Curriculum Vitae

Personal Data

Name: Bühlmann, Peter Lukas.
Born: April 12, 1965 in Zürich, Switzerland.
Citizenship: Switzerland.
Family status: Married, four children.

Education

1990–1993: PhD studies at ETH Zürich, Switzerland.
1985–1990: Studies in mathematics at ETH Zürich, Switzerland.

Positions

2013–2017: Chair of the Department of Mathematics, ETH Zürich, Switzerland.
2004–present: Full Professor, Department of Mathematics, ETH Zürich, Switzerland.
2001–2004: Associate Professor, Department of Mathematics, ETH Zürich, Switzerland.
1997–2001: Assistant Professor, Department of Mathematics, ETH Zürich, Switzerland.
1995–1997: Neyman Assistant Professor, Department of Statistics, University of California, Berkeley.
1994–1995: Postdoctoral Research Fellow at University of California, Berkeley. Supported by the Swiss National Science Foundation.

Affiliations

2020–current: Member Steering Committee for ETH AI Center (ETH Zürich).
2019–current: Director of ETH Foundations of Data Science (ETH Zürich).
2014–2019: Member of Competence Center for Personalized Medicine (University of Zürich and ETH Zürich).
2012–current: Founding member of the Max Planck ETH Center for Learning Systems.
2005–2013: Group Leader in Competence Center for Systems Physiology and Metabolic Diseases (ETH Zürich and University of Zürich).

Awards and Honours

2024: Wald Award & Lecture from the Institute of Mathematical Statistics. 11th World Congress in Probability & Statistics, Bochum (Germany).
2022: President of the Institute of Mathematical Statistics (IMS).
2022: Elected member of the German National Academy of Sciences Leopoldina.
2021: Al-Kindi Lectures 2021. King Abdullah University of Science and Technology.
2021: Plenary speaker at the 8th European Congress of Mathematics. Portoroz, Slovenia (virtual).
2020: Highly Cited Researcher 2020 (in mathematics) by Clarivate Analytics. https://recognition.webofscience.com/awards/highly-cited/2020/.
2019: Highly Cited Researcher 2019 (in mathematics) by Clarivate Analytics. https://recognition.webofsciencegroup.com/awards/highly-cited/2019/.

2019: Invited semi-plenary speaker at the International Congress on Industrial and Applied Mathematics 2019. Valencia.
2019: Challis Lectures. University of Florida (Gainesville).
2018: Highly Cited Researcher 2018 (in mathematics) by Clarivate Analytics. See `https://clarivate.com/hcr/`.
2018: Hartigan Lecture. Yale University.
2018: Guy Medal in Silver from the Royal Statistical Society.
2018: Invited speaker at the International Congress of Mathematicians 2018. Rio de Janeiro.
2018: Neyman Lecture. Annual Meeting of the Institute of Mathematical Statistics & 12th Intern. Vilnius Conference. Vilnius.
2018: Rothschild Distinguished Visiting Fellow and Lecturer. Isaac Newton Institute. Cambridge.
2018: ERC Advanced Grant from European Research Council.
2017: Highly Cited Researcher 2017 (in mathematics and in computer science) by Clarivate Analytics. See `https://clarivate.com/hcr/`.
2017: Miller Visiting Professor, UC Berkeley.
2017: Doctor Honoris Causa. Université Catholique de Louvain.
2016: James Francis Hannan Visiting Scholar. Michigan State University.
2016: Highly Cited Researcher 2016 (in mathematics) by Clarivate Analytics. See `https://clarivate.com/hcr/`.
2016: Fellow of the American Statistical Association.
2016: IAS Senior Scholar-in-Residence 2016, Institute for Advanced Studies/Park City Mathematics Institute.
2016: Read paper to the Royal Statistical Society, London ('Causal inference using invariant prediction: identification and confidence
bio-medicine intervals'). Joint with J. Peters and N. Meinshausen.
2015: Highly Cited Researcher 2015 (in mathematics) by Thomson Reuters. See `http://highlycited.com/'`.
2015: Forum Lectures, European Meeting of Statisticians 2015, Amsterdam.
2014: Highly Cited Researcher 2014 (in mathematics) by Thomson Reuters. See `http://highlycited.com/`.
2014: Distinguished Lecturer at the Chinese Academy of Sciences, Beijing.
2013: Winton Research Prize, London.
2012: Golden Tricycle Award (for most family-friendly supervisor), ETH Zürich.
2012: 14th Bahadur Memorial Lecture, University of Chicago.
2012: 5th Woodroofe Lecture, University of Michigan, Ann Arbor.
2011: 5th Pao-Lu Hsu Lecture, sponsored by Peking University and Microsoft Research Asia. Peking.
2010: Read paper to the Royal Statistical Society, London ('Stability Selection'). Joint with N. Meinshausen.
2010–2012: Co-Editor of the Annals of Statistics.
2009: Medallion Lecture, sponsored by the Institute of Mathematical Statistics; Joint Statistical Meetings, Washington.
2006: Fellow of the Institute of Mathematical Statistics (IMS).

1993: Award for Excellent Young Scientists from ETH Zürich.
1990: Pólya Prize: Best 'diploma' in mathematics from ETH Zürich.

Research interests
Statistics, Machine Learning, Computational Biology and Medicine
(ranging from methodology and mathematical theory to interdisciplinary research in biology and healthcare)

PhD students (main advisor)
1. 2002: Fiorenzo Ferrari, ETH Zürich.
2. 2002: Francesco Audrino, ETH Zürich.
3. 2004: Marcel Dettling, ETH Zürich.
4. 2006: Roman Lutz, ETH Zürich.
5. 2006: Nicolai Meinshausen, ETH Zürich.
6. 2008: Markus Kalisch, ETH Zürich.
7. 2008: Lukas Meier, ETH Zürich.
8. 2009: Corinne Dahinden, ETH Zürich.
9. 2010: Nicolas Städler, ETH Zürich.
10. 2011: Jürg Schelldorfer, ETH Zürich.
11. 2012: Bernd Fellinghauer, ETH Zürich.
12. 2012: Daniel Stekhoven, ETH Zürich.
13. 2012: Philipp Rütimann, ETH Zürich.
14. 2012: Sarah Gerster, ETH Zürich.
15. 2012: Jonas Peters, ETH Zürich.
16. 2013: Manuel Koller, ETH Zürich.
17. 2013: Alain Hauser, ETH Zürich.
18. 2015: Jacopo Mandozzi, ETH Zürich.
19. 2015: Christopher Nowzohour, ETH Zürich.
20. 2015: Anna Drewek, ETH Zürich.
21. 2016: Chenchen Zhu, ETH Zürich and EMBL Heidelberg.
22. 2016: Ruben Dezeure, ETH Zürich.
23. 2016: Jan Ernest, ETH Zürich.
24. 2016: Laura Buzdugan, ETH Zürich.
25. 2017: Sylvain Robert, ETH Zürich.
26. 2018: Shu Li, ETH Zürich.
27. 2019: Britta Velten, ETH Zürich and EMBL Heidelberg.
28. 2019: Niklas Pfister, ETH Zürich.
29. 2021: Solt Kovács, ETH Zürich.
30. 2021: Claude Renaux. ETH Zürich.
31. 2021: Domagoj Ćevid. ETH Zürich.
32. 2021: Nicolas Bennett, ETH Zürich.
33. 2022: An-phi Nguyen, ETH Zürich and IBM Rüschlikon.
34. 2023: Corinne Emmenegger. ETH Zürich.
35. 2024: Christoph Schultheiss, ETH Zürich.
36. ongoing: Juan Gamella, ETH Zürich.
37. ongoing: Malte Londschien, ETH Zürich.
38. ongoing: Cyrill Scheidegger, ETH Zürich.
39. ongoing: Michael Zellinger, Caltech and ETH Zürich.

40. ongoing: Markus Ulner, ETH Zürich.

Supervision of postdoctoral researchers

1. 2002–2005: Anja Wille
2. 2006–2009: Juliane Schäfer
3. 2008–2011: Nicole Bruni
4. 2012: Caroline Uhler
5. 2013–2014: Ewa Szczurek (joint with Niko Beerenwinkel)
6. 2013–2014: Jonas Peters
7. 2019–2021: Yuansi Chen
8. 2019–2022: Armeen Taeb
9. 2020–2022: Mona Azadkia
10. 2022–2023: Alexander Henzi
11. 2022–current: Michael Law
12. 2022–current: Xinwei Shen

Scientific advisory board committees

2020 – current: Co-Editor for Springer Series and Lecture Notes in Statistics.
2019 – current: Center for Statistical Science, Peking University.
2018 – current: MATRIX, international research institute in the mathematical sciences, Australia.
2009 – current: Centro Stefano Franscini, conference center of ETH Zürich, Ascona, Switzerland.
2018 – 2021: FMJH, Fondation Mathématique Jacques Hadamard, Paris.
2011: "Bioinformatics & Exploratory Biostatistics group" at Roche, Basel.

