

**Jörg Drechsler**  
**Curriculum Vitae**  
**September 07, 2018**

**Personal information**

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Current position     Distinguished researcher, Institute for Employment Research  
Regensburger Str. 104, 90478 Nuremberg, Germany  
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[joerg.drechsler@iab.de](mailto:joerg.drechsler@iab.de)

Honorarprofessor, Fakultät für Sozialwissenschaften, Universität  
Mannheim

Adjunct Associate Professor, Joint Program in Survey  
Methodology, University of Maryland

**Education**

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10/2015                **Habilitation in Statistics**  
Ludwig-Maximilians-Universität, Munich, Germany

12/2009                **Ph.D. in Social Sciences** (*summa cum laude*),  
University of Bamberg, Germany

4/2006                 **Diploma in Business Administration**  
University of Erlangen-Nuremberg, Germany

08/2004 – 12/2004   **American University, Washington, D.C., USA**  
Field of study: American Foreign Policy; partially funded through  
a grant from the University Erlangen-Nuremberg

08/1999 – 03/2004   **Conservatory of Music Nuremberg-Augsburg**  
Field of study: Piano

**Employment**

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07/2018 – present    **Fakultät für Sozialwissenschaften, Universität Mannheim**  
Honorarprofessor

07/2018 – present    **Joint Program in Survey Methodology, University of Maryland**  
Adjunct Associate Professor

04/2016 – 06/2018   **Joint Program in Survey Methodology, University of Maryland**  
Adjunct Assistant Professor

08/2015 – present    **Institute for Employment Research (IAB)**  
Distinguished researcher

09/2012 – 09/2015   **Institute for Employment Research (IAB)**  
Deputy head of the Department for Statistical Methods

04/2006 – 09/2012   **Institute for Employment Research (IAB)**  
Researcher at the Department for Statistical Methods

09/2011 – 03/2012   **Interim-Professor at Ludwig-Maximilians-University, Munich,**  
Institute for Statistics

- 04/2007 – 02/2010 **University of Erlangen-Nuremberg, Faculty of Philosophy**  
Instructor for piano accompaniment in school
- 10/2001 – 02/2002 **State Theater Nuremberg**  
Temporary employment as assistant répétiteur at the Nuremberg Opera

### **Professional service**

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- Guest Editor, *Special Issue on Data Confidentiality and Disclosure Control, Journal of the Royal Statistical Society, Series A, 181, 2018*
- Associate Editor, *Journal of Survey Statistics and Methodology 2015 – present*
- Associate Editor, *Journal of Official Statistics, 2012 – present*
- International Scientific Review Committee, UK Anonymisation Networks, 2014 – present
- Scientific Advisory Board of the Research Data Centers of the Federal Statistical Office and the Statistical Offices of the Länder, Germany, 2018 – present
- Program Committee, *Privacy in Statistical Databases, 2012, 2014, 2016, 2018*
- Organizer, *4th IAB Workshop on Confidentiality and Disclosure – bridging approaches from statistics and computer science, 2011*
- Organizer, *3rd IAB Workshop on Confidentiality and Disclosure – SDC for Microdata, 2008*
- **Proposal Reviewer:** European Science Foundation (ESF), Deutsche Forschungsgemeinschaft (DFG)
- **Referee:** *Advances in Statistical Analysis, American Journal of Epidemiology, Annals of Applied Statistics, AStA Wirtschafts- und Sozialstatistisches Archiv, Biometrical Journal, Biometrika, Computational Statistics and Data Analysis, Computer Methods and Programs in Biomedicine, International Journal of Educational Research, International Journal of Geographical Information Science, International Statistical Review, Journal of Applied Statistics, Journal of Educational and Behavioral Statistics, Journal of Official Statistics (JOS), Journal of Privacy and Confidentiality (JPC), Journal of Research on Educational Effectiveness, Journal of the American Statistical Association (JASA), Journal of the Royal Statistical Society (A), Methods, Data, Analysis (MDA), Neural Computing and Applications, Pattern Recognition Letters, Privacy in Statistical Databases (PSD), Psychological Methods, Public Opinion Quarterly, Sage Open, Statistical Journal of the IAOS, Statistical Methods and Applications, Statistical Methods in Medical Research, Statistical Papers, Statistical Science, Statistics in Medicine, Statistics and Computation, Survey Research Methods, Transactions on Data Privacy (TDP), Zeitschrift für Arbeits- und Organisationspsychologie*

