

ANNEX B

UNIVERSITY OF MILAN

Public selection for recruiting No.1 tenure track researcher(s) (RTT) for competition sector 13/D1 - STATISTICS , (scientific-disciplinary sector SECS-S/01 - STATISTICS) at the Department of Economics, Management and Quantitative Methods , (announcement published in Official Gazette No. Of art. 24 of Law 240/2010 as amended by art.14 paragraph 6-decies of D.L. 36/2022 converted with modifications, by Law 79/2022)
- Competition code 5576

Kley Tobias **CURRICULUM VITAE**

(N.B. CV MUST BE OF UP TO 30 PAGES AND INCLUDE THE DETAILS CANDIDATES CONSIDER USEFUL FOR THE ASSESSMENT.

ALL THE TITLES INSERTED BELOW ARE JUST EXAMPLES THAT CAN BE REPLACED, CHANGED OR COMPLETED)

PERSONAL DATA (DO NOT INCLUDE YOUR PERSONAL ADDRESS AND LANDLINE OR MOBILE PHONE NUMBER)

SURNAME	KLEY
NAME	TOBIAS
DATE OF BIRTH	

QUALIFICATIONS

DEGREE

(Specify full degree name and related score, University, date, thesis title, etc.)

University of Münster

Diploma in Mathematics, 10/2003-03/2011 (grade average of 1.1).*

Dissertation title: A quantile-based approach to spectral analysis of time series

Advisors: Holger Dette, Nina Gantert

Master of Science in Information Systems, 03/2007-03/2008 (grade average of 1.4).

Dissertation title: A comparative review of software to support statistical data analysis [in German]

Advisor: Ulrich Müller-Funk

Bachelor of Science in Information Systems, 10/2001-02/2007 (grade average of 2.2).

DOCTORAL DEGREE OR EQUIVALENT QUALIFICATION EARNED IN ITALY OR ABROAD / MEDICAL SPECIALISATION DIPLOMA OR EQUIVALENT QUALIFICATION, FOR THE RELEVANT SECTORS, EARNED IN ITALY OR ABROAD

(Specify qualification full name and related score, institution, date, thesis title, etc.)

Ruhr University Bochum and Princeton University

Doctorate in Mathematics, 04/2011-05/2014 (summa cum laude).

Thesis title: Quantile-based spectral analysis: asymptotic theory and computation

Advisors: Holger Dette, Marc Hallin

RESEARCH CONTRACTS, RESEARCH FELLOWSHIP CONTRACTS, POSTDOCTORAL SCHOLARSHIPS OR SIMILAR CONTRACTS

(Specify, for each contract, university/institution, starting and termination date, duration in years, etc.)

University of Göttingen

Scientific Staff (permanent) at the Institut for Mathematical Stochastics, since 10/2020.

University of Bristol

Lecturer in Statistical Science at the School of Mathematics, 09/2018-09/2020.

Humboldt University of Berlin

Visiting Docent for Applied Statistics in the School of Business and Economics, 02/2018-09/2018,
Offer (Ruf) for a Junior Professorship in „Applied Statistics“, 22.02.2018,
Rejected the offer in favor of the Lectureship in Bristol, 29.03.2018.

London School of Economics

Postdoctoral Research Officer in the Department of Statistics, 07/2015-01/2018,
as part of the EPSRC Fellowship on the topic of New challenges in time series analysis

Ruhr University Bochum

Research Fellow in the Mathematics Department, 04/2009-06/2015,
as part of the collaborative research center SFB 823 Statistical modeling of nonlinear dynamic processes

University of Münster

Research Fellow in the Economics Department, 04/2009-12/2010,

TEACHING ACTIVITIES AT ITALIAN OR FOREIGN UNIVERSITIES

(Specify academic year, university, degree course, number of hours/CFU, indicate type of activity, start and end date - day, month, year, etc.)

Institute for Mathematical Stochastics (U Göttingen)

Lecture Stochastic Lab Course I [SS21, SS22, SS23]**

Lecture Stochastic Lab Course II [WS20, WS21, WS22]

Lecture Stochastics [SS23]

Lecture Measure and Probability Theory [WS22]

Lecture Statistics in the Geosciences [SS22]

Lecture Discrete Stochastics for Computer Scientists [WS21]

Seminar High-Dimensional Probability Theory [SS23]

Seminar Extreme Value Theory [WS22]

Seminar Empirical Processes [SS21]

Seminar Statistical Aspects of Optimal Transport [WS21]

School of Mathematics (U Bristol)

Lecture Multivariate Analysis (MATH30510/MATHM0510) [SS19, SS20]

Lecture Time Series Analysis (MATH33800) [WS19]

Lecture Statistical Methods 2 (MATHM0038) [SS20]

TA Probability and Statistics (MATH10013) [SS19]

Department of Economics at (HU Berlin)

Lecture Non- and Semiparametric Modeling (7010316) [SS18]

Mathematics Department (Bochum)

TA Calculus II [SS14]

Mathematics and Computer Science Department (Münster)

TA Probability Theory II [WS08]

TA Probability Theory I [SS08]

