

Samuel Muller
Faculty of Science and Engineering
Data Horizons Research Centre
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Biography

Professor Samuel Muller is Executive Dean of the Faculty of Science and Engineering at Macquarie University and an internationally recognised leader in statistics and higher-education transformation. A Fellow of the American Statistical Association and Editor-in-Chief of the *Australian and New Zealand Journal of Statistics*, he is known for driving strategic, research, and cultural renewal across complex academic environments.

Since 2025, he has led the Faculty through significant financial and organisational revitalisation, delivering record research performance, major strategic reforms, and national recognition. His leadership is grounded in transparency, collaboration, and integrity, complemented by a long-standing commitment to equity and inclusion as Executive Sponsor for the Ally Network and Access and Inclusion.

Samuel holds a Ph.D. in Mathematics from the University of Bern and has authored more than 90 publications, secured over \$10M in research funding, and supervised numerous research students. His work continues to advance global statistical science while shaping high-performing, inclusive institutions

Qualifications

Mathematics, PhD, Endpoint, Tail Index, and Support Estimation in Extreme Value Theory, University of Bern
Award Date: 1 Nov 2002

Statistics and Insurance Mathematics, Diploma (MSc), The Robustness of the Friedman Test, University of Bern
Award Date: 1 Oct 1998

Employment

Executive Dean

Faculty of Science and Engineering
Macquarie University
2 Feb 2025 → present

Data Horizons Research Centre

Macquarie University
1 Jan 2023 → 31 Dec 2027

Astrophysics and Space Technologies Research Centre

Macquarie University
1 Jan 2023 → 31 Dec 2027

Frontier AI Research Centre

Macquarie University
1 Jan 2025 → 31 Dec 2029

Editor-in-Chief

Australian and New Zealand Journal of Statistics
31 Jan 2025 → present

Honorary Professor

University of Sydney
Sydney, Australia
1 Sept 2020 → 31 Aug 2026

College of Experts, Member

Australian Research Council
Canberra, Australia
1 Jan 2019 → 31 Dec 2021

Research outputs

Bayesian stability selection and inference on selection probabilities

Nourai, M., Smith, C. & Muller, S., Apr 2026, In: *Statistics and Computing*. 36, 2, p. 1-14 14 p., 62.

Data-adaptive automatic threshold calibration for stability selection

Huang, M., Muller, S. & Tarr, G., 17 Feb 2026, (E-pub ahead of print) In: *Journal of Statistical Computation and Simulation*. 25 p.

Random effects misspecification and its consequences for prediction in generalized linear mixed models

Vu, Q., Hui, F. K. C., Muller, S. & Welsh, A. H., Jan 2026, In: *Computational Statistics and Data Analysis*. 213, p. 1-12 12 p., 108254.

A Kidney transplant support system for patient-clinician shared decision-making

Zhang, Y., Torkel, M., Muller, S., Wong, G. & Yang, J., Dec 2025, In: *Journal of Medical Systems*. 49, 1, p. 1-6 6 p., 60.

Artificial intelligence-based personalised learning in education: a systematic literature review

Farhood, H., Nyden, M., Beheshti, A. & Muller, S., Dec 2025, In: *Discover Artificial Intelligence*. 5, p. 1-41 41 p., 331.

Two-stage sampling for better survival model performance

Zhang, Y. & Muller, S., Dec 2025, In: *BMC Medical Research Methodology*. 25, 1, p. 1-11 11 p., 242.

Adjusted predictions for generalized estimating equations

Hui, F. K. C., Muller, S. & Welsh, A. H., 1 Sept 2025, In: *Biometrics*. 81, 3, p. 1-11 11 p., ujaf090.

Air-HOLP: adaptive regularized feature screening for high dimensional correlated data

Joudah, I., Muller, S. & Zhu, H., Jun 2025, In: *Statistics and Computing*. 35, 3, p. 1-11 11 p., 63.

Best subset solution path for linear dimension reduction models using continuous optimization

Liquet, B., Moka, S. & Muller, S., Feb 2025, In: *Biometrical Journal*. 67, 1, p. 1-17 17 p., e70015.

eNODAL: an experimentally guided nutrionics data clustering method to unravel complex drug-diet interactions

Xu, X., Senior, A. M., Le Couteur, D. G., Cogger, V. C., Raubenheimer, D., James, D. E., Parker, B., Simpson, S. J., Muller, S. & Yang, J. Y. H., 1 Jan 2025, In: *Briefings in Bioinformatics*. 26, 1, p. 1-11 11 p., bbaf036.

Advancing student outcome predictions through generative adversarial networks

Farhood, H., Joudah, I., Beheshti, A. & Muller, S., Dec 2024, In: *Computers and Education: Artificial Intelligence*. 7, p. 1-13 13 p., 100293.

