GIACOMO DE NICOLA

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Birthdate: 07.11.1993 ⋄ Nationality: Italian

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EDUCATION

LMU Munich   2019 - present
PhD in Statistics (ongoing), with Prof. Göran Kauermann   *Munich, Germany*

Bocconi University   2015 - 2019
MSc in Economic and Social Sciences   *Milan, Italy*

· Comprehensive quantitative course in Economics. A world-renowned program providing students with outstanding theoretical and applied Economics prowess while bolstering research skills.

University of Florence   2012 - 2015
BSc in Statistics   *Florence, Italy*

· Classical undergraduate program in Statistics with a secondary focus on Computer Science.

WORK EXPERIENCE

Department of Statistics, LMU Munich   2019 - present
Research and Teaching Associate   *Munich, Germany*

· While pursuing my PhD, I'm employed full time at the Department of Statistics, within the Chair of Applied Statistics in Social Sciences, Economics and Business.
· My research mainly revolves around analyzing networks to answer questions posed within the social sciences through use of novel statistical modeling techniques, with an interdisciplinary outlook.
· I am also an active member of the CODAG (COVID-19 Data Analysis Group), where I am doing research on several topics related to the COVID-19 pandemic and the associated mortality.
· In addition to research, I also regularly teach courses and seminars aimed at masters student in Statistics and Data Science (full list below).

Department of Finance, Bocconi University   Jan-Apr 2018
Research Assistant   *Milan, Italy*

· Carried out a project in the area of behavioral finance under the guidance of Prof. Nicola Gennaioli, which provided the basis for my master thesis and resulted in the published paper "On the intraday behavior of Bitcoin".

IRPET - Regional Institute for Economic Planning of Tuscany   Apr-Jun 2015
Research Intern   *Florence, Italy*

· Carried out a project in the field of operations research. Developed an algorithm to balance accounting matrices though quadratic optimization in the R environment. This work provided the basis for my bachelor thesis, which was written under the supervision of Prof. Leonardo Grilli.

TEACHING EXPERIENCE

Courses

- Advanced Statistical Modeling (MSc Data Science, main teacher, 2019-2022)
- Statistical Reasoning and Inference 1 (MSc Data Science, exercise sessions, 2020-2023)
- Statistical Reasoning and Inference 2 (MSc Data Science, exercise sessions, 2020-2022)
- Analysis of Longitudinal Data (MSc Statistics, exercise sessions, 2020-2021)
- Regression for Correlated Data (MSc Statistics, exercise sessions, 2022)
- Inferenzstatistik 1: Grundlagen der Schätztheorie (BSc Statistics, exercise sessions, 2022-2023)

Seminars

- Complex Networks (2020)
- Statistical Analysis of Social Networks (2021)
- Statistical Analysis of COVID-19 Data (2022)
- Statistical Modeling of Political Networks (2022)
- Open Science in Statistics & Machine Learning (2022-2023)

Supervised Theses:

- "Recovering network structure through latent space models" (Lea Schulz-Vanheyden, BSc Statistics, 2020)
- "Network analysis of COVID-19 Twitter data" (Victor Tuekam, MSc Data Science, 2022)
- "Statistische Netzwerkdatenanalyse von deutschen Unternehmen und ihren Vorständen" (Marie Kraft, BSc Statistics, 2022)

LANGUAGE SKILLS

English	Fluent (Cambridge English C2 Proficiency, Grade A)
German	Advanced
Italian	Native

HONORS AND AWARDS

Corona Special Award: Impact of the pandemic on the economy and society - 2022
Awarded by the Federal Statistical Office of Germany (DESTATIS) for outstanding work examining empirical issues with intensive use of data related to the COVID-19 pandemic. Awarded for the papers "On assessing excess mortality in Germany during the COVID-19 pandemic" and "An update on excess mortality in the second year of the COVID-19 pandemic in Germany".

DAGStat Best Poster Award - 2022
Awarded for the poster *"Modelling large and dynamically growing bipartite networks - A case study in patent data"* presented at the DAGStat conference, March 28-Apr 1, 2022, Hamburg, Germany

"Giuseppe Parenti" Prize, Best Graduate - 2016
Awarded by the alumni association of the Faculty of Economics at the University of Florence ("Associazione Villa Favard") on the basis of overall GPA among all graduates of the faculty of Economics, Management and Statistics of the class of 2015 (1000+ students).

Productivity and merit scholarship - 2013, 2014, 2015
Scholarship awarded on the basis of academic merit and productivity by the University of Florence.

VARIOUS

Fellowships
I am an active member of the German Statistical Society and the COVID-19 Data Analysis Group (CODAG@LMU), and a fellow at the LMU Open Science Center.

Media Appearances
My research was featured in interviews with Nature and The New York Times, in addition to other Swiss, Italian and German media and TV outlets.

h-index: 6
Calculated by Google Scholar.

