Pantelis Karapanagiotis, Ph.D.

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Current Affiliations

University of Groningen	Groningen, The Netherlands
Postdoctoral Researcher	Jul 2024 .. present
Leibniz Institute for Financial Research SAFE	Frankfurt am Main, Germany
Research Affiliate	Jul 2021 .. present
Goethe Business School	Frankfurt am Main, Germany
External Lecturer	Jun 2024 .. present

Previous Affiliations

EBS University (Group of Economics)	Wiesbaden, Germany
Assistant Professor	Jul 2021 .. Jul 2024
Goethe University (Department of Management and Microeconomics)	Frankfurt am Main, Germany
Research Assistant	Nov 2016 .. Apr 2021
EBS University (Group of Economics)	Wiesbaden, Germany
External Lecturer	Aug 2018 .. Dec 2018 & 2019

Research Visits

Paris School of Economics	Paris, France
Visiting Researcher (EurHisFirm Project)	Feb .. Apr 2020

Education

Goethe University	Frankfurt am Main, Germany
Graduate School of Economics Finance and Management	
Ph.D. in Quantitative Economics	Oct 2015 .. Dec 2020
M.Sc. in Quantitative Economics	Oct 2015 .. Mar 2019
Kapodistrian University of Athens	Athens, Greece
Department of Mathematics	Mar 2011 .. Nov 2014
Ptychio (4-year undergrad.) in Mathematics	
Athens University of Economics and Business	Athens, Greece
Department of Economics	
M.Sc. in Economic Theory	Sep 2006 .. Jan 2008
Department of International and European Economic Studies	
Ptychio (4-year undergrad.) in International Economics	Sep 2002 .. Sep 2006

Exchange Year

Ludwig Maximilians University Munich	Munich, Germany
Department of Mathematics	Oct 2013 .. Mar 2014

Scholarships and Awards

Kapodistrian University of Athens — Athens, Greece
Award for editing *differential geometry notes* — Jun 2012
Institute of International Economics Relations — Athens, Greece
Research Scholarship — Mar 2005

Grants and Funding

[1] "Entity Matching with Similarity Encoding. A Supervised Learning Recommendation Framework for Linking (Big) Data (Project: 539465691)," *Infrastructure Priority Program: New Data Spaces for the Social Sciences (SPP 2431)*. Deutche Forschungsgemeinschaft, Jul. 2024.

[2] "Face Reading Technology: Improving Preference Prediction from Self-Reports Using Micro Expressions." EBS Research Fund, May 2023.

[3] "An Extensible Model for Historical Financial Data with an Application to German Company and Stock Market Data." SAFE Research Fund, Jan. 2020.

Academic Service

Reviews for Journals

- Journal of Small Business Management. Taylor & Francis Group. ISSN: 0047-2778 . Oxfordshire, UK.
- Engineering applications of artificial intelligence. Elsevier, Inc.. ISSN: 0952-1976 . New York, US.
- Annual Reviews in Control. Elsevier, Inc.. ISSN: 1367-5788. New York, US.

Reviews for Conferences

- 5th IFAC Workshop on Cyber-Physical and Human Systems. International Federation of Automatic Control.

Publications

Journal Articles

[7] P. Karapanagiotis, K. W. M. Kottagaha, D. Rovere, J. A. C. Bokhorst, A. Valdata, and C. Emmanouilidis, "Enabling interoperable human–AI teaming for automation in construction and manufacturing via Digital Twins and Sliding Work Sharing ontologies," *Journal of Industrial Information Integration*, vol. 48. Oct. 2025. doi: 10.1016/j.jii.2025.100962.

[8] D. Heller, P. Karapanagiotis, and Ø. A. Nilsen, "Small and vulnerable during crises? Firm size and financing constraint dynamics," *Small Business Economics*. Jan. 24, 2025. doi: 10.1007/s11187-024-00996-y.

[9] P. Karapanagiotis, "The R Package markets: Estimation Methods for Markets in Equilibrium and Disequilibrium," *Journal of Statistical Software*, vol. 108. American Statistical Association, pp. 1–39, Feb. 2024. doi: 10.18637/jss.v108.i02.

[10] P. Karapanagiotis and P. Reimers, "Why does the Schooling Gap Close while the Wage Gap Persists across Country Income Comparisons?," *Journal of Economic Dynamics and Control*, vol. 159. Feb. 2024. doi: 10.1016/j.jedc.2023.104805.

