

Ioanna Maria Spyrou

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Visiting Assistant Professor of Data Analytics, Campbell School of Business, Berry College

EDUCATION

Ph.D. Economics

Dissertation: “Essays on the Economics of Natural Shocks, Food Security and Sustainable Agriculture”

Committee Chair: Dr. Shatakshee Dhongde

(Awarded: August 2024)

Georgia Institute of Technology

Atlanta, GA

M.S. Economics

(Awarded May 2023)

Georgia Institute of Technology

Atlanta, GA

M.A. Statistics & Applied Mathematics

(Awarded: June 2017)

City University of New York

New York City, NY

B.S. Mathematics

(Awarded: June 2014)

Aristotle University

Thessaloniki, Greece

M.S. Plant Protection & Environmental Sciences

(Awarded: November 2008)

Aristotle University

Thessaloniki, Greece

B.S. Agricultural & Plant Protection Sciences

(Awarded: March 2005)

Aristotle University

Thessaloniki, Greece

RESEARCH INTERESTS

Data Science & Analytics, Machine Learning, Business Management, Econometrics, Sustainable Development, Information Systems, Environmental Economics, Agricultural Economics, Team Science

PUBLICATIONS

- Meaghan McSorley, Bettina K. Arkhurst, Marjorie Hall, Yilun Zha, **Ioanna Maria Spyrou**, Katherine Duchesneau, Udit Ringania, Michael Chang (2023) For graduate students to become leaders in sustainability, we must transcend disciplinary boundaries, *Elementa: Science of the Anthropocene* Vol. 11, Issue 1 <https://doi.org/10.1525/elementa.2023.00012>

- **Ioanna Maria Spyrou**, Christos Frantzidis, Charalampos Bratsas, Ioannis Antoniou, Panagiotis D. Bamidis. (2016) Geriatric depression symptoms coexisting with cognitive decline: A comparison of classification methodologies, *Biomedical Signal Processing and Control*, Vol. 25, pp 118-129 <https://doi.org/10.1016/j.bspc.2015.10.006>

- S. Billis, Evdokimos I. Konstantinidis, **Ioanna Maria Spyrou**, Panagiotis Antoniou, Panagiotis D. Bamidis. (2015) Exercise Intensity Forecasting: Application in Elderly Interventions that Promote Active and Healthy Aging. *International Journal of E-Health and Medical Communications*, Vol. 6, Issue 4, pp 1-19 <https://doi.org/10.4018/IJEHMC.2015100101>

- **Ioanna Maria Spyrou**, Dimitrios G. Karpouzas, Urania Menkissoglu-Spirodi. (2009) Do botanical pesticides alter the structure of the soil microbial community? *Microbial Ecology*, Vol. 58, Issue 4, pp 715-727 <https://doi.org/10.1007/s00248-009-9522-z>

WORKING PAPERS

- Shatakshee Dhongde, **Ioanna Maria Spyrou** (2024) Impact of Drought on Children’s Educational Outcomes. <https://dx.doi.org/10.2139/ssrn.4547663> (under submission)

- **Ioanna Maria Spyrou** (2024) Sustainable Agricultural Practices: Determinants of Adoption and Impact on Food Security. (under submission)
- **Ioanna Maria Spyrou, Shatakshee Dhongde** (2025) Food Insecurity Forecasting using Machine Learning. (under submission)

WORK IN PROGRESS

- Strategic use of Information Systems to optimize allocation of sources and methods of corporate financing, capital structure, corporate governance, efficiency/productivity, profitability, and decision-making under conditions of uncertainty and risk in the business and capital markets environment, to increase the company's value for shareholders.
- Heterogeneous Treatment Effect Estimation in Matching Marketplaces under Interference. (with Economics & Decision Sciences Team at Microsoft)
- Study on the Interaction between External Factors and Cognitive Well-Being leading to more Informed Decision-Making and Improved Outcomes for Individuals and Communities alike. (with Christos Frantzidis - University of Lincoln, UK)

RESEARCH EXPERIENCE

Visiting Assistant Professor Aug 2024 - present

Berry College, Campbell School of Business

- Data Analytics: Forecasting using Machine Learning, Association Rules, Clustering

PhD Researcher Aug 2019 - July 2024

Georgia Institute of Technology, School of Economics

- Forecasting using Machine Learning.
- Panel data analysis using random, fixed effects estimation.

Graduate Research Fellow Aug 2021 - July 2023

Georgia Institute of Technology, Brook Byers Institute of Sustainable Systems
Sustainability, Interdisciplinary Teams and Leadership - participated in:

- Climate Action Plan Advisory Task Force Working Group
- The Georgia Tech Research Institute grant proposal process
- Interdisciplinary BBISS team for project design and implementation.

