dr. ir. Joaquin Vanschoren

Born June 1, 1981, Hasselt, Belgium

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https://joaquinvanschoren.github.io

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Professional Profile

Assistant professor of Machine Learning at the Eindhoven University of Technology. My passion is to empower everyone to use machine learning to make the world a better place. My research focuses on automating machine learning, as well as making it more open and collaborative. I founded OpenML.org, a popular online machine learning platform where scientists across disciplines can easily share data, code, models and experiments. I also develop algorithms that learn from all these experiments to recommend techniques and help people perform machine learning better and easier. I have a passion to associate, to connect what is not connected, to meet people from different backgrounds, to bring separate data sources, ideas and people together and create.

Professional Experience

- **Eindhoven University of Technology**
  - **Assistant Professor** Department of Mathematics and Computer Science — Jan 2014 - now
- **CityLife**
  - **Data Scientist** Large-scale recommender systems. 150,000+ users. — Jan 2013 - Dec 2013
- **Leiden University**
  - **Guest researcher**. Leiden Institute for Advanced Computer Science. — Oct 2013 - Oct 2017
  - **Post-doctoral Fellow** Leiden Institute for Advanced Computer Science. — Sep 2010 - Sept 2013
    Lecturer, NWO Project Lead, PhD Supervisor, Researcher
- **University of Leuven**
  - **Guest researcher**. Computer Science Department. — Sep 2010 - Sep 2016
  - **Post-doctoral Fellow**. Computer Science Department. — May 2010 - Sep 2010
  - **PhD Candidate**. Computer Science Department. — Aug 2005 - May 2010
    Original machine learning research on meta-learning, Teaching assistance

Education and Degrees

- **PhD in Engineering**, *University of Leuven, Belgium* — 17 May 2010
  - PhD thesis: "Understanding Machine Learning Performance with Experiment Databases"
    Data-driven analysis of machine learning techniques, the foundation of OpenML.org.
- **Master in Engineering: Computer Science**, *University of Leuven*, cum laude — 8 July 2005
  - Master's thesis: "Development of a framework for high-level perception", magna cum laude
    On bottom-up reconstruction and interpretation of visual scenes, used in face recognition systems.
- **High school education**
  - Sint Jan Berchmansinstituut Zonhoven: Latin-Mathematics — 1995-1999
  - Vrije Middenschool Zonhoven: Latin — 1993-1995

Competence Summary

- **Programming languages**: Python, R, Java, PHP, Javascript, C++, C#, Matlab
- **Languages**: English (proficient), Dutch (native), Spanish (native), French (fluent), German (basic)
- **Technologies**: Machine learning algorithms and systems (incl. deep learning), MapReduce/Spark, Web technology, Databases, Semantic Web
- **Software development**: Data structures, Algorithms, Design patterns. Agile, Scrum, Git.
  Open source development (OpenML), production-level recommender systems (CityLife app)
- **Leadership**: Research project leader, Open source project lead, PhD/MSc Supervisor, Conference chair.
- **Speaking and authorship**: University lecturer, (invited) speaker at many international conferences and workshops. Author of many scientific publications, grant applications and project reports.
- **International collaboration** with researchers and professionals from many universities and companies (Philips, Amazon, Microsoft, Yandex, KNIME, RapidMiner, Strukton)
- **Organization** of international scientific conferences and workshops: General chair (LION, Benelearn), PC chair (Discovery Science), Associate chair (ECML-PKDD), Workshop Chair of NIPS, ICML, ECML and ECAI workshops
- **Reviewing** for major scientific journals (MLJ, JMLR, DaMi, SWJ, COIN), programme committee member for large scientific conferences (NIPS, ICML, KDD, ECML-PKDD, IJCAI, IJCNN, ESWC).

References

Recommendations can also be found at http://www.linkedin.com/in/jvanschoren

- **Prof. dr. Mykola Pechenizkiy** — current superior
  Full professor, Eindhoven University of Technology, The Netherlands
  Phone: +31 40 247 26 02, e-mail: m.pechenizkiy@tue.nl
- **Prof. dr. ir. Hendrik Blockeel** — PhD promotor
  Full professor, University of Leuven, Belgium
  Phone: +32 16 32 76 43, e-mail: hendrik.blockeel@cs.kuleuven.be
- **Prof. dr. Geoff Holmes** — PhD supervisor
  Dean of the School of Computing and Mathematical Sciences, Waikato University, New Zealand
  Phone: +64 7 838 4405, e-mail: geoff@waikato.ac.nz

Other interests

Triathlon, Marathon running, Photography (published), Improvisational theater

Awards

- Microsoft Azure Research Award, July 2016 + July 2017
- Dutch Data Prize, Research Data Netherlands, Nov 2016
- Best Hadoop Application Award, SURFsara Hