J.**, Keene, K.L., Aguilar-Mogas. (2023). A. Reframing Patient Experience Measures: Human Caring and Geo Mapping. *Patient Experience Journal*. (Under Review)

Etheridge, R., Smith, R.L., D'Anna, L., Grace-McCaskey, C.A., **Pascual-Gonzalez, J.**, Sabin, J.E. (2023). Evaluating Capstone Student Engineering Designs for Increasing Coastal Resiliency. *Journal of Ecological Engineering Design*. (Under Review)

Etheridge, R., **Pascual-Gonzalez, J.**, Hochard, J., Peralta, A.L., Voge, T.JI. (2023). Predicting nitrate exposure from groundwater wells using machine learning and meteorological conditions. *JAWRA Journal of the American Water Resources Association*, 00 (0): 1–13.

Golden, J.S., Handfield, R., Tickner, J., Daystar, J., **Pascual-Gonzalez, J.**, and Kronthal-Sacco, R. (2021). The Convergence of Policies, Consumers and ESG: Five Examples Pulled from Recent Reports on the US Biobased Economy. *Industrial Biotechnology*, 17: 318-320.

Daystar, J., Handfield, R., Golden, J.S., McConnell, E., and **Pascual-Gonzalez, J.** (2012). An Economic Impact Analysis of the US Biobased Products Industry. *Industrial Biotechnology*, 17: 259-270.

**Pascual-González, J.**, Guillén-Gosálbez, G., Jiménez-Esteller, L., Grossmann, I., Siirola, J. (2016). Macro-economic multi-objective input-output model for minimizing CO<sub>2</sub> emissions: Application to the US economy. *AIChE Journal*, 62: 3639–3656.

**Pascual-González, J.**, Pozo, C., Guillén-Gosálbez, G., Jiménez-Esteller, L. (2015). Combined use of MILP and multi-linear regression to simplify LCA studies. *Computers and Chemical Engineering*, 82: 34-43.

**Pascual-González, J.**, Guillén-Gosálbez, G., Mateo-Sanz, J. M., Jiménez-Esteller, L. (2015) Statistical analysis of the ecoinvent database to uncover relationships between life cycle impact assessment metrics. *Journal of Cleaner Production* 112: 359-368

**Pascual-González, J.**, Guillén-Gosálbez, G., Mateo-Sanz, J. M., Jiménez-Esteller, L. (2015) Statistical analysis of global environmental impact patterns using a world multi-regional input–output database, *Journal of Cleaner Production* 90: 360-369.

## Policy and Technical Reports

Golden, J.S.; Ha, H.; **Pascual-Gonzalez, J.**; Aguilar-Mogas, A.; Brown, T; Otis, A.; and A. Radich. (2023) "Indicators & Trends of the U.S. Biobased Economy: 2019 to 2021", Office of the Chief Economist of the United States Department of Agriculture.

Parvathikar, S., Rao, V., Pratson, L., Vujic, T., Deshusses, M., Fay, J., Dupnock, T., Aguilar Mogas, A., **Pascual-Gonzalez, J.**, & S. Paynter, (2021). "Biogas Utilization in North Carolina: Opportunities and Impact Analysis", RTI International. Available at: <https://www.rti.org/publication/biogas-utilization-north-carolina/fulltext.pdf>

Daystar, J., Handfeld, R.B., **Pascual-Gonzalez, J.**, McConnell, E. and J.S. Golden (2019). "An Economic Impact Analysis of the U.S. Biobased Products Industry". Volume IV. A Joint Publication of the Supply Chain Resource Cooperative at North Carolina State University and the College of Engineering and Technology at East Carolina University. Available at [https://www.rd.usda.gov/sites/default/files/usda\\_rd\\_economic\\_impact\\_analysis\\_us\\_biobased\\_products\\_industry.pdf](https://www.rd.usda.gov/sites/default/files/usda_rd_economic_impact_analysis_us_biobased_products_industry.pdf)

Golden, J.S.; **Pascual-Gonzalez, J.**; Aguilar-Mogas, A.; Paynter, S.R., & A.F. Radich (2021). "2018 Indicators of the U.S. Biobased Economy", Office of the Chief Economist of the United States Department of Agriculture (2021). Available at <https://www.usda.gov/sites/default/files/documents/USDA-BIOINDICATORS-2018.pdf>

Golden, J.S.; Handfield, R.B.; **Pascual-Gonzalez, J.**; & B. Morrison (2020). "2017 Indicators of the U.S. Biobased Economy", Office of the Chief Economist of the United States Department of Agriculture. Available at <https://www.usda.gov/sites/default/files/documents/usda-bioindicators-jan-2020.pdf>

Golden, J.S., Handfield, R., **Pascual-Gonzalez, J.**, Agsten, B., Brennan, T., Khan, L., and E. True (2018). "Indicators of the U.S. Biobased Economy", U.S. Department of Agriculture, Office of Energy Policy and New Uses, Office of the Chief Economist.. Available at [https://www.usda.gov/energy/maps/resources/publications/\\$file/BioIndicators.pdf](https://www.usda.gov/energy/maps/resources/publications/$file/BioIndicators.pdf)

## Book chapters

**Pascual-González, J.**, Guillén-Gosálbez, G., Jiménez, L. Multi-objective optimization of US economy via multi-regional input-output analysis. *24th European symposium on Computer Aided Process Engineering*. 2014, 33, 1015-1020. Elsevier, B.V. ISBN: 978-0-444-63434-4.