Research Scientist Oct 2013 to Aug 2015

Aristotle University, School of Medicine, Medical Physics Laboratory

- Examined and Evaluated Data Mining Techniques (Random Forests, Random Trees, Support Vector Machines (SVMs) and Multilayer Perceptron (MLP) Networks).
- Generated time-series forecasting models.

Senior Research & Data Scientist Aug 2008 to Aug 2015

European Apiculture Programs Supervisor

Institute of Plant Breeding and Genetic Resources (IPB & GR) of the Hellenic Agricultural Organization-Demeter supervised by the Ministry of Agriculture

- Analyzed and Evaluated Data Mining Techniques and Extracted Knowledge for Price and Subsidies Policy Determination.
- Analyzed of Honey Samples in the lab for pesticides residuals detection.

Graduate Research Assistant Jan 2003 to Aug 2009

Aristotle University, School of Agriculture, Plant Pathology Laboratory

- Applied and Analyzed Data Mining Techniques and Evaluated Statistical Inference. Applied Principal Component Analysis (PCA), three-way and a two-way analysis of variance (ANOVA).

TEACHING EXPERIENCE

Visiting Assistant Professor, Berry College, Campbell School of Business

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|--|-----------------------|
| • BUS 657 Strategic Use of Information Technology | Jan 2025 to May 2025 |
| • BUS 316 Business Intelligence/Information Systems | Jan 2025 to May 2025 |
| • DAT 420 Data Visualization/Power Business Intelligence | Jan 2025 to May 2025 |
| • DAT 499I Analytics Project Capstone | Jan 2025 to May 2025 |
| • DAT 101: Introduction to Data Analytics | Sept 2024 to Dec 2024 |
| • BUS 380I: Business Analytics | Sept 2024 to Dec 2024 |

Instructor, Georgia Institute of Technology, School of Economics

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| • ECON 2106: Principles of Microeconomics | Aug 2023 to Dec 2023 |
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Graduate Teaching Assistant, Georgia Institute of Technology, School of Economics

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|---|-----------------------|
| • ECON 2106: Principles of Microeconomics | June 2024 to Aug 2024 |
| • ECON 4440: Economics of Natural Resources and the Environment | Jan 2024 to May 2024 |
| • ECON 7103: Environmental Economics II | Jan 2024 to May 2024 |
| • ECON 4340: Industrial Organization | May 2021 to July 2021 |
| • ECON 2106: Principles of Microeconomics | Aug 2020 to July 2021 |
| • ECON 4440: Economics of the Environment | Jan 2020 to May 2020 |
| • ECON 4180: Game Theory Economics | Aug 2019 to Dec 2019 |

PREVIOUS INDUSTRY EMPLOYMENT

Senior Research & Data Scientist, European Apiculture Programs Supervisor, Institute of Plant Breeding & Genetic Resources, Thessaloniki, Greece, 2008 to 2015

FELLOWSHIPS

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|---|-----------------------|
| - Brook Byers Institute for Sustainable Systems | Aug 2021 to July 2023 |
| - Gerondelis Foundation (for Academic Excellence) | Jan 2019 to Dec 2020 |

CONFERENCES/PROGRAMS PRESENTATIONS

2023: Southern Economic Association Conference (SEA), New Orleans — Association for Public Policy Analysis & Management Conference (APPAM) — The South East Exchange of Development Studies (SEEDS), Georgia Institute of Technology, Atlanta

2022: Rapid Fire Presentations on Global Development, Georgia Institute of Technology, Atlanta — 1st Brook Byers Institute for Sustainable Systems Scholar Symposium, Georgia Institute of Technology, Atlanta — Southern Economic Association Conference (SEA), Fort Lauderdale — Ivan Allen College Graduate Student Conference, Georgia Institute of Technology, Atlanta — Ivan Allen College Focus Scholars Program, Georgia Institute of Technology, Atlanta

2021: Southern Economic Association Conference (SEA), Houston

ADDITIONAL DEGREES AND CERTIFICATES

Tech to Teaching Certificate
(Awarded May 2022)

Georgia Institute of Technology
Atlanta, GA

MEMBERSHIPS

- American Economic Association
- Southern Economic Association

SKILLS

Python, C, C++, R, STATA, MATLAB, Weka, SQL, Tableau

LANGUAGES

English (Fluent), German (Fluent), Greek (Native)

REFERENCES

- | | |
|---|---|
| <ul style="list-style-type: none">• Dr. Shatakshee Dhongde
School of Economics
Georgia Institute of Technology
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| <ul style="list-style-type: none">• Dr. Casey Wichman
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| <ul style="list-style-type: none">• Dr. Karen Yan
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