Psychology Department (RU Bochum)

Lecture Statistical Methodology III (Multivariate Statistics) [WS14]

TA Statistical Methodology III (Multivariate Statistics) [WS09, WS10, WS11]

TA Statistical Methodology II (Linear Models) [SS09, SS10, SS11]

Economics Department (Münster)

TA Statistical Data Analysis and Data Mining [WS07]

TA Quantitative Methods I (Operations Research) [SS04, SS05]

TA Quantitative Methods II (Stochastics) [WS03, WS04, SS05, WS05, SS08, WS09]

** I abbreviate summer term by SS (summer semester) and winter term by WS (winter semester)

ATTESTED TRAINING OR RESEARCH ACTIVITIES AT QUALIFIED ITALIAN OR FOREIGN INSTITUTIONS

(Specify academic year, institution, course, period, commitment in terms of hours, indicate type of activity, etc.)

Federal Research Institute for Cultivated Plants, Julius Kuehn Institute (JKI)

Block Seminar on Factor Analysis with Applications in SAS [10/2011, 10/2015]

ATTESTED ACTIVITY IN THE CLINICAL FIELD

(Specify date, duration, role, institution where the aid activity was carried out, etc.)

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IMPLEMENTATION OF PROJECTS

(Specify date, project name, indicate type of activity, any organization in favor of which the activity was carried out etc.)

2011-13 Research School of the Ruhr University Bochum PhD Grant [36,000 EUR]

ORGANISATION, SUPERVISION AND COORDINATION OF NATIONAL AND INTERNATIONAL RESEARCH GROUPS, OR PARTICIPATION IN THEM

(For each entry, specify year, role, research group, any financing institutions and amount of financing, indicate type of project, etc.)

2021 Co-organiser of the Focused Research Group Stein's Method and High-Dimensional Time Series Analysis (Bristol, 29.-31.3.2021)

2019 Co-organiser of the Focused Research Group *Modern Challenges in Spectral Analysis of Time Series* (Bristol, 9.-11.9.2019)

2015 Co-organiser of the workshop *New developments in econometrics and time series* (Bochum, 11./12.6.)

HOLDING PATENTS

(For each patent, specify authors' names, title, classification (national or international), patent number, etc.)

NA

SPEAKING AT NATIONAL AND INTERNATIONAL CONFERENCES AND CONVENTIONS

(Specify conference/convention title, date, duration in days/hours, organizing institution, etc.)

2024 Kolloquium über Mathematische Statistik und Stochastische Prozesse, U Hamburg, 16.1. [talk]
2020 Programme StatScale: Statistical Scalability for Streaming Data, Lancaster University, 17.7. [Webinar]
Seminar at the Department of Mathematics des King's College London, 14.5. [Webinar]
2019 Seminar at the Department of Statistical Sciences der University of Toronto, 7.11. [talk]
Seminar at the Department of Mathematical Sciences, University of Bath, 1.10. [talk]
Seminar at the Institut für Mathematische Stochastik, TU Braunschweig, 5.7. [talk]
Workshop New Developments in Econometrics and Time Series, Graz, 6./7.6. [talk]
2018 Seminar at the School of Mathematics, University of Bristol, 5.10. [talk]
IRTG 1792 Summer Camp, 11.-13.7., Buckow [talk]
Seminar at the Fakultät für Mathematik der TU Dresden, 19.7. [talk]
4th ISNPS Conference of the International Society for Non-Parametric Statistics
Salerno (Italy) 11-15.6. [Vortrag]
Seminar at the Weierstraß-Institut für Angewandte Analysis und Stochastik Berlin, 22.5. [talk]
Seminar at the Institut für Statistik der Ludwig-Maximilians-Universität München, 9.5. [talk]
Seminar an der Technische Universität München, 7.5. [Vortrag]
Programme Statistical Scalability am Isaac Newton Institute, 26.3.-6.4., Cambridge [talk]
2017 10th International Conference of the ERCIM WG on Computational and Method
Statistics (CMStatistics 2017), 16.-18.12. [talk]
Joint seminar of the Business School and the Institute for Complex Systems and
Mathematical Biology of the University of Aberdeen, 22.11. [talk]
17th Applied Stochastic Models and Data Analysis International Conference (ASMDA),
London, 6.-9.6. [talk]
Seminar at the Institute of Mathematics at Humboldt University Berlin, 12.5. [talk]
Seminar of the Department for Signal and Image Processing at Télécom ParisTech, Paris, 16.3. [talk]
2016 12th German Probability and Statistics Days, Bochum, 1.-4.3. [talk]
2015 8th International Conference of the ERCIM WG on Computational and Methodological
Statistics (CMStatistics 2015), 12.-14.12. [talk]
Conference New Directions in Quantile Regression, 10./11.12. [talk]
Statistics Seminar of the School of Mathematics, University of Bristol, 13.11. [talk]
Departmental Seminar, Department of Statistical Science, University College London, 29.10. [talk]
European Young Statisticians Meeting, Prague, 31.8.-4.9. [talk]
2014 7th International Conference of the ERCIM WG on Computing and Statistics, Pisa, 6.-8.12. [talk]
Joint Seminar of the Economics and Statistics Departments, Urbana, IL, 3.10. [talk]
NBER NSF Time Series Conference, St. Louis, MO, 26./27.9. [poster]
11th German Probability and Statistics Days, Ulm, 4.-7.3. [talk]
2012 NBER NSF Time Series Conference, College Station, TX, 26.-27.10. [poster]
Workshop Financial Time Series Analysis: High-dimensionality, Non-stationarity and the
Financial Crisis, Singapore, 1.-22.6. [best poster award]
Seminar Finanzakademie of SFB 823, Dortmund, 30.5. [talk]
10th German Probability and Statistics Days, Mainz, 6.-9.3. [talk]
2011 4th International Conference of the ERCIM WG on Computing and Statistics, London, 17.-19.12.
[talk]
Workshop New Developments in Econometrics and Time Series, Brussels, 12./13.9. [talk]
2008 Workshop on Fuzzy Systems and Neural Networks of the GOR, Frankfurt, 6./7.3. [talk]
International Conference of the German Operations Research Society, Augsburg, 3.9. [talk]