Robust variable selection methods with Cox model—a selective practical benchmark study

Zhang, Y. & Muller, S., 1 Nov 2024, In: *Briefings in Bioinformatics*. 25, 6, p. 1-9 9 p., bbae508.

CR-Lasso: Robust cellwise regularized sparse regression

Su, P., Tarr, G., Muller, S. & Wang, S., Sept 2024, In: *Computational Statistics and Data Analysis*. 197, p. 1-14 14 p., 107971.

Evaluating and enhancing artificial intelligence models for predicting student learning outcomes

Farhood, H., Joudah, I., Beheshti, A. & Muller, S., Sept 2024, In: *Informatics*. 11, 3, p. 1-17 17 p., 46.

The effect of the working correlation on fitting models to longitudinal data

Muller, S., Wang, S. & Welsh, A. H., Jun 2024, In: Scandinavian Journal of Statistics. 51, 2, p. 891-912 22 p.

COMBSS: best subset selection via continuous optimization

Moka, S., Liquet, B., Zhu, H. & Muller, S., Apr 2024, In: Statistics and Computing. 34, 2, p. 1-22 22 p., 75.

Likelihood-based surrogate dimension reduction

Nghiem, L. H., Hui, F. K. C., Muller, S. & Welsh, A. H., Feb 2024, In: Statistics and Computing. 34, 1, p. 1-15 15 p., 51.

Robust variable selection under cellwise contamination

Su, P., Tarr, G. & Muller, S., 2024, In: Journal of Statistical Computation and Simulation. 94, 6, p. 1371-1387 17 p.

NEMoE: a nutrition aware regularized mixture of experts model to identify heterogeneous diet-microbiome-host health interactions

Xu, X., Lubomski, M., Holmes, A. J., Sue, C. M., Davis, R. L., Muller, S. & Yang, J. Y. H., Dec 2023, In: Microbiome. 11, 1, p. 1-14 14 p., 51.

A Multi-step precision pathway for predicting allograft survival in heterogeneous cohorts of kidney transplant recipients

Zhang, Y., Deng, D., Muller, S., Wong, G. & Yang, J. Y. H., Sept 2023, In: Transplant International. 36, 9, p. 1-8 8 p., 11338.

Screening methods for linear errors-in-variables models in high dimensions

Nghiem, L. H., Hui, F. K. C., Müller, S. & Welsh, A. H., Jun 2023, In: Biometrics. 79, 2, p. 926-939 14 p.

GEE-assisted variable selection for latent variable models with multivariate binary data

Hui, F. K. C., Müller, S. & Welsh, A. H., 2023, In: Journal of the American Statistical Association. 118, 542, p. 1252-1263 12 p.

simKAP: simulation framework for the kidney allocation process with decision making model

Zhang, Y., Hu, A., Lin, Y., Cao, Y., Muller, S., Wong, G. & Yang, J. Y. H., 2023, In: Scientific Reports. 13, p. 1-9 9 p., 16367.

Surface area estimation using 3D point clouds and Delaunay triangulation

Farhood, H., Muller, S. & Beheshti, A., 2023, *Proceedings of the Second International Conference on Innovations in Computing Research (ICR'23)*. Daimi, K. & Al Sadoon, A. (eds.). Cham: Springer, Springer Nature, p. 28-39 12 p. (Lecture Notes in Networks and Systems; vol. 721).

Cross-Platform Omics Prediction procedure: a statistical machine learning framework for wider implementation of precision medicine

Wang, K. Y. X., Pupo, G. M., Tembe, V., Patrick, E., Strbenac, D., Schramm, S. J., Thompson, J. F., Scolyer, R. A., Muller, S., Tarr, G., Mann, G. J. & Yang, J. Y. H., Dec 2022, In: npj Digital Medicine. 5, 1, p. 1-10 10 p., 85.

Estimation of graphical models for skew continuous data

Nghiem, L. H., Hui, F. K. C., Müller, S. & Welsh, A. H., Dec 2022, In: Scandinavian Journal of Statistics. 49, 4, p. 1811-1841 31 p.

Robust subtractive stability measures for fast and exhaustive feature importance ranking and selection in generalised linear models

Smith, C., Guennewig, B. & Muller, S., Sept 2022, In: Australian and New Zealand Journal of Statistics. 64, 3, p. 339-355 17 p.

The gut microbiome in Parkinson's disease: A longitudinal study of the impacts on disease progression and the use of device-assisted therapies

Lubomski, M., Xu, X., Holmes, A. J., Muller, S., Yang, J. Y. H., Davis, R. L. & Sue, C. M., 17 May 2022, In: *Frontiers in Aging Neuroscience*. 14, p. 1-24 24 p., 875261.

Nutritional intake and gut microbiome composition predict Parkinson's disease

Lubomski, M., Xu, X., Holmes, A. J., Muller, S., Yang, J. Y. H., Davis, R. L. & Sue, C. M., 11 May 2022, In: *Frontiers in Aging Neuroscience*. 14, p. 1-16 16 p., 881872.

COMBSS: Best Subset Selection via Continuous Optimization

Moka, S., Liquet, B., Zhu, H. & Muller, S., 5 May 2022, (Submitted) arXiv.org, (arXiv).

Sparse sliced inverse regression via Cholesky matrix penalization

Nghiem, L. H., Hui, F. K. C., Müller, S. & Welsh, A. H., 2022, In: *Statistica Sinica*. 32, p. 2431-2453 23 p.

SurvBenchmark: comprehensive benchmarking study of survival analysis methods using both omics data and clinical data

Zhang, Y., Wong, G., Mann, G., Muller, S. & Yang, J. Y. H., 2022, In: *GigaScience*. 11, p. 1-13 13 p.

Gut microbiota and nutritional profiles of Parkinson's disease patients

Lubomski, M., Xu, X., Holmes, A., Muller, S., Yang, J., Sue, C. M. & Davis, R. L., Aug 2021, In: *BMJ Neurology Open*. 3, Suppl 1, p. A6-A7 2 p., 015.

svReg: structural varying-coefficient regression to differentiate how regional brain atrophy affects motor impairment for Huntington disease severity groups

Kim, R., Müller, S. & Garcia, T. P., Aug 2021, In: *Biometrical Journal*. 63, 6, p. 1254-1271 18 p.

The gut microbiome in Parkinson's disease: longitudinal insights into disease progression and the use of device-assisted therapies

Lubomski, M., Xu, X., Holmes, A. J., Muller, S., Yang, J., Sue, C. M. & Davis, R. L., Aug 2021, In: *BMJ Neurology Open*. 3, Suppl 1, p. A14 1 p., 037.

Prediction modeling-part 2: using machine learning strategies to improve transplantation outcomes

Coorey, C. P., Sharma, A., Muller, S. & Yang, J. Y. H., Apr 2021, In: *Kidney International*. 99, 4, p. 817-823 7 p.

Random effects misspecification can have severe consequences for random effects inference in linear mixed models

Hui, F. K. C., Müller, S. & Welsh, A. H., Apr 2021, In: *International Statistical Review*. 89, 1, p. 186-206 21 p.

mcvis: a new framework for collinearity discovery, diagnostic, and visualization

Lin, C., Wang, K. & Muller, S., 2021, In: *Journal of Computational and Graphical Statistics*. 30, 1, p. 125-132 8 p.

Robust variable selection under cellwise contamination

Peng, S., Tarr, G. & Muller, S., 2021, (Submitted) arXiv.org, (arXiv).

A personalised prediction model for allograft survival after kidney transplantation

Zhang, Y., Yang, J., Wong, G. & Muller, S., Sept 2020, In: *Transplantation*. 104, S3, p. S41 1 p.

Identification of driven risk factors for HLA-DR in kidney transplantation

Zhang, Y., Yang, J., Muller, S. & Wong, G., Sept 2020, In: *Transplantation*. 104, S3, p. S420 1 p., P-11.136.

The LASSO on latent indices for regression modeling with ordinal categorical predictors

Hui, F. K. C., Müller, S. & Welsh, A. H., Sept 2020, In: *Computational Statistics and Data Analysis*. 149, p. 1-13 13 p., 106951.

LC-N2G: a local consistency approach for nutrigenomics data analysis

Xu, X., Solon-Biet, S. M., Senior, A., Raubenheimer, D., Simpson, S. J., Fontana, L., Mueller, S. & Yang, J. Y. H., 2020, In: *BMC Bioinformatics*. 21, 1, p. 1-14 14 p., 530.

mcvis: multi-collinearity visualization
Wang, K., Lin, C. & Mueller, S., 2020

mcvis: multi-collinearity visualisation

Wang, K. & Muller, S., 2020, In: Biometric Bulletin. 37, 3, p. 12-14 3 p.

Fast and approximate exhaustive variable selection for generalised linear models with APES

Wang, K. Y. X., Tarr, G., Yang, J. Y. H. & Mueller, S., Dec 2019, In: Australian and New Zealand Journal of Statistics. 61, 4, p. 445-465 21 p.

Semiparametric regression using variational approximations

Hui, F. K. C., You, C., Shang, H. L. & Müller, S., 2 Oct 2019, In: Journal of the American Statistical Association. 114, 528, p. 1765-1777 13 p.

Melanoma Explorer: a web application to allow easy reanalysis of publicly available and clinically annotated melanoma omics data sets

Strbenac, D., Wang, K., Wang, X., Dong, J., Mann, G. J., Mueller, S. & Yang, J. Y. H., Jun 2019, In: Melanoma Research. 29, 3, p. 342-344 3 p.