### **Professional experience**

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- 04/2010 – 06/2010 **Visiting researcher, Duke University, NC, USA**  
Funded through a post-doc grant of the *Deutsche Forschungsgemeinschaft (DFG)*
- 11/2009 **Visiting researcher, Harvard University, MS, USA**

- 01/2008            **Visiting researcher, Cornell University, NY, USA**  
Partially funded through a grant from Cornell University, NY, USA
- 05/2007            **Visiting researcher, University of Michigan, MI, USA**
- 03/2007            **Visiting researcher, Duke University, NC, USA**

### **Grants and funded research**

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**Deutsche Forschungsgemeinschaft (DFG):** "Enhancing the Quality and Utility of Longitudinal Data for Education Research", 12/2018 – 11/2019, role: PI (with Joe Sakshaug, Institute for Employment Research).

**National Center for Educational Statistics:** "Feasibility of Synthetic Data for Population-Averaged and Cluster-Specific Analyses by Researchers Utilizing Integrated State Longitudinal Data Systems", 01/2016 – 06/2020, role: external consultant.

**Deutsche Forschungsgemeinschaft (DFG):** "Imputation and record linkage strategies for educational data collected from surveys and administrative sources", 12/2015 – 11/2018, role: PI (with Joe Sakshaug, University of Manchester).

**Deutsche Forschungsgemeinschaft (DFG):** "Imputation and weighting to address nonresponse in complex longitudinal educational surveys", 05/2012 – 08/2015, role: PI (with Prof. Hans Kiesel, Hochschule Regensburg).

**European Commission:** "BLUE-ETS BLUE-Enterprise and Trade Statistics," 07/2010 – 07/2013, role: PI (with Stefan Bender, IAB).

**German Ministry for Education and Research:** "InfiniT – Eine informationelle Infrastruktur für das ‚E-Science Age,‘" 05/2009 – 04/2012, role: PI.

**European Commission:** "ESSNet on Statistical Disclosure Control," 2008. Commissioned to write report on synthetic data files, role: external consultant (with Josep Domingo-Ferrer and Silvia Polettini).

### **Awards & academic honors**

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**Elected member of the International Statistical Institute,** 03/2016

**Wolfgang-Wetzel-Preis of the German Statistical Association** for an excellent published paper of an early career researcher on statistical methods and their application, 09/2011

**Gerhard-Fuerst-Preis of the German Federal Statistical Office** for the best dissertation on a topic relevant for official statistics, 11/2010

**E.ON Kulturpreis** for the best dissertation at the University of Bamberg, 10/2010

**Student paper award** of the survey research methods section of the American Statistical Association, 08/2010

### **Peer-reviewed publications**

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Drechsler, J. (2018): Some Clarifications Regarding Fully Synthetic Data. In: J. Domingo-Ferrer (Ed.), *Privacy in Statistical Databases* (Lecture Notes in Computer Science), Berlin: Springer, (forthcoming)

Geßendorfer, J., Beste, J., Drechsler, J., Sakshaug, J. (2018): Statistical Matching as a Supplement to Record Linkage: A valuable method to tackle non-consent bias? *Journal of Official Statistics* (forthcoming)

