

Riccardo De Bin

Curriculum vitae

Department of Mathematics,
University of Oslo
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CURRENT POSITION

10.2016 – now **Associate Professor**, *Department of Mathematics, Section of Statistics and Data Science*, University of Oslo, Norway.

PAST POSITIONS

- 06.2016 – **Assistant Professor**, *Department of Health Evidence*, Radboud University Medical Centre, Netherlands.
09.2016
05.2012 – **Postdoctoral Fellow**, *Department of Medical Informatics, Biometry and Epidemiology*, Ludwig-Maximilians-Universität, Germany.
05.2016
03.2012 – **Research Assistant**, *Department of Statistical Sciences*, University of Padova, Italy.
04.2012
10.2010 – **Predoctoral Fellow**, *Department of Statistics*, Northwestern University, Evanston (IL), USA.
11.2011

EDUCATION

- 01.2009 – **PhD in Statistics**, *Department of Statistical Sciences*, University of Padova, Italy.
04.2012
10.2005 – **Master Degree in Statistics and Computer Science**, *Faculty of Statistical Sciences*, University of Padova, Italy.
10.2007
10.2002 – **Bachelor Degree in Statistics and Information Technology**, *Faculty of Statistical Sciences*, University of Padova, Italy.
07.2005

LANGUAGE SKILLS

Italian (mother language), English (proficient user), Norwegian (independent user), German (basic user)

LIST OF PUBLICATIONS

STATISTICAL JOURNALS

Wallisch, C., Dunkler, D., Rauch, G., **De Bin, R.** & Heinze, G. (2020). Selection of variables for multivariable models: Opportunities and limitations in quantifying model stability by resampling. *Statistics in Medicine*, doi: <https://doi-org.ezproxy.uio.no/10.1002/sim.8779>

- Belhechmi, S., **De Bin, R.**, Michiels, S. & Rotolo, F. (2020). Accounting for grouped predictor variables or pathways in high-dimensional penalized Cox regression models. *BMC Bioinformatics*, 21: 277
- Fuchs, M., Hornung, R., Boulesteix, A. L., **De Bin, R.** (2020). On the asymptotic behavior of the variance estimator of a U -statistic. *Journal of Statistical Planning and Inference*, 209: 101–111
- De Bin, R.**, Boulesteix A. L., Benner, A., Becker, N. & Sauerbrei, W. (2019). Combining clinical and molecular data in regression prediction models: insights from a simulation study. *Briefings in Bioinformatics*, doi: <https://doi.org/10.1093/bib/bbz136>
- Volkman, A., **De Bin, R.**, Sauerbrei, W. & Boulesteix A. L. (2019). A plea for taking all available clinical information into account when assessing the predictive value of omics data. *BMC Medical Research Methodology*, 19:162
- De Bin, R.** & Sauerbrei, W. (2018). Handling co-dependence issues in resampling-based variable selection procedures: a simulation study. *Journal of Statistical Computation and Simulation*, 88: 28–55
- Seibold H., Bernau C., Boulesteix, A. L. & **De Bin, R.** (2018). On the choice and influence of the number of boosting steps. *Computational Statistics*, 33: 1195–1215
- De Bin, R.**, Boulesteix, A. L. & Sauerbrei, W. (2017). Detection of influential points as a byproduct of resampling-based variable selection procedures. *Computational Statistics & Data Analysis*, 116: 19–31
- Boulesteix, A. L., **De Bin, R.**, Jiang, X., Fuchs, M. (2017). IPF-lasso: integrative L_1 -penalized regression with penalty factors for prediction based on multi-omics data. *Computational and Mathematical Methods in Medicine*, 2017:7691937
- De Bin, R.**, Janitza, S., Sauerbrei, W. & Boulesteix, A. L. (2016). Subsampling versus bootstrap in resampling-based model selection for multivariable regression. *Biometrics*, 72: 272 – 280
- De Bin, R.** (2016). Boosting in Cox regression: a comparison between the likelihood-based and the model-based approaches with focus on the R-packages CoxBoost and mboost. *Computational Statistics*, 31: 513 – 531
- De Bin, R.** (2016). On the equivalence between conditional and random-effects likelihoods in exponential families. *Statistics & Probability Letters*, 110: 34 – 38
- De Bin, R.**, Severini, T. A. & Sartori N. (2015). Integrated likelihoods in models with stratum nuisance parameters. *Electronic Journal of Statistics*, 7:1474 – 1491
- De Bin, R.**, Sauerbrei, W. & Boulesteix A. L. (2014). Investigating the prediction ability of survival models based on both clinical and omics data: two case studies. *Statistics in Medicine*, 33:5310 – 5329
- De Bin, R.**, Herold, T. & Boulesteix, A. L. (2014). Added predictive value of omics data: specific issues related to validation illustrated by two case studies. *BMC Medical Research Methodology*, 14:117