A radiographic analysis of the abnormal hallux interphalangeus angle range: considerations for surgeons performing Akin osteotomies

Nguyen, J. K., Sullivan, M., Alpuerto, B. B., Mueller, S. & Sly, N., 1 May 2019, In: Journal of Orthopaedic Surgery. 27, 2, p. 1-5 5 p.

bcGST: an interactive bias-correction method to identify over-represented gene-sets in boutique arrays

Wang, K. Y. X., Menzies, A. M., Silva, I. P., Wilmott, J. S., Yan, Y., Wongchenko, M., Kefford, R. F., Scolyer, R. A., Long, G. V., Tarr, G., Mueller, S. & Yang, J. Y. H., 15 Apr 2019, In: Bioinformatics. 35, 8, p. 1350-1357 8 p.

Testing random effects in linear mixed models: another look at the F-test (with discussion)

Hui, F. K. C., Müller, S. & Welsh, A. H., Mar 2019, In: Australian and New Zealand Journal of Statistics. 61, 1, p. 61-84 24 p.

Lasso tuning through the flexible-weighted bootstrap

Patrick, E. & Mueller, S., 2019, (Submitted) arXiv.org, (arXiv).

mplot: an R package for graphical model stability and variable selection procedures

Tarr, G., Müller, S. & Welsh, A. H., Feb 2018, In: Journal of Statistical Software. 83, 9, p. 1-28 28 p.

Bootstrapping F test for testing random effects in linear mixed models

O'Shaughnessy, P. Y., Hui, F. K. C., Muller, S. & Welsh, A. H., 2018, (Submitted) arXiv.org, (arXiv).

mplot: graphical model stability and variable selection procedures

Tarr, G., Mueller, S. & Welsh, A. H., 2018

Sparse pairwise likelihood estimation for multivariate longitudinal mixed models

Hui, F. K. C., Müller, S. & Welsh, A. H., 2018, In: Journal of the American Statistical Association. 113, 524, p. 1759-1769 11 p.

2nd special issue on robust analysis of complex data

Mueller, S., Boente, G., Croux, C., Romo, J. & Van Aelst, S., Sept 2017, In: Computational Statistics and Data Analysis. 113, p. 395-397 3 p.

Hierarchical selection of fixed and random effects in generalized linear mixed models
Hui, F. K. C., Müller, S. & Welsh, A. H., Apr 2017, In: *Statistica Sinica*. 27, 2, p. 501-518 18 p.

A multi-step classifier addressing cohort heterogeneity improves performance of prognostic biomarkers in three cancer types
Patrick, E., Schramm, S.-J., Ormerod, J. T., Scolyer, R. A., Mann, G. J., Mueller, S. & Yang, J. Y. H., 2017, In: *Oncotarget*. 8, 2, p. 2807-2815 9 p.

A variational bayes approach to variable selection
Ormerod, J. T., You, C. & Müller, S., 2017, In: *Electronic Journal of Statistics*. 11, 2, p. 3549-3594 46 p.

Joint selection in mixed models using regularized PQL
Hui, F. K. C., Müller, S. & Welsh, A. H., 2017, In: *Journal of the American Statistical Association*. 112, 519, p. 1323-1333 11 p.

Cox regression with exclusion frequency-based weights to identify neuroimaging markers relevant to huntington's disease onset
Garcia, T. P. & Müller, S., Dec 2016, In: *Annals of Applied Statistics*. 10, 4, p. 2130-2156 27 p.

Identification, review, and systematic cross-validation of microRNA prognostic signatures in metastatic melanoma
Jayawardana, K., Schramm, S.-J., Tembe, V., Mueller, S., Thompson, J. F., Scolyer, R. A., Mann, G. J. & Yang, J., Jan 2016, In: *Journal of Investigative Dermatology*. 136, 1, p. 245-254 10 p.

On generalized degrees of freedom with application in linear mixed models selection
You, C., Müller, S. & Ormerod, J. T., Jan 2016, In: *Statistics and Computing*. 26, 1-2, p. 199-210 12 p.

Robust estimation of precision matrices under cellwise contamination
Tarr, G., Müller, S. & Weber, N. C., Jan 2016, In: *Computational Statistics and Data Analysis*. 93, p. 404-420 17 p.

Fast and flexible methods for monotone polynomial fitting
Murray, K., Müller, S. & Turlach, B. A., 2016, In: *Journal of Statistical Computation and Simulation*. 86, 15, p. 2946-2966 21 p.

rpql: regularized PQL for joint selection in GLMMs
Hui, F. K. C., Mueller, S. & Welsh, A. H., 2016

Inferring data-specific micro-RNA function through the joint ranking of micro-RNA and pathways from matched micro-RNA and gene expression data
Patrick, E., Buckley, M., Müller, S., Lin, D. M. & Yang, J. Y. H., 1 Sept 2015, In: *Bioinformatics*. 31, 17, p. 2822-2828 7 p.