- Speidel, M., Drechsler, J., Sakshaug, J. (2017): Biases in multilevel analyses caused by cluster-specific fixed effects imputation. *Behavior Research Methods* (online first)
- Drechsler, J., & Kiesl, H. (2015): Beat the heap: An imputation strategy for valid inferences from rounded income data. *Journal of Survey Statistics and Methodology*, 4, 22-42.
- Drechsler, J., Kiesl, H., Speidel, M. (2015): MI Double Feature: Multiple Imputation to Address Nonresponse and Rounding Errors in Income Questions. *Austrian Journal of Statistics*, Vol. 44, 59–71.
- Drechsler, J. (2015): Multiple Imputation of Multilevel Missing Data – Rigor vs. Simplicity, *Journal of Educational and Behavioral Statistics*, Vol. 40, 69–95.
- Drechsler, J., Ronning, G., Bleninger, P. (2014): Disclosure Risk from Factor Scores. *Journal of Official Statistics*, Vol. 30, 107–122.
- Drechsler, J., Vilhuber, L. (2014): A first step towards a German SynLBD: Constructing a German Longitudinal Business Database. *Statistical Journal of the IAOS*, Vol. 30, 137–142.
- Drechsler, J., Vilhuber, L. (2014): Synthetic Longitudinal Business Databases for International Comparisons. In: J. Domingo-Ferrer (Ed.), *Privacy in Statistical Databases* (Lecture Notes in Computer Science 8744), Berlin: Springer, 243–252
- Drechsler, J. (2012): New Data Dissemination Approaches in Old Europe - Synthetic Datasets for a German Establishment Survey. *Journal of Applied Statistics*, Vol. 39, 243–265.
- Drechsler, J., Reiter, J. P. (2012): Combining Synthetic Data with Subsampling to Create Public Use Microdata Files for Large Scale Surveys. *Survey Methodology*, Vol. 38, 73–79.
- Dorner, M., Drechsler, J., Jacobebbinghaus, P. (2012): Generating Useful Test Data for Complex Linked Employer-Employee Datasets. In: J. Domingo-Ferrer & I. Tinnirello (Ed.), *Privacy in Statistical Databases* (Lecture Notes in Computer Science 7556), Berlin: Springer, 165–178.
- Drechsler, J. (2011): *Synthetic Datasets for Statistical Disclosure Control: Theory and Implementation*. Lecture Notes in Statistics 201, New York: Springer.
- Drechsler, J. (2011): Multiple Imputation in Practice - A Case Study Using a Complex German Establishment Survey. *Advances in Statistical Analysis*, Vol. 95, 1–26.
- Drechsler, J., Reiter, J. P. (2011): An empirical evaluation of easily implemented, nonparametric methods for generating synthetic datasets. *Computational Statistics & Data Analysis*, Vol. 55, 3232–3243.
- Bleninger P., Drechsler, J., Ronning, G. (2011): Remote data access and the risk of disclosure from linear regression. *Statistics and Operations Research Transactions*, Special Issue Privacy in Statistical Databases 2010, 7–24.
- Drechsler, J. (2010): Using Support Vector Machines for Generating Synthetic Datasets. In: J. Domingo-Ferrer & E. Magkos (Ed.), *Privacy in Statistical Databases* (Lecture Notes in Computer Science 6344), Berlin: Springer, 148–161.
- Bleninger, P., Drechsler, J., Ronning, G. (2010): Remote data access and the risk of disclosure from linear regression: An empirical study. In: J. Domingo-Ferrer & E. Magkos (Ed.), *Privacy in Statistical Databases* (Lecture Notes in Computer Science 6344), Berlin: Springer, 220–233.
- Drechsler, J., Reiter, J. P. (2010): Sampling with Synthesis: A New Approach for Releasing Public Use Census Microdata. *Journal of the American Statistical Association*, Vol. 105, 1347–1357.

- Reiter, J. P.; Drechsler, J. (2010): Releasing Multiply-Imputed Synthetic Data Generated in Two Stages to Protect Confidentiality. *Statistica Sinica*, Vol. 20, 405–421.
- Drechsler, J., Reiter, J. P. (2009): Disclosure Risk and Data Utility for Partially Synthetic Data: An Empirical Study Using the German IAB Establishment Survey. *Journal of Official Statistics*, Vol. 25, 589–603.
- Drechsler, J., Bender, S., Rässler, S. (2008): Comparing Fully and Partially Synthetic Data Sets for Statistical Disclosure Control in the German IAB Establishment Panel. *Transactions on Data Privacy*, Vol 1, 105–130.
- Drechsler, J., Dundler, A., Bender, S., Rässler, S., Zwick, T. (2008): A New Approach for Disclosure Control in the IAB Establishment Panel. Multiple Imputation for a Better Data Access. *Advances in Statistical Analysis*, Vol. 92, 439–458.
- Drechsler, J., Reiter, J. P. (2008): Accounting for Intruder Uncertainty Due to Sampling When Estimating Identification Disclosure Risks in Partially Synthetic Data. In: J. Domingo-Ferrer & Y. Saygin (Ed.), *Privacy in Statistical Databases (Lecture Notes in Computer Science 5262)*, Berlin: Springer, 227–238.