[11] D. Gram, P. Karapanagiotis, M. Liebald, and U. Walz, "Design and Implementation of a Historical German Firm-level Financial Database," *Journal of Data and Information Quality*, vol. 14. Association for Computing Machinery, Sep. 29, 2022. doi: 10.1145/3531533.

Book Chapters

[12] W. König, M. Frank, J. Braswell, L. Ranft, and P. Karapanagiotis, "How to Ensure Collective Action in Multinational Projects: Insights from the EurHisFirm Project," in *Digitalization Across Organizational Levels: New Frontiers for Information Systems Research*, D. Jens, J. Förderer, K. Thomas, R. Franz, and K. Spohrer, Eds. Springer International Publishing, 2022, pp. 41–77. doi: 10.1007/978-3-031-06543-9_3.

Conference Papers and Proceedings

[13] P. Karapanagiotis, F. Koester, and C. Emmanouilidis, "An Ontology Framework for Human-Robot Interoperability in Dynamic Construction Environments," *Innovative Intelligent Industrial Production and Logistics*. Springer Nature Switzerland, pp. 313–331, 2025. doi: 10.1007/978-3-031-80775-6_22.

[14] S. Adam, J. Annaert, F. Buelens, B. B. Couasnon, B. Cule, A. de Vicq, C. Guerry, P.-C. Hautcoeur, T. Paquet, A. Rojas Camacho, I. Le Floch, A. Lemaitre, P. Karapanagiotis, J. Poukens, and A. Riva, "Data extraction and matching: The EurHisFirm experience." Kellogg School of Management - Northwestern University, Dec. 2021. Available: `https://hal.archives-ouvertes.fr/hal-03828381`

[15] D. Gram, P. Karapanagiotis, J. Krzyzanowski, M. Liebald, and U. Walz, "An Extensible Model for Historical Financial Data with an Application to German Company and Stock Market Data." Jul. 20, 2021. doi: 10.21428/7a45813f.553a9b40.

Working Papers Series

[16] P. Karapanagiotis and M. Liebald, "Entity Matching with Similarity Encoding: A Supervised Learning Recommendation Framework for Linking (Big) Data." Aug. 15, 2023. doi: 10.2139/ssrn.4541376.

Technical Reports

[17] L. M. Ranft, P. Karapanagiotis, J. Braswell, and W. König, "Updated Technical Document on the Preliminary Data Model," EurHisFirm Deliverable 5.4, Apr. 2021. doi: 10.5281/zenodo.4724802.

[18] P. Karapanagiotis, "Technical Document on Preliminary Common Data Model," EurHisFirm Deliverable 5.2, Feb. 2020. doi: 10.5281/zenodo.3686930.

[19] P. Karapanagiotis, "Technical Document on National Data Models," EurHisFirm Deliverable 5.1, Nov. 2019. doi: 10.5281/zenodo.3467926.

Ph.D. Thesis

[20] P. Karapanagiotis, "Essays on Behavioral Industrial Organization and Finance," Johann Wolfgang Goethe-University, 2021.

Software

Open Source Projects

[21] P. Karapanagiotis and M. Liebald, "Neer Match: NEural-symbolic Entity Reasoning and Matching," version 0.7.39, Mar. 13, 2025. Available: `https://pypi.org/project/neer-match/`

[22] P. Karapanagiotis, "markets: Estimation Methods for Markets in Equilibrium and Disequilibrium," version 1.1.5, Feb. 17, 2024. Available: `https://cran.r-project.org/package=markets`

Contributions to Third Party Open Source Projects

[23] K. Modi, "ox-hugo: A carefully crafted Org exporter back-end for Hugo," Oct. 2022.

[24] M. Gomolka, "sdcLog: Tools for statistical disclosure control in research data centres," Jul. 15, 2021.

Proprietary Projects

[25] "Resolution," version 3.1.2, Jun. 2013.

Replication Material

[26] P. Karapanagiotis and P. Reimers, "structural-schooling: Gender Labor Biased Technological Change with Schooling," version 1.0.0 [JEDC Release], Jan. 10, 2024. Available: `https://github.com/pi-kappa-devel/structural-schooling`

[27] "rad: Radial Attention Model," version 1.4.0 [SSRN Release], Jul. 2019. doi: 10.5281/zenodo.3353647.

Talks and Presentations

Conferences

[28] "Identification and Estimation of Semi-Parametric Link Formation Models with Externalities," presented at the Econometric Society World Congress 2025, Aug. 22, 2025.

[29] "An Ontology Framework for Human-Robot Interoperability in Dynamic Construction Environments," presented at the 5th IFAC/INSTICC International Conference on Innovative Intelligent Industrial Production and Logistics, Nov. 22, 2024.

[30] Ø. A. Nilsen, "Small and Vulnerable? Financial Constraints during Economic Crises," presented at the RES and SES Annual Conference, Apr. 03, 2023.

[31] M. Liebald, "A Historical Firm-Level Database: A Data Model and the Issue of ID Linking," presented at the The 19th World Economic History Congress, Jul. 27, 2022.

[32] Ø. A. Nilsen, "Small and Vulnerable? Financial Constraints during Economic Crises," presented at the The 15th International Risk Management Conference, Jul. 04, 2022.

[33] J. Annaert, "Data extraction and matching: the EurHisFirm experience," presented at the Methodological Advances in the Extraction and Analysis of Historical Data, Dec. 03, 2021.

[34] "Dynamic Choice with Volitional Attention: Experience and Endogenous Narrow Framing," presented at the European Association for Research in Industrial Economics Conference, Aug. 27, 2021.

[35] "Dynamic Choice with Volitional Attention: Experience and Endogenous Narrow Framing," presented at the European Economic Association - Econometric Society European Meeting, Aug. 25, 2021.

[36] "Small and Vulnerable? Financial Constraints during Economic Crises," presented at the The 11th RCEA Money Macro & Finance Conference, Jul. 27, 2021.

[37] "An Extensible Model for Historical Financial Data with an Application to German Company and Stock Market Data," presented at the International Conference on ICT Enhanced Social Sciences and Humanities, Jun. 29, 2021.

[38] "The Assessment of Market-Clearing as a Model Selection Problem," presented at the Warsaw 16th International Economic Meeting, Jun. 24, 2021.

[39] "Rational Inattention Dynamics in Stochastic Games: Coordination and Conditioning," presented at the International Association for Research in Economic Psychology - Society for the Advancement of Behavioral Economics Conference, Jun. 13, 2021.

[40] "Dynamic Choice with Volitional Attention: Experience and Endogenous Narrow Framing," presented at the International Association for Research in Economic Psychology - Society for the Advancement of Behavioral Economics Conference, Jun. 11, 2021.

[41] "Invisible Market Forces with Observable Effects," presented at the Modelling with Big Data & Machine Learning: Measuring Economic Instability, Nov. 05, 2020.

[42] Ø. A. Nilsen, "Small and Vulnerable? Financial Constraints during the Financial Crisis," presented at the Verein für Socialpolitik Annual Conference, Sep. 27, 2020.

[43] "Model Selection, Estimation, and Marginal Effects for Markets in Equilibrium and Disequilibrium," presented at the Goethe University's Microeconomics and Management Colloquium, Feb. 14, 2020.

[44] "Costly Consideration and Dynamic Choice Set Formation," presented at the Goethe University's Microeconomics and Management Colloquium, Feb. 09, 2018.

Seminars and Workshops

[45] "AI4Work Evaluation Customization," presented at the AI4Work General Assembly, May 07, 2025.

[46] "Identification and Estimation of Semi-Parametric Link Formation Models with Externalities," presented at the Economics, Econometrics and Finance Seminar, Dec. 11, 2024.

[47] "AI4Work Evaluation Methodology," presented at the AI4Work General Assembly, Sep. 25, 2024.

[48] "Machine Learning Record Matching with Similarity Encoding," presented at the AI/Digitalization Brownbag, May 06, 2024.

[49] "Face Reading Technology: Improving Preference Prediction from Self-Reports Using Micro Expressions," presented at the EBS Research Seminar, Nov. 16, 2023.

[50] "Understanding the Co-Existence of Design Styles: Theory Development and Algorithm-Based Picture Recognition," presented at the Journal of Marketing Virtual Symposium: Marketing Impact with Research-Driven Apps, Oct. 20, 2023.

