

## Curriculum Vitae

# Dr. Markos Farag

## Profile

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PhD in Economics, specializing in econometric modeling of energy markets. Skilled in developing and applying advanced quantitative techniques, including nonlinear time series methods for risk transmission evaluation, Bayesian structural models for analyzing price dynamics, and parametric and nonparametric forecasting methods for price prediction in energy markets. Proficient in statistical and programming tools such as R and MATLAB for data analysis and model development. Experienced in project management, program administration, and cross-institutional collaboration, including organizing workshops, facilitating research initiatives, and managing international partnerships.

## Personal Data

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Date of Birth: 7th August 1993  
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LinkedIn: <https://www.linkedin.com/in/markosfarag>  
Location: Bonn, Germany

## Education

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| 01/2020 – 12/2024 | <b>Department of Economics, University of Cologne, Germany</b><br><b>PhD in Economics</b><br>Dissertation: Essays in Empirical Analysis of Energy Markets<br>Supervisors: Prof. Dr. Marc Oliver Bettzüge & Prof. Dr. Jörg Breitung |
| 09/2023 – 12/2023 | <b>Center for Energy Studies, Louisiana State University, USA</b><br>Visiting Research Scholar   |
| 09/2016 – 02/2019 | <b>Cairo University, Egypt</b><br><b>Master of Science (M.Sc.) in Economics</b><br>Thesis: Econometric Analysis of Natural Gas Demand: The Case of Egypt   |
| 09/2017 – 03/2018 | <b>University of Padova, Italy</b><br>Semester Abroad via the Erasmus+ Program   |
| 09/2011 – 06/2015 | <b>Cairo University, Egypt</b><br><b>Bachelor of Science (B.Sc.) in Economics &amp; Statistics</b><br>Thesis: Empirical Analysis of the Role of SMEs in Economic Growth in Egypt   |

## Working Experience

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| 01/2024 – Present | <b>Project Lead – H2-Markets</b><br><b>Institute of Energy Economics at the University of Cologne (EWI)</b> <ul style="list-style-type: none"><li>• Lead collaboration efforts among universities in Germany, Egypt, and Morocco, ensuring alignment in research objectives and fostering productive partnerships.</li><li>• Manage the planning and execution of summer schools, workshops, and research projects, coordinating diverse teams across institutions.</li><li>• Engage with academic and industry partners to facilitate research stays and internship programs, promoting knowledge exchange.</li></ul> |
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- 04/2022 – Present**     **Research Associate**  
**Chair of Energy Economics at the University of Cologne**
- Deliver lectures and mentor students in the Energy Economics Seminar (Econometrics Focus).
  - Supervise Bachelor’s and Master’s theses.
- 08/2021 – 03/2022**     **Research Associate (Part-time)**  
**Institute of Energy Economics at the University of Cologne (EWI)**
- Contributed to consulting projects on the European gas market.
- 01/2018 – 10/2019**     **Program Coordinator**  
**The Master in Law and Economics of the Arab Region - Cairo University**
- Directed the development and launch of a collaborative Master’s program between Cairo University and the University of Hamburg, facilitating academic and cultural exchanges.
  - Managed daily program operations, including organizing workshops, coordinating conferences, handling logistics, and overseeing budget planning and financial administration.
- 06/2016 – 10/2019**     **Teaching Assistant**  
**Economics Department at Cairo University**
- Delivered lectures in foundational and intermediate Macroeconomics and Econometrics courses for Bachelor’s students.
  - Assisted in creating course materials and supported student learning through review sessions and office hours.
- 06/2015 – 05/2016**     **Junior Economist**  
**Egyptian Center for Economic Studies**
- Gathered and analyzed economic data to support consulting projects on poverty mapping and socio-economic development in Egypt.
  - Supported the production of Egypt’s 2016 Global Competitiveness Report in collaboration with the World Economic Forum (WEF).
- 07/2015 – 05/2016**     **Student Assistant**  
**Center for Economic and Financial Research - Cairo University**
- 07/2013 – 08/2013**     **Trainee**  
**Central Bank of Egypt**
- 01/2012 – 02/2012**     **Trainee**  
**Egyptian Competition Authority (ECA)**

## Selected Publications

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- Global Natural Gas Market Integration: The Role of LNG Trade and Infrastructure Constraints. *The World Economy* (2025, forthcoming) (with Samir Jeddi & Jan Kopp).
- A deep learning approach for prediction of electrical vehicle charging stations power demand in regulated electricity markets. *Cleaner Energy Systems*, 3, 100039 (2021) (with Mouaad Boulakhbar & Malika Zazi).
- Decomposing Return and Volatility Connectedness in Northwest European Gas Markets: Evidence from the R2 connectedness approach. *EWI Working Paper 2024-6* (with Oliver Ruhnau).
- Can Futures Prices Predict the Real Price of Primary Commodities? *USAEE Working Paper 24-629* (with Stephen Snudden & Greg Upton).

**Full Publication List:** [Google Scholar Profile](#).

## Conference and Seminar Presentations

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- 2025 17th FIW-Research Conference International Economics (*Vienna, Austria*); CESifo/ifo Junior Workshop on Energy & Climate Economics (*Munich, Germany*)
- 2024 11th International Ruhr Energy Conference (*Essen, Germany*); 2024 RCEA International Conference in Economics, Econometrics, and Finance (*London, UK*).
- 2023 44th IAEE International Conference (*Riyadh, Saudi Arabia*); 10th International Ruhr Energy Conference (*Essen, Germany*); USAEE/IAEE North American 2023 conference (*Chicago, USA*).
- 2022 Global Economic Policy Group meeting 2022: Macroeconomic Politics, Integration and Trade (*Berlin, Germany*); Seminar on Statistics and Econometrics (*University of Kiel, Germany*).
- 2021 16th Annual Conference - Warsaw International Economic Meeting (*Virtual*); USAEE/IAEE North American 2021 conference (*Virtual*); 10th International Ruhr Energy Conference (*Essen, Germany*).

## Advanced Training

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- 2024 Monitoring and Forecasting Macroeconomic and Financial Risk – The Society for Financial Econometrics (*Brussels, Belgium*).
- 2023 International Research School on Behaviorally Smart Institutions – Max Planck Institute for Research on Collective Goods (*Lake Constance, Germany*).
- 2022 Using Simulation Studies to Evaluate Statistical Methods – GESIS (*Cologne, Germany*).
- 2020 Tools for Macroeconomists: Advanced Tools – Department of Economics, University of Oxford (*London, UK*).

## Scholarships

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- 2023 Heinrich J. Klein Foundation Scholarship awarded to support my research stay at the University of Louisiana.
- 2023 Scholarship from the Max Planck Institute for Research on Collective Goods to attend the International Max Planck Research School's Summer School.
- 2019 Doctoral scholarship for Ph.D. studies at the University of Cologne.
- 2017 Erasmus+ scholarship to attend advanced courses in Economics at the University of Padova, Italy.