### **Invited publications**

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- Drechsler, J., Shlomo, N. (2018): Editorial for the special issue on data confidentiality and statistical disclosure control, *Journal of the Royal Statistical Society A*, Vol. 181, 607–608.
- Drechsler, J. (2016): Discussion of the synthetic data papers published in the previous issue. *Statistical Journal of the IAOS*, Vol. 32, 271–274.
- Drechsler, J. (2011): Improved Variance Estimation for Fully Synthetic Datasets. Invited paper for the *Work Session on Statistical Data Confidentiality 2011* in Tarragona, Organizer: United Nations Statistical Commission und Economic Commission for Europe.
- Drechsler, J. (2011): Erzeugung synthetischer Datensätze durch multiple Imputation: Theorie und Implementierung in der Praxis. *Wirtschaft und Statistik* 4/2011, 402–408.
- Bleninger, P., Drechsler, J., Ronning, G. (2011): Disclosure Risk from Factor Scores in a Remote Access Environment. Invited paper for the *Work Session on Statistical Data Confidentiality 2011* in Tarragona, Organizer: United Nations Statistical Commission und Economic Commission for Europe.
- Drechsler, J. (2009): Synthetic Datasets for the German IAB Establishment Panel. Invited paper for the *Work Session on Statistical Data Confidentiality 2009* in Bilbao, Organizer: United Nations Statistical Commission und Economic Commission for Europe.
- Drechsler, J. (2009): Far from Normal: Multiple Imputation of Missing Values in a German Establishment Survey. Invited paper for the *Work Session on Statistical Data Editing 2009* in Neuchâtel, Organizer: United Nations Statistical Commission und Economic Commission for Europe.
- Domingo-Ferrer, J., Drechsler, J., Polettini, S. (2009): Report on Synthetic Data Files. Expertise for Eurostat.  
([http://neon.vb.cbs.nl/casc/ESSnet/essnet\\_sdc\\_synthetic\\_deliverable\\_final\\_ddp.pdf](http://neon.vb.cbs.nl/casc/ESSnet/essnet_sdc_synthetic_deliverable_final_ddp.pdf))
- Drechsler, J., Raghunathan, T. E. (2008): Evaluating Different Approaches for Multiple Imputation under Linear Constraints. Invited paper for the *Work Session on Statistical Data Editing 2008* in Vienna, Organizer: United Nations Statistical Commission und Economic Commission for Europe.

## Other publications

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- Drechsler, J., Jentsch, N. (2018): Synthetische Daten: Innovationspotential und gesellschaftliche Herausforderungen, *Impulse (Working Paper Series of the Stiftung Neue Verantwortung)*, (in German)
- Hu, J., Drechsler, J. (2015): Generating synthetic geocoding information for public release. *Proceedings of the Eurostat Conference on New Techniques and Technologies for Statistics (NTTS)*, 56–59, Brussels.
- Drechsler, J., Kiesl, H. (2014): Beat the heap - an imputation strategy for valid inferences from rounded income data. *IAB-Discussion Paper, 02/2014*, Nürnberg.
- Soria-Comas, J., Drechsler, J. (2013): Evaluating the potential of differential privacy mechanisms for census data. *Work Session on Statistical Data Confidentiality 2013* in Ottawa, Organizer: United Nations Statistical Commission und Economic Commission for Europe.
- Drechsler, J. (2011): Synthetische Scientific-Use-Files der Welle 2007 des IAB-Betriebspanels, *FDZ-Methodenreport No. 1*. (in German)
- Ronning, G., Bleninger, P., Drechsler, J., Gürke, C. (2010): Remote Access – Eine Welt ohne Mikrodaten??, *IAW Discussion Paper No. 66*. (in German)
- Drechsler, J. (2009): Disclosure Control in Business Data - Experiences with Multiply Imputed Synthetic Datasets for the German IAB Establishment Survey. In: *Proceedings of the Eurostat Conference on New Techniques and Technologies for Statistics (NTTS)*, Brussels.
- Drechsler, J., Rässler, S. (2008): Does Convergence Really Matter? In: Shalabh & C. Heumann (Hrsg.), *Recent Advances in Linear Models and Related Areas. Essays in Honour of Helge Toutenburg*, (Statistical Theory and Methods, 15), Heidelberg: Physica-Verlag.
- Kettner, A., Drechsler, J., Rebien, M.; Schmidt, K.; Smerdjieva, M.; Stops, M.; Vogler-Ludwig, K. (2007): Estimation of Vacancies by NACE and ISCO at Disaggregated Regional Level. *IAB-Bibliothek*, Vol 310.