[51] "Face Reading Technology: Improving Preference Prediction from Self-Reports Using Micro Expressions," presented at the Technology, Innovation, and Entrepreneurship, Sep. 21, 2023.

[52] "Face Reading Technology: Improving Preference Prediction from Self-Reports Using Micro Expressions," presented at the EBS Economics Group Retreat, May 07, 2023.

[53] "Machine Learning Record Matching with Similarity Encoding," presented at the Digitisation and OCR Workshop, May 04, 2023.

[54] "The Regional and Federal Dynamics of the German Debt during the First World War," presented at the Historical Big Data: Research Data and Infrastructures for Socioeconomic History and Social Sciences, Dec. 15, 2022.

[55] "Why Does the Schooling Gap Close While the Wage Gap Persists?," presented at the Organizations, Markets, and Policy Interventions, Nov. 09, 2022.

[56] "Dynamic Choice with Volitional Attention: Experience and Endogenous Narrow Framing," presented at the University of Copenhagen Seminar, Dec. 14, 2021.

[57] "Small and Vulnerable? Financial Constraints during Economic Crises," presented at the Fourth ERMEES Macroeconomics Workshop, Nov. 03, 2021.

[58] "Rational Inattention Dynamics in Stochastic Games: Coordination and Conditioning," presented at the EBS Economics and Philosophy Seminar, Jun. 01, 2021.

[59] "Small and Vulnerable? Financial Constraints during the Financial Crisis," presented at the SAFE Brown Bag Seminar, Nov. 25, 2020.

[60] "Invisible Market Forces with Observable Effects," presented at the SAFE Brown Bag Seminar, Oct. 28, 2020.

[61] "Dynamic Choice with Volitional Attention," presented at the Management and Microeconomics Brown Bag Seminar, Jul. 09, 2020.

[62] "Costly Consideration and Dynamic Choice Set Formation," presented at the Joint Macro-Finance Seminar, Feb. 02, 2018.

Teaching

Designed Courses

Goethe Business School	Frankfurt am Main, Germany
Executive MBA	
- Coding and Data Visualization with Generative AI	WS 2024-25, SS 2025 (Ongoing)
EBS University	Wiesbaden, Germany
M.Sc. in Management	
- Strategic Interactions in Markets	FT 2023
- Managerial Economics Part I (Game Theory and Industrial Organization)	FT 2022
- Managerial Economics Part II (Incentive Theory)	FT 2021
B.Sc. in Management	
- Economics of the Market	FTs 2021 .. 2032
- Supportive Quantitative Methods	STs 2022 .. 2024
Goethe University	Frankfurt am Main, Germany
Pre-semester GSEFM Ph.D.	
- Real Analysis	WS 2017-18

Tutorials

EBS University	Wiesbaden, Germany
M.Sc. in Management	
- Managerial Economics Part II (Incentive Theory)	FTs 2018, 2019
- Managerial Economics Part I (Game Theory and Industrial Organization)	FTs 2018
Goethe University	Frankfurt am Main, Germany
M.Sc. Business Informatics	
- Management of Business Processes	SS 2020
GSEFM Ph.D.	
- Advanced Microeconomics I Part II (General Equilibrium)	WS 2018-19
- Advanced Microeconomics II Part II (Game Theory)	SSs 2017, 2018
M.Sc. in International Economics and Economic Policy	
- Competition Economics	SS 2017

Skills

Languages

English (proficient), Greek (native), German (naturalized)

Digital

Programming	Experienced	C ($\leq$ std17), C++ ($\leq$ std21), Emacs Lisp (31.*).
	Working Knowledge	Java.
Scripting	Experienced	Python (3.*), R (4.*), MATLAB/Octave.
Typesetting	Experienced	LaTeX, tikz/pgf, R markdown, Quarto.
Web	Experienced	JavaScript ($\leq$ ES2023), Typescript.
	Working Knowledge	PhP (8.*).
Semantic Web	Working Knowledge	SPARQL.
Databases	Experienced	MySQL/MariaDB, PostgreSQL, SQLite.
	Working Knowledge	Oracle SQL, Ms. SQL server.
APIs & Libraries	Experienced	TensorFlow, open-mpi, MySQL C API, libpq (PostgreSQL C API), pthreads, Drupal 9, plotly js, reveal js.
	Working Knowledge	Hugo.