Adenocarcinomas of the upper third of the rectum and the rectosigmoid junction seem to have similar prognosis as colon cancers even without radiotherapy, SAKK 40/87
Käser, S. A., Froelicher, J., Li, Q., Müller, S., Metzger, U., Castiglione, M., Laffer, U. T. & Maurer, C. A., Aug 2015, In: *Langenbeck's Archives of Surgery*. 400, 6, p. 675-682 8 p.

Much more than U-statistics: a symposium to celebrate Neville C. Weber
Tarr, G. & Müller, S., Jun 2015, In: *The Newsletter of the Statistical Society of Australia*. 151, p. 10-12 3 p.

The difference of symmetric quantiles under long range dependence
Tarr, G., Weber, N. C. & Müller, S., Mar 2015, In: *Statistics and Probability Letters*. 98, p. 144-150 7 p.

Determination of prognosis in metastatic melanoma through integration of clinico-pathologic, mutation, mRNA, microRNA, and protein information

Jayawardana, K., Schramm, S. J., Haydu, L., Thompson, J. F., Scolyer, R. A., Mann, G. J., Müller, S. & Yang, J. Y. H., 15 Feb 2015, In: *International Journal of Cancer*. 136, 4, p. 863-874 12 p.

Identification of important regressor groups, subgroups and individuals via regularization methods: application to gut microbiome data

Garcia, T. P., Müller, S., Carroll, R. J. & Walzem, R. L., 15 Mar 2014, In: *Bioinformatics*. 30, 6, p. 831-837 7 p.

On variational Bayes estimation and variational information criteria for linear regression models

You, C., Ormerod, J. T. & Müller, S., Mar 2014, In: *Australian and New Zealand Journal of Statistics*. 56, 1, p. 73-87 15 p.

Influence of measures of significance based weights in the weighted Lasso

Garcia, T. P. & Müller, S., 2014, In: *Journal of the Indian Society of Agricultural Statistics*. 68, 2, p. 131-144 14 p.

Graphical tools for model selection in generalized linear models

Murray, K., Heritier, S. & Müller, S., 10 Nov 2013, In: *Statistics in Medicine*. 32, 25, p. 4438-4451 14 p.

Revisiting fitting monotone polynomials to data

Murray, K., Müller, S. & Turlach, B. A., Oct 2013, In: *Computational Statistics*. 28, 5, p. 1989-2005 17 p.

Controlling the local false discovery rate in the adaptive Lasso

Sampson, J. N., Chatterjee, N., Carroll, R. J. & Müller, S., Sept 2013, In: *Biostatistics*. 14, 4, p. 653-666 14 p.

Structured variable selection with q-values

Garcia, T. P., Müller, S., Carroll, R. J., Dunn, T. N., Thomas, A. P., Adams, S. H., Pillai, S. D. & Walzem, R. L., Sept 2013, In: *Biostatistics*. 14, 4, p. 695-707 13 p.

Model selection in linear mixed models

Müller, S., Scealy, J. L. & Welsh, A. H., May 2013, In: *Statistical Science*. 28, 2, p. 135-167 33 p.

A prediction model for viability at the end of the first trimester after a single early pregnancy evaluation

Oates, J., Casikar, I., Campaign, A., Müller, S., Yang, J., Reid, S. & Condous, G., Feb 2013, In: *Australian and New Zealand Journal of Obstetrics and Gynaecology*. 53, 1, p. 51-57 7 p.

Informative measures of significance for constructing intelligent feature weights

Müller, S., Garcia, T. P. & Carroll, R. J., 2013, *Proceedings of the 59th World Statistics Congress of the International Statistical Institute, 2013*. The Hague: International Statistical Institute, p. 3833-3838 6 p.

On generalized degrees of freedom and their application in linear mixed model selection

You, C., Müller, S. & Ormerod, J. T., 2013, *Proceedings of the 59th World Statistics Congress of the International Statistical Institute, 2013*. The Hague: International Statistical Institute, p. 3851-3856 6 p.

Vertical data integration for melanoma prognosis

Jayawardana, K., Müller, S., Schramm, S.-J., Mann, G. J. & Yang, J., 2013, *Proceedings of the 59th World Statistics Congress of the International Statistical Institute, 2013*. The Hague: International Statistical Institute, p. 3599-3604 6 p.

The latency distribution of motor evoked potentials in patients with multiple sclerosis

Firmin, L., Müller, S. & Rösler, K. M., Dec 2012, In: *Clinical Neurophysiology*. 123, 12, p. 2414-2421 8 p.