NATIONAL AND INTERNATIONAL AWARDS AND ACCOLADES FOR RESEARCH ACTIVITY

(Specify award and motivation for the award, date, issuing organisation, etc.)

Best Poster Award, Workshop Financial Time Series Analysis: High-dimensionality, Non-stationarity and the Financial Crisis (Singapore, 1.-22.6.2012)

HOLDING A EUROPEAN SPECIALISATION DIPLOMA RECOGNISED BY INTERNATIONAL BOARDS

(For those competition sectors for which it is requested)

(Specify diploma and indicate the area, date, institution that awarded the diploma, etc.)

QUALIFICATIONS UNDER ART.24, PARAGRAPH 3.a AND 3.b, OF LAW No.240/2010 OF 30 DECEMBER 2010

(Specify whether it is a type A or type B contract, University, contract effective date and end date, etc.)

SCIENTIFIC PRODUCTION

SCIENTIFIC PUBLICATIONS

(For each publication, specify the following: authors' names, full title, publisher, date and place of publication, ISBN/ISSN/DOI or equivalent code)

- 11) Wasserstein distance bounds on the normal approximation of empirical autocovariances and cross-covariances under non-stationarity and stationarity. Journal of Time Series Analysis, 2023. With A. Anastasiou.
[arxiv:2305.04290]
- 10) The integrated copula spectrum. Annals of Statistics, 50(6), pp. 3563-3591, 2022. With Y. Goto, R. Van Hecke, S. Volgushev, H. Dette, und M. Hallin. [arXiv:2112.07077]
- 9) A new approach for open-end sequential change point monitoring. Journal of Time Series Analysis, 42(1), pp. 63- 84, 2021. With J. Gösmann and H. Dette. [arXiv:1906.03225]
- 8) Predictive, finite-sample model choice for time series under stationarity and non-stationarity. Electronic Journal of Statistics, 13(2), pp. 3710-3774, 2019. With P. Preuß und P. Fryzlewicz.
[arXiv:1611.04460]
- 7) Quantile coherency: a general measure for dependence between cyclical economic variables. Econometrics Journal, 22, pp. 131-152, 2019. With J. Baruník. [arXiv:1510.06946]
- 6) Model assessment for time series dynamics using copula spectral densities: A graphical tool. Journal of Multivariate Analysis, 39, pp. 122-146, 2019. With S. Birr und S. Volgushev. [arXiv:1804.01440]
- 5) On Wigner-Ville spectra and the unicity of time-varying quantile-based spectral densities. Journal of Time Series Analysis, 39, pp. 242-250, 2018. With H. Dette, M. Hallin, S. Birr and S. Volgushev.
[arXiv:1611.07253]
- 4) Quantile spectral analysis for locally stationary time series. Journal of the Royal Statistical Society: Series B, 79(5), pp. 1619-1643, 2017. With S. Birr, H. Dette, M. Hallin and S. Volgushev.
[arXiv:1404.4605]
- 3) Quantile spectral processes: asymptotic analysis and inference. Bernoulli, 22(3), pp. 1770-1807, 2016. With H. Dette, M. Hallin, and S. Volgushev. [arXiv:1401.8104]
- 2) Quantile-based spectral analysis in an object-oriented framework and a reference implementation in R: the quantspec Package. Journal of Statistical Software, 70(3), pp. 1-27, 2016. [arXiv:1408.6755]

1) Of copulas, quantiles, ranks and spectra: an L1-approach to spectral analysis. Bernoulli, 21(2), pp. 781-831, 2015. With H. Dette, M. Hallin and S. Volgushev. [arXiv:1111.7205]

LEADERSHIP ACTIVITIES

2022-24 Member of the Board of the Institute of Mathematical Stochastics, U Göttingen

2019-20 Co-Director of the Centre for Doctoral Training for Computational Statistic and Data Science (COMPASS)

Date

18 July 2024

Place

Göttingen


Tobi Kley.