## Dashboards and Databases

**Pascual-Gonzalez, J.**; Golden, J.S. (2023). The National Resource for Climate-Smart Commodities, Syracuse University. (Under development).

**Pascual-Gonzalez, J.**; Aguilar-Mogas, A.; Paynter, S.R. (2021) Regional Transformation database, East Carolina University. Available at <https://regional-transformation-data.ecu.edu/>

**Pascual-Gonzalez, J.**; Aguilar-Mogas, A.; Paynter, S.R. (2020) DRIVE East Data, East Carolina University. Available at <https://regional-transformation-data.ecu.edu/drive-east-data/>

Golden, J.S.; **Pascual-Gonzalez, J.**; Aguilar-Mogas, A.; Paynter, S.R. (2020) Indicators of the U.S. biobased economy, East Carolina University, available at <https://bioindicators.ecu.edu>

## Invited Presentations and Talks

**Pascual-Gonzalez, J.** A Preview of the National Climate Smart Commodities Database and Web Portal, Oral Presentation, AFCC Symposium, Washington, DC (USA), November 2023.

Carr, Z., Mullis, E., Myers, C., Zahran, W., Morrison, B.C., **Pascual-Gonzalez, J.**, Golden. J.S., Biogas and Clean Energy Investment Potential in North Carolina, Poster presentation, State Energy Conference of North Carolina, North Carolina (USA), April 2018

Bryan, J.T., Carr, Z., Hilliard, T.E., Myers, C., Zahran, W., Morrison, B.C., **Pascual-Gonzalez, J.**, Golden. J.S., Analyzing the Economic Impact of Biobased Ethanol Production in the United States, Poster presentation, State Energy Conference of North Carolina, North Carolina (USA), April 2018

**Pascual-González, J.**, Guillén-Gosálbez, G., Mateo-Sanz, J. M., Jiménez-Esteller, L., Statistical analysis of global environmental impact patterns using a world multi-regional input–output database, Oral presentation, American Institute of Chemical Engineers (AIChE) Annual Meeting, Atlanta (USA), November 2014.

**Pascual-González, J.**, Guillén-Gosálbez, G., Jimenez, L., Multi-objective optimization of international economies via multi-regional input-output analysis: Application to the US economy, Poster presentation, 13th Mediterranean Congress of Chemical Engineering (13MCCE), Barcelona (Spain), October 2014.

**Pascual-González, J.**, Guillén-Gosálbez, G., Jiménez, L. Multi-objective optimization of US economy via multi-regional input-output analysis, Oral presentation, 24th European symposium on computer aided process engineering (ESCAPE24), Budapest (Hungary), July 2014.

**Pascual-González, J.**, Guillén-Gosálbez, G., Jimenez, L., Cortés-Borda, D. Multi-objective optimization of international economies via multi-regional input-output analysis: Application to the US economy, Oral presentation, American Institute of Chemical Engineers (AIChE) Annual Meeting, San Francisco (USA), November 2013.

**Pascual, J.**; López-Villada, J.; Bruno, J.C.; Coronas, A. Performance and techno-economic viability of a water/LiBr absorption heat Transformer driven by solar energy for heating applications. Oral presentation, International Sorption Heat Pump Conference (ISHPC11), Padua (Italy), April 2011.

## Service

2023 - Present **Syracuse University.** Steering Committee reporting to the Vice President of Research on the development of a pan-university Institute for Climate, Energy and Sustainability. Staff researcher representative.

2018 - 2019 **East Carolina University.** Staff researcher representative to the Office of the Vice Chancellor on the campus-wide Rural Prosperity Initiative. Included the organizing and implementation of faculty and staff collective tours and meetings throughout eastern North Carolina to develop understanding of community needs that could be addressed by the university through research and outreach.

2018 **East Carolina University.** Hurricane Florence Recovery Task Force. Appointed to the university-wide task force to assist communities in eastern North Carolina impacted by Hurricane Florence a category one hurricane, that made landfall during the morning of September 14, 2018. Multiple deaths and over thirty-inches of rain impacted the region including over \$24 Billion in damage.

2018 - Present Multiple reviews on environmental engineering articles as a peer-reviewer.