De Bin, R. & Risso, D. (2011). A novel approach to the clustering of microarray data via nonparametric density estimation. *BMC Bioinformatics*, 12:49 (Highly accessed)

NON-STATISTICAL JOURNALS

Aiken, J. M., **De Bin, R.**, Caballero, M. D. & Hjorth-Jensen, M. (2020). Predicting time to graduation at a large enrollment American university. *PLoS ONE*, 15(11): e0242334

Friederich, P., dos Passos Gomes, G., **De Bin, R.**, Aspuru-Guzik, A. & Balcells, D. (2020). Machine learning dihydrogen activation in the chemical space surrounding Vaska's complex. *Chemical Science*, 11: 4584–4601

van Gruting, I., Kluivers, K. B., Sultan, A. H., **De Bin, R.**, Stankiewicz, A., Blake, H. & Thakar, R. (2017). Does 4D transperineal ultrasound have additional value over 2D transperineal ultrasound for diagnosing posterior pelvic floor disorders in women with obstructed defaecation syndrome? *Ultrasound in Obstetrics & Gynecology*, 52: 784–791

van Gruting, I., Stankiewicz, A., Kluivers, K. B., **De Bin, R.**, Blake, H., Sultan, A. H. & Thakar, R. (2017). Accuracy of four imaging techniques for diagnosis of posterior pelvic floor disorders. *Obstetrics and Gynecology*, 130: 1017–1024

CONFERENCE PROCEEDINGS (REFEREED)

Belhechmi, S., **De Bin, R.**, Michiels, S. & Rotolo, F. (2019). Prise en compte des groupes de biomarqueurs ou des voies biologiques dans les modèles de Cox pénalisés de haute dimension. *Revue d'Épidémiologie et de Santé Publique*, 67: S134

De Bin, R. (2017) Overview of topics related to model selection for regression. In: Ainsbury E., Calle M., Cardis E., Einbeck J., Gómez G., Puig P. (eds) *Extended Abstracts Fall 2015. Trends in Mathematics*, 7. Birkhäuser, Cham

De Bin, R. & Risso, D. (2010). A nonparametric algorithm for clustering microarray data. *45th Scientific Meeting of the Italian Statistical Society*, ISBN 978 88 6129 566 7

PRE-PRINT AND TECHNICAL REPORTS

Moss, J. & **De Bin, R.** (2019). Modelling publication bias and p-hacking. *arXiv:1911.12445*

Hellton, K. H., Lingjærde, C. & **De Bin, R.** (2019). Influence of single observations on the choice of the penalty parameter in ridge regression. *arXiv.org:1911.03662*

De Bin, R. & Scarpa B. (2014). Non-parametric Bayesian modeling of cervical mucus symptom. *LMU, Department of Statistics: Technical Reports 170*

Fuchs, M., Hornung, R., **De Bin, R.**, Boulesteix, A. L. (2013). A U-statistic estimator for the variance of resampling-based error estimators. *LMU, Department of Statistics: Technical Reports 148*

OTHER

De Bin, R. (2016). Referee Report for: Three general concepts to improve risk prediction: good data, wisdom of the crowd, recalibration [version 1; referees: 2 approved with reservations]. *F1000Research*, 5:2671

CONFERENCES/WORKSHOPS/SEMINARS

- Invited talks Hylleraas Virtual Spring Meeting 2020 (Oslo, 2020), RiskAOP Kick-off Meeting (Oslo, 2020), Advances in Statistical Modelling and Inference (Udine, 2020), CMStatistics (London, 2019), Applied Statistics (Ribno, 2019), CMStatistics (Pisa, 2018), Workshop on Distributed Computing, Differential Privacy and Boosting (Munich, 2018), FocuStat Conference 2018: Vårens Vakreste Variabler (Oslo, 2018), FocuStat Research Kitchen: From Processes to Models (Oslo, 2017), The Hon. Doc. Sylvia Richardson Workshop on Statistics for the Life Sciences (Oslo, 2017), International FocuStat Workshop: Bridging Parametrics and Nonparametrics (Oslo 2017), CMStatistics (London, 2015), DoReMi LD-RadStats (Barcelona, 2015), Modelli Bayesiani non parametrici e applicazioni (Padova, 2014), ERCIM (Oviedo 2012)
- Talks 27th Nordic Conference in Mathematical Statistics (Tartu, 2018), Workshop of Topic group 9 High-dimensional data of the STRATOS initiative (Dortmund, 2018), CMStatistics (London, 2017), Nordic-Baltic Biometric Conference (Copenhagen, 2017), Norske Statistikermøtet (Fredrikstad, 2017), International Biometrical Conference (Victoria, 2016), DAGStat (Göttingen, 2016), Joint Meeting of the Italian and Austro-Swiss Biometrical Societies (Milano, 2015), Biometrisches Kolloquium (Dortmund, 2015), Statistical Computing (Regensburg, 2014), International Biometrical Conference (Florence, 2014), ISCB (Munich, 2013), DAGStat (Freiburg, 2013), Likelihood, Approximate Likelihood and Nonparametric Statistical Methods for Complex Applications (Venice, 2012)
- Seminars Rheinische Friedrich-Wilhelms-Universität (Bonn, 2019), Norwegian Institute of Public Health (Oslo, 2019), University of Udine (Udine, 2019), Chalmers University (Gothenburg, 2019), University Medical Center Freiburg (Freiburg, 2019), University of Padova (Padova, 2018), Ludwig-Maximilians-Universität (Munich, 2018), University of Oslo (Oslo, 2018), TU Dortmund University (Dortmund, 2018), Institut Gustave Roussy (Paris, 2017), University of Oslo (Oslo 2017), Ludwig-Maximilians-Universität (Munich, 2017), Radboud University Medical Center (Nijmegen, 2016), University Medical Center Freiburg (Freiburg, 2016), University College London (London, 2015), University of Padova (Padova, 2014)
- Posters International Biometrical Conference (Barcelona, 2018), Computational Life Sciences at Bayer (invited – Berlin, 2015), Leeds Annual Statistics Research Workshop (Leeds, 2011)