A robust scale estimator based on pairwise means

Tarr, G., Müller, S. & Weber, N., Mar 2012, In: *Journal of Nonparametric Statistics*. 24, 1, p. 187-199 13 p.

Exploring multicollinearity using a random matrix theory approach

Feher, K., Whelan, J. & Müller, S., Feb 2012, In: *Statistical Applications in Genetics and Molecular Biology*. 11, 3, p. 1-33
34 p., 15.

Empirical performance of cross-validation with oracle methods in a genomics context

Martinez, J. G., Carroll, R. J., Müller, S., Sampson, J. N. & Chatterjee, N., Nov 2011, In: *American Statistician*. 65, 4, p. 223-228 6 p.

Partially smooth tail-index estimation for small samples

Müller, S. & Chhay, H., Sept 2011, In: *Computational Statistics*. 26, 3, p. 491-505 15 p.

Predation risk and competitive interactions affect foraging of an endangered refuge-dependent herbivore

Tuft, K. D., Crowther, M. S., Connell, K., Müller, S. & McArthur, C., Aug 2011, In: *Animal Conservation*. 14, 4, p. 447-457
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A method to measure the distribution of latencies of motor evoked potentials in man

Firmin, L., Müller, S. & Rösler, K. M., Jan 2011, In: *Clinical Neurophysiology*. 122, 1, p. 176-182 7 p.

Assessing modularity using a random matrix theory approach

Feher, K., Whelan, J. & Müller, S., Jan 2011, In: *Statistical Applications in Genetics and Molecular Biology*. 10, 1, p. 1-34
35 p., 44.

Serious summation

Müller, S., 2011, In: *Australian Mathematical Society. Gazette*. 38, 1, p. 20 1 p.

On model selection curves

Müller, S. & Welsh, A. H., Aug 2010, In: *International Statistical Review*. 78, 2, p. 240-256 17 p.

A note on the effect on power of score tests via dimension reduction by penalized regression under the null

Martinez, J. G., Carroll, R. J., Müller, S., Sampson, J. N. & Chatterjee, N., Jan 2010, In: *International Journal of Biostatistics*. 6, 1, p. 1-12 13 p., 12.

Fair game

Müller, S., 2010, In: *Australian Mathematical Society. Gazette*. 37, 2, p. 71 1 p.

Smooth tail-index estimation

Müller, S. & Rufibach, K., Sept 2009, In: *Journal of Statistical Computation and Simulation*. 79, 9, p. 1155-1167 13 p.

Robust model selection in generalized linear models

Müller, S. & Welsh, A. H., Jul 2009, In: *Statistica Sinica*. 19, 3, p. 1155-1170 16 p.

Partially linear model selection by the bootstrap

Müller, S. & Vial, C., Jun 2009, In: *Australian and New Zealand Journal of Statistics*. 51, 2, p. 183-200 18 p.

Lucky lottery

Müller, S., 2009, In: *Australian Mathematical Society. Gazette*. 36, 1, p. 13 1 p.

On the max-domain of attraction of distributions with log-concave densities

Müller, S. & Rufibach, K., 1 Sept 2008, In: *Statistics and Probability Letters*. 78, 12, p. 1440-1444 5 p.

Robust model selection in generalized linear models

Müller, S. & Welsh, A. H., 2007, In: Oberwolfach Reports. 4, 4, p. 2984-2985 2 p.

smoothtail: smooth estimation of GPD shape parameter

Rufibach, K. & Mueller, S., 2007

Estimating the number of motor units using random sums with independently thinned terms

Müller, S., Conforto, A. B., Z'Graggen, W. J. & Kaelin-Lang, A., Jul 2006, In: Mathematical Biosciences. 202, 1, p. 29-41 13 p.

Weighted least squares estimation of the extreme value index

Hüsler, J., Li, D. & Müller, S., 1 May 2006, In: Statistics and Probability Letters. 76, 9, p. 920-930 11 p.

Smoothed semi-parametric tail index estimation

Müller, S. & Rufibach, K., 2006, University of Bern. 20 p. (Institute of Mathematical Statistics and Actuarial Science - Technical Reports; vol. 58)

Outlier robust model selection in linear regression

Müller, S. & Welsh, A. H., Dec 2005, In: Journal of the American Statistical Association. 100, 472, p. 1297-1310 14 p.

Two-stage support estimation

Müller, S., Dec 2005, In: Australian and New Zealand Journal of Statistics. 47, 4, p. 463-472 10 p.

Iterative estimation of the extreme value index

Müller, S. & Hüsler, J., Jun 2005, In: Methodology and Computing in Applied Probability. 7, 2, p. 139-148 10 p.