## Invited presentations

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- Synthetic Longitudinal Business Databases for International Comparisons, *Conference of European Statistics Stakeholders 2018*, 19.10.2018
- Nonparametric Multiple Imputation for Bridging Between Different Industry Coding Systems, *Joint Statistical Meetings 2018*, American Statistical Association, Vancouver, 30.07.2018
- Valid Inferences from Differentially Private Microdata – Some thoughts and illustrations using geocoded administrative data, *Statistical Group Guest Speaker Lunch Talk*, Westat, Rockville, 13.06.2018
- Multiple Imputation – Why and How, Tutorial as part of a Two-day Seminar on Data Quality, *Mexican National Institute of Statistics and Geography*, Guanajuato, 27.10.2017
- Imputation for Item Nonresponse – Some Common Misconceptions, Tutorial as part of a Two-day Seminar on Data Quality, *Mexican National Institute of Statistics and Geography*, Guanajuato, 26.10.2017
- Experiences with Differentially Private Geocoded Administrative Data, *Joint Statistical Meetings 2017*, American Statistical Association, Baltimore, 02.08.17.

Generating synthetic geocoding information for public release, *Seminar*, Cambridge University, Cambridge, 01.12.2016

My View on the Key Research Questions for Synthetic Data, *Synthetic Data Workshop*, Cambridge University, Cambridge, 31.10.2016.

A short introduction to synthetic data for statistical disclosure control, *European Data Access Forum*, (DwB) - Data without Boundaries, Luxemburg, 24.03.2015.

Synthetic Data - Where do we come from? Where do we want to go?, *Synthetic Data Workshop*, Office for National Statistics, Titchfield, UK, 01.12.2014.

Sampling with Synthesis - A New Approach for Releasing Public Use Census Microdata, *Demographic Statistical Methods Division Seminar*, U.S. Census Bureau, Washington, D.C, 12.03.2014.

Three reasons to analyze fully synthetic datasets from the partially synthetic data perspective, *Conference on Applications of Missing-Data Procedures*, Otto-Friedrich-Universität Bamberg, Bamberg, 20.06.2013.

Multiple Imputation for correcting rounding errors in heaped income data, *Recent advances in multiple imputation*, Utrecht University, Utrecht, 16.05.2013.

Synthetic Datasets for Statistical Disclosure Control – A Personal Appraisal, *Seminar at the Centre for Statistical & Survey Methodology at the University of Wollongong*, Wollongong, 18.05.2012.

Innovative Data Access Strategies - Synthetic data with a touch of Remote Access, *Seminar of the Methodology and Data Management Division of the Australian Bureau of Statistics*, Canberra, 15.05.2012.

Innovative Methods for Statistical Disclosure Control, *Micro Data Access – Internationale und nationale Perspektiven – 20. Wissenschaftliches Kolloquium des Statistischen Bundesamts*, Wiesbaden, 10.11.2011

Improved variance estimation for fully synthetic datasets, *work session on data confidentiality 2011*, United Nations Statistical Commission und Economic Commission for Europe, Tarragona, 27.10.2011.

Der Armut auf der Spur – Multiple Imputation zur Reduktion von Verzerrungen in der aktuellen Armutsforschung, *Tagung des Arbeitskreises „Fragen der mathematischen Methodik“*, Statistisches Bundesamt, Wiesbaden, 22.06.2011.

Synthetic Datasets: A Brief Introduction and Some Personal Experience, *Data Confidentiality Symposium*, CSIRO, Sydney, 18.01.11.

Data Wars – The Agency Strikes Back, *3rd Workshop on Analysis of Incomplete Data*, Universität Bamberg, 13.12.09.