Selected keynote or special talks at Conferences

2024: Plenary Lecture at the International Symposium on Nonparametric Statistics (ISNPS 2024). Braga.
2023: Plenary Lecture at the 5th Conference of the Central European Network of the International Biometric Society (CEN 2023). Basel.
2023: Plenary Lecture at the 1st Joint Conference on Statistics and Data Science in China (JCSDS 2023). Beijing.
2022: Plneary Lecture at the 2nd Joint Congress of Mathematics co-organized by the American Mathematical Society, the European Mathematical Society and the Société Mathématique de France. Grenoble.
2022: Plenary Lecture at the Annual Meeting of the Israel Statistical Society. Tel Aviv.
2021: Distinguished Theme Seminar Series 2021, Purdue University (virtual).
2021: Plenary Lecture at the 8th European Congress of Mathematics. Portoroz, Slovenia (virtual).
2020: Plenary Lecture. Joint conference of the GMDS & CEN-IBS 2020. Berlin (virtual).
2019: Semi-plenary Lecture. International Congress on Industrial and Applied Mathematics 2019. Valencia.
2018: Invited Lecture at the International Congress of Mathematicians 2018.

Rio de Janeiro.
2018: Neyman Lecture. IMS-Vilnius meeting. Vilnius.
2018: Rothschild Lecture. Isaac Newton Institute. Cambridge.
2018: Keynote talk at 9th International Purdue Symposium on Statistics. Purdue University.
2017: Opening Lecture. International Meeting of the Psychometric Society (IMPS 2017). Zurich.
2017: Distinguished Speaker. IMS-China International Conference on Statistics and Probability 2017, Nanning, China.
2016: Plenary Lecture. International Conference on Robust Statistics (ICORS 2016), Geneva, Switzerland.
2016: Distinguished Lecturer. 4th IMS-Asian Pacific Rim Meeting, Hong Kong.
2015: Plenary Lecture 31st Conference on Uncertainty in Artificial Intelligence (UAI), Amsterdam, Netherlands.
2015: Forum Lectures, European Meeting of Statisticians 2015, Amsterdam, Netherlands.
2015: Sackler Colloquium "Drawing Causal Inference from Big Data", National Academy of Sciences (USA), Washington DC, USA.
2014: Plemary Lecture. Statistische Woche 2014, Hannover, Germany.
2014: Plenary Lecture. 21st CompStat conference, Geneve, Switzerland
2014: Plenary Lecture. 2nd ISNPS conference, Cadiz, Spain.
2014: Plenary Lecture. 8th PLS 2014 conference, Paris, France.
2014: Plenary Lecture. 17th International Conference on Artificial Intelligence and Statistics (AISTATS), Reykjavik, Iceland.
2012: Plenary Lecture. 5th ERCIM conference, Oviedo, Spain.
2011: Distinguished Speaker. IMS-China International Conference on Statistics and Probability 2011, Xian, China.
2010: Tutorial Lecture at 24th NIPS conference, Vancouver, Canada.
2010: Main Lectures. 39th Lunteren Stochastics Meeting, Lunteren Netherlands.
2010: Plenary Lecture. 23rd NORDSTAT, Voss, Norway.
2009: Plenary Lecture. XI CLAPEM conference, Caracas, Venezuela.
2009: Medallion Lecture (IMS) at JSM, Washington DC., USA.
2008: Plenary Lecture. useR 2008, Dortmund, Germany.

Publications

Complete list at: `http://stat.ethz.ch/~buhlmann/publications/`
See also Google Scholar at: `http://scholar.google.com/citations?user=3r-fWJwAAAAJ&hl=en`

Selected publications:

1. N. Meinshausen and P. Bühlmann (2006). High-dimensional graphs and variable selection with the Lasso. *Annals of Statistics 34*, 1436–1462.

2. N. Meinshausen and P. Bühlmann (2010). Stability selection. *Journal of the Royal Statistal Society: Series B (discussion paper) 72*, 417–473.

3. D.J. Stekhoven and P. Bühlmann (2012). MissForest – nonparametric missing value imputation for mixed-type data. *Bioinformatics 28*, 112–118.

4. J. Peters, P. Bühlmann and N. Meinshausen (2016). Causal inference using invariant prediction: identification and confidence intervals. *Journal of the Royal Statistical Society: Series B (discussion paper) 78*, 947–1012.

5. P. Bühlmann and S. van de Geer (2011). Statistics for High-Dimensional Data: Methods, Theory and Applications. *Springer Series in Statistics. Springer.* (556 pages).