RESEARCH

Current Research Interests
· Statistical Network Analysis
· Latent Variable Network Models
· Statistical Modeling
· Excess Mortality Estimation

Talks

· **13.12.2022** Estimating excess mortality in high income countries during the COVID-19 pandemic. *IMS International Conference on Statistics and Data Science (ICSDS) 2022, Florence, Italy*
· **8.12.2022** A connected world: Data analysis for real-world network data. *Full day workshop (with Cornelius Fritz and Göran Kauermann), BERD Academy Series 2022, Garching, Germany*
· **20.09.2022** Exploring the latent social space of COVID-19 Twitter elites. *Statistical Week 2022, Münster, Germany*
· **19.09.2022** Estimating excess mortality in high income countries during the COVID-19 pandemic. *Young Statisticians Workshop of the German Statistical Society 2022, Münster, Germany*
· **14.09.2022** Exploring the latent social space of COVID-19 Twitter elites. *EUSN Conference 2022, London, United Kingdom*
· **30.03.2022** Modelling large and dynamically growing bipartite networks - A case study in patent data (poster presentation, best poster award winner). *DAGStat Conference 2022, Hamburg, Germany*
· **10.07.2020** Nowcasting Fatalities and Surveillance of COVID-19 Infections on a Regional Level in Germany. *COSTNET COVID-19 Conference (Online), Munich, Germany*

Publications

[1] C. Fritz, G. De Nicola, S. Kevork, D. Harhoff, and G. Kauermann. "Modelling the large and dynamically growing bipartite network of German patents and inventors". *Journal of the Royal Statistical Society, Series A: Statistics in Society* (to appear) (2023).

[2] C. Fritz, G. De Nicola, M. Rave, M. Weigert, Y. Khazaei, U. Berger, H. Küchenhoff, and G. Kauermann. "Statistical modelling of COVID-19 data: Putting Generalised Additive Models to work". *Statistical Modelling* OnlineFirst, `https://doi.org/10.1177/1471082X221124628` (2022).

[3] C. Fritz, G. De Nicola, F. Günther, D. Rügamer, M. Rave, M. Schneble, A. Bender, M. Weigert, R. Brinks, A. Hoyer, U. Berger, H. Küchenhoff, and G. Kauermann. "Challenges in Interpreting Epidemiological Surveillance Data – Experiences from Germany". *Journal of Computational and Graphical Statistics* OnlineFirst, `https://doi.org/10.1080/10618600.2022.2126482` (2022).

[4] G. De Nicola and G. Kauermann. "An update on excess mortality in the second year of the COVID-19 pandemic in Germany". *AStA Wirtschafts-und Sozialstatistisches Archiv* 16 (2022), 21–24. Awarded with the "Corona Special Award: Impact of the pandemic on the economy and society" by the Federal Statistical Office of Germany.

[5] G. De Nicola, M. Schneble, G. Kauermann, and U. Berger. "Regional now- and forecasting for data reported with delay: Towards surveillance of COVID-19 infections". *AStA Advances in Statistical Analysis* 106 (2022), 407–426.

[6] G. De Nicola, G. Kauermann, and M. Höhle. "On assessing excess mortality in Germany during the COVID-19 pandemic". *AStA Wirtschafts-und Sozialstatistisches Archiv* 16 (2022), 5–20. Discussed in interviews and featured in **Nature** and **The New York Times**. Awarded with the "Corona Special Award: Impact of the pandemic on the economy and society" by the Federal Statistical Office of Germany.

[7] G. De Nicola, B. Sischka, and G. Kauermann. "Mixture models and networks: The stochastic blockmodel". *Statistical Modelling* 22.1-2 (2022), 67–94.

[8] G. De Nicola. "On the Intraday Behavior of Bitcoin". *Ledger* 6 (2021), 58–80.

[9] M. Schneble, G. De Nicola, G. Kauermann, and U. Berger. "A statistical model for the dynamics of COVID-19 infections and their case detection ratio in 2020". *Biometrical Journal* 63.8 (2021), 1623–1632.

[10] M. Schneble, G. De Nicola, G. Kauermann, and U. Berger. "Nowcasting fatal COVID-19 infections on a regional level in Germany". *Biometrical Journal* 63.3 (2021), 471–489.

[11] E. Conti, G. Sgandurra, G. De Nicola, T. Biagioni, S. Boldrini, E. Bonaventura, B. Buchignani, S. Della Vecchia, F. Falcone, C. Fedi, et al. "Behavioural and emotional changes during COVID-19 lockdown in an Italian paediatric population with neurologic and psychiatric disorders". *Brain Sciences* 10.12 (2020), 918.

Under Review

[12] G. De Nicola, V. H. Tuekam Mambou, and G. Kauermann. "COVID-19 and social media: Beyond polarization". *arXiv preprint arXiv:2207.13352* (2022).

[13] G. De Nicola, C. Fritz, M. Mehrl, and G. Kauermann. "Statistical Network Data Analysis in Economics". *arXiv preprint arXiv:2210.14860* (2022).