Synthetic Datasets for the German IAB Establishment Panel, *work session on data confidentiality 2009*, United Nations Statistical Commission und Economic Commission for Europe, Bilbao, 03.12.2009.

Data Wars – The Agency Strikes Back, University of Michigan, Ann Arbor, 17.11.2009.

Data Wars – The Agency Strikes Back, Harvard University, Cambridge, 12.11.2009.

Far from Normal: Multiple Imputation of Missing Values in a German Establishment Survey, *Work Session on Statistical Data Editing 2009*, United Nations Statistical Commission und Economic Commission for Europe, Neuchâtel, 06.10.09.

Far from Normal: Multiple Imputation of Missing Values in a German Establishment Survey, *2nd Workshop on Analysis of Incomplete Data*, Universität Bamberg, 02.10.09.

New Data Dissemination Approaches in Old Europe – Synthetic Datasets for a German Establishment Survey, *NSF-Census-IRS Workshop on Synthetic Data and Confidentiality Protection 2009*, Cornell University /U.S. Census Bureau, Washington, D.C., 31.07.09.

Synthetic Datasets from Census Data: Data Quality Improvement for Public Use Micro Data Samples, *1st Workshop on Analysis of Incomplete Data*, Universität Bamberg, 26.03.09.

Multiple Imputation for Protecting Data Confidentiality: Applications by the German Institute for Employment Research, *Joint Statistical Meetings 2008*, American Statistical Association, Denver, 06.08.08.

Evaluating Different Approaches for Multiple Imputation Under Linear Constraints, *Work Session on Statistical Data Editing 2008*, United Nations Statistical Commission und Economic Commission for Europe, Wien, 22.04.08.

A New Approach for Disclosure Control in the IAB Establishment Panel - Multiple Imputation for a better Data Access, *Work Session on Statistical Data Editing 2006*, United Nations Statistical Commission und Economic Commission for Europe, Bonn, 26.09.06.

## **Teaching and Training**

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**Workshop on Synthetic Data**, Half-day workshop as part of the European Courses in Advanced Statistics on Statistical Disclosure Control, Bruz, winter 2018

**Multiple Imputation – Why and How**, Online course for the International Program in Survey and Data Science, winter 2018

**Item Nonresponse and Imputation**, Online course for the International Program in Survey and Data Science, fall 2017, fall 2018

**Synthetic Datasets for Statistical Disclosure Limitation**, Continuing Education Course at the 2017 Joint Statistical Meetings sponsored by the American Statistical Association, Baltimore, summer 2017 (with Jerry Reiter, Duke University)

**Analyzing Survey Data**, graduate program of the Institute for Employment Research, spring 2017, fall 2017, fall 2018

**Synthetic Data – Balancing Confidentiality and Quality in Public Use Files**, short course sponsored by the Joint Program in Survey Methodology, Washington, D.C., summer 2016, summer 2018 (with Jerry Reiter, Duke University)

**Data Confidentiality and Statistical Disclosure Control – Problems with traditional approaches and alternatives based on synthetic data**, Online course for the International Program in Survey and Data Science, spring 2016, spring 2017, spring 2018

**Multiple Imputation for Missing Data – Theory and Application**, Short course sponsored by GESIS, Mannheim, spring 2016, winter 2017/2018

**Generating Synthetic Data for Statistical Disclosure Control**, short course sponsored by the University of Southampton, 2014, 2017

**Workshop on synthetic data for data confidentiality**, short course, sponsored by the Australian Bureau of Statistics, 2012



**Grundlegende Methoden der Sozialstatistik B**, LMU Munich, summer 2012, summer 2014, summer 2015, winter 2017/2018, winter 2018/2019

**Statistisches Praktikum**, LMU Munich, summer 2012

**Grundlegende Methoden der Sozialstatistik A**, LMU Munich, winter 2011/2012, summer 2017, summer 2018

**Applications and Extensions of Multiple Imputation for Survey Research**, LMU Munich, winter 2011/2012

**Einführung in die induktive Statistik**, LMU Munich, winter 2011/2012

**Missing data and imputation**, LMU Munich, summer 2011

**Missing data and imputation**, graduate program of the Institute for Employment Research, winter 2010/2011