TEACHING EXPERIENCES

- Norway Machine Learning and Statistical Methods for Prediction and Classification (bachelor course), Statistical Learning Methods in Data Science (master), Advanced Statistical Methods (PhD), Statistical Learning: Advanced Regression and Classification (master), Modelling by Stochastic Processes (bachelor)
- Netherland Scientific Skills (master)
- Germany Recent Developments in Biostatistics (master), Introduction to R (master)
- Italy Statistics I (as TA, bachelor), Statistics II (as TA, bachelor)

SUPERVISION ACTIVITY

- PhD 4 as main supervisor, 3 as co-supervisor (University of Oslo)
- Master 10 (7 at the University of Oslo, 2 at the Ludwig-Maximilians-Universität, 1 at the Technische Universität München)
- Bachelor 4 (2 at the University of Oslo, 2 at the Ludwig-Maximilians-Universität)

COMMISSIONS OF TRUST

- 2018 – now Scientific Expert for the Italian Ministry of Education, Universities and Research (reviewer for “Programma Rita Levi Montalcini” and “PRIN 2017”)
- 2019 Member of an “Adjudication Committees” for 4 Phd defences, Univ. of Padova
- 2019 External censor for a Master thesis, NTNU of Trondheim

EDITORIAL ACTIVITY

- Reviewer for Bioinformatics, Biometrical Journal, BMC Bioinformatics, BMC Medical Research Methodology, Biometrics, Computational and Mathematical Methods in Medicine, Computational Statistics & Data Analysis, Chapman & Hall/CRC, F1000Research, International Journal of Biostatistics, Journal of Applied Statistics, Journal of Computational and Graphical Statistics, Lifetime Data Analysis, Meta-Psychology, Methods of Information in Medicine, Neuroscience Letters, PLoS ONE, Scandinavian Journal of Statistics, Stat, Statistical Analysis and Data Mining, Statistical Applications in Genetics and Molecular Biology, Statistics, Statistics and Computing, Statistics in Medicine

INSTITUTIONAL RESPONSIBILITIES

- 2018 – now Chair of 3 “Adjudication Committees” for Phd defences, University of Oslo
- 2018 – now Member of the Board of the Master Program in Data Science, University of Oslo
- 2018 – now Responsible for the Seminar Series in Statistics, University of Oslo
- 2016 – now Member of 5 “Master Defence” committees, University of Oslo
- 2016 – now Member of 6 “Phd Recruiting” committees, University of Oslo
- 2016 – now Member of 6 “Third Semester Phd Evaluation” committees, University of Oslo
- 2017 Member of 2 “Course Teaching” committees, University of Oslo
- 2011 – 2012 Student Representative in the PhD School Board, University of Padova

FUNDING

- Projects AURORA (n. 294455, Norwegian Research Council, 2018), HPC resources (n. NN9480K, UNINETT Sigma2, 2017)
- As a key-collaborator RiskAOP (Norwegian Research Council), PerCaThe (University of Oslo), BO3139/4-2 (German Research Council)
- Scholarship Italian Government (PhD scholarship, 2010 – 2012)

ORGANIZATION OF SCIENTIFIC MEETINGS

- 2019 Organizer of the “Workshop in Data Science”, Halden, 2019
- 2019 Co-organizer of an invited section at “CMStatistics”, London, 2019
- 2019 Member of the International Organizing Committee and the Scientific Program Committee of the “21st European Young Statisticians Meeting”, Belgrade, 2019
- 2017 Co-organizer of the “The Hon. Doc. Sylvia Richardson Workshop on Statistics for the Life Sciences”, Oslo, 2017

MEMBERSHIPS OF SCIENTIFIC SOCIETY

- 2014 – now International Biometric Society
- 2016 – now STRATOS Group