A Comparison of human and pseudo-uniform random numbers

Müller, S. & Rufibach, K., 2005, University of Bern. 14 p. (Institute of Mathematical Statistics and Actuarial Science - Technical Reports; vol. 55)

Robust model selection in linear regression models

Müller, S. & Welsh, A. H., 2005, *Abstract book: 55th session of the International Statistical Institute (ISI), 5-12 April 2005, Sydney Convention and Exhibition Centre, Sydney, Australia*. Sydney: International Statistical Institute, 2 p.

Association between periodontal and peri-implant conditions: a 10-year prospective study

Karoussis, I. K., Müller, S., Salvi, G. E., Heitz-Mayfield, L. J. A., Brägger, U. & Lang, N. P., Feb 2004, In: Clinical Oral Implants Research. 15, 1, p. 1-7 7 p.

Tail estimation based on numbers of near m-extremes

Müller, S., Jun 2003, In: Methodology and Computing in Applied Probability. 5, 2, p. 197-210 14 p.

Iterated tail index estimation

Müller, S., 2003, *54th session of the International Statistical Institute (ISI): proceedings, invited papers, contributed papers : Berlin, 13-20 August 2003*. International Statistical Institute, 2 p.

Prolonged unloading of rat soleus muscle causes distinct adaptations of the gene profile

Wittwer, M., Flück, M., Hoppeler, H., Müller, S., Desplanches, D. & Billeter, R., Jun 2002, In: FASEB Journal. 16, 8, p. 884-886 33 p.

Phase II study of capecitabine and oxaliplatin in first-and second-line treatment of advanced or metastatic colorectal cancer

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Schmid, J., Ambühl, M., Decrouez, D. & Müller, S., 2000, *Paria Lithos: latomeia, marmaro kai ergastēria glyptikēs tēs Parou : praktika A' diethnous Synedriou Archaialogias Parou kai Kykladōn, Paroikia, Paros 2-5 Oktobriou 1997*. Schilardi, D. U. & Katsonopoulou, D. (eds.). Athena, p. 569-575 7 p.

A quantitative fabric analysis approach to the discrimination of white marbles
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Prizes

Commendation Teaching

Müller, S. (Recipient), 2015

Elected Member of the International Statistical Institute (ISI)

Müller, S. (Recipient), 4 Jun 2021

Faculty Award in Mathematics

Müller, S. (Recipient), 1999

Fellow of the American Statistical Association

Müller, S. (Recipient), 2019

Member of the Honor Society of Research Scientists and Engineers Sigma Xi

Müller, S. (Recipient), 2 Aug 2024

Special Commendation, Award for Excellence in Graduate Research Supervision

Muller, S. (Recipient), 2019

SUPRA Supervisor of the Year Award, Finalist

Muller, S. (Recipient), Dec 2021

SUPRA Supervisor of the Year Award, Finalist

Muller, S. (Recipient), Nov 2020

Top cited paper award from Wiley for the 2019-2020 period

Muller, S. (Recipient), 2021

Top cited paper award from Wiley for the 2021-2022 period

Muller, S. (Recipient), 22 Feb 2023

Vice-Chancellor's Awards for Excellence in Outstanding Research - Higher Degree Supervision

Muller, S. (Recipient), 2018

Awards

Projects

ARC DP: Building models for complex data

Welsh, A. H. (Primary Chief Investigator) & Muller, S. (Chief Investigator)

1/01/11 → 31/12/14

ARC DP: Dimension reduction and model selection for statistically challenging data

Welsh, A. H. (Primary Chief Investigator), Muller, S. (Chief Investigator), Hui, F. (Primary Chief Investigator) & Ma, Y. (Primary Chief Investigator)

13/04/18 → 12/04/21

ARC DP: Fast flexible feature selection for high dimensional challenging data

Ormerod, J. T. (Primary Chief Investigator), Muller, S. (Primary Chief Investigator) & Tarr, G. (Primary Chief Investigator)

1/06/21 → 31/05/24

ARC DP: Prediction, inference and their application to modelling correlated data.

Welsh, A. H. (Primary Chief Investigator) & Muller, S. (Chief Investigator)

1/06/15 → 31/05/17

ARC DP: Prognosis based network-type feature extraction for complex biological data

Yang, J. Y. H. (Primary Chief Investigator), Muller, S. (Chief Investigator), Ormerod, J. (Chief Investigator), Yang, P. (Chief Investigator) & Mann, G. J. (Primary Chief Investigator)

1/05/17 → 1/05/20

ARC DP: Vertically integrated statistical modelling in multi-layered omics studies.

Yang, J. Y. H. (Primary Chief Investigator), Muller, S. (Chief Investigator) & Mann, G. J. (Chief Investigator)

1/06/13 → 30/06/17

USYD Led: Cost-Utility Comparison of Down-Titration Strategies for Safer and More Efficient Use of Biologics in Adults with Rheumatoid Arthritis and Psoriatic Arthritis

March, L. (Chief Investigator), Buchbinder, R. (Chief Investigator), Lassere, M. (Chief Investigator), Proudman, S. M. (Chief Investigator), Thomas, R. (Chief Investigator), Schofield, D. (Primary Chief Investigator), Xue, M. (Chief Investigator), Wechalekar, M. D. (Chief Investigator), Whittle, S. L. (Chief Investigator), Sinnathurai, P. (Chief Investigator),

Keen, H. I. (Associate Investigator), Hill, C. (Associate Investigator), Youssef, P. (Associate Investigator), Benham, H. (Associate Investigator), Bereza-Malcolm, L. (Associate Investigator), Willers, C. (Associate Investigator), Schachna, L. (Associate Investigator), Muller, S. (Associate Investigator), Perera, C. (Associate Investigator), Tymms, K. (Associate Investigator) & Worsley, H. (Other)

1/06/21 → 31/05/25

USYD Led: CRE for Better Outcomes in Arthritis and Autoimmune Diseases

March, L. (Chief Investigator), Thomas, R. (Chief Investigator), Lassere, M. (Chief Investigator), Buchbinder, R. (Chief Investigator), Hill, C. (Chief Investigator), Keen, H. I. (Chief Investigator), Wechalekar, M. D. (Chief Investigator), Munro, J. (Chief Investigator), Figtree, G. A. (Chief Investigator), Schofield, D. (Primary Chief Investigator), Xue, M. (Associate Investigator), El-Omar, E. (Associate Investigator), Muller, S. (Associate Investigator), Bereza-Malcolm, L. (Associate Investigator), Sinnathurai, P. (Associate Investigator), Singh-Grewal, D. (Associate Investigator), Lester, S. (Associate Investigator), Willers, C. (Associate Investigator), Youssef, P. (Associate Investigator), Proudman, S. M. (Primary Chief Investigator) & Worsley, H. (Other)

1/12/21 → 30/06/26

Estimating the Number of Tyres in Stockpiles

Muller, S. (Primary Chief Investigator), Beheshti, A. (Chief Investigator), Farhood, H. (Research Assistant) & Moka, S. (Research Assistant)

3/10/22 → 9/12/22

MRFF: Cost-Utility Comparison of Down-Titration Strategies for Safer and More Efficient Use of Biologics in Adults with Rheumatoid Arthritis and Psoriatic Arthritis

March, L. (Primary Chief Investigator), Buchbinder, R. (Chief Investigator), Lassere, M. (Chief Investigator), Proudman, S. M. (Chief Investigator), Thomas, R. (Chief Investigator), Schofield, D. (Chief Investigator), Xue, M. (Chief Investigator), Wechalekar, M. D. (Chief Investigator), Whittle, S. L. (Chief Investigator), Sinnathurai, P. (Chief Investigator), Keen, H. I. (Associate Investigator), Hill, C. (Associate Investigator), Youssef, P. (Associate Investigator), Benham, H. (Associate Investigator), Bereza-Malcolm, L. (Associate Investigator), Willers, C. (Associate Investigator), Schachna, L. (Associate Investigator), Muller, S. (Associate Investigator), Perera, C. (Associate Investigator) & Tymms, K. (Associate Investigator)

1/08/21 → 31/07/25

NHMRC: CRE for Better Outcomes in Inflammatory Arthritis

March, L. (Primary Chief Investigator), Thomas, R. (Chief Investigator), Lassere, M. (Chief Investigator), Buchbinder, R. (Chief Investigator), Hill, C. (Chief Investigator), Keen, H. I. (Chief Investigator), Wechalekar, M. D. (Chief Investigator), Munro, J. (Chief Investigator), Figtree, G. A. (Chief Investigator), Schofield, D. (Chief Investigator), Xue, M. (Associate Investigator), El-Omar, E. (Associate Investigator), Muller, S. (Associate Investigator), Bereza-Malcolm, L. (Associate Investigator), Sinnathurai, P. (Associate Investigator), Singh-Grewal, D. (Primary Chief Investigator), Lester, S. (Associate Investigator), Willers, C. (Associate Investigator), Youssef, P. (Associate Investigator) & Proudman, S. M. (Associate Investigator)

1/12/21 → 1/12/26

DP23: Reliable and accurate statistical solutions for modern complex data

Welsh, A. H. (Chief Investigator), Hui, F. (Chief Investigator), Muller, S. (Primary Chief Investigator) & Cantoni, E. (Partner Investigator)

21/02/23 → 20/02/26

Research Fellowship: Nonstandard Robustness Problems in Applied Probability and Statistics

Muller, S. (Primary Chief Investigator)

1/01/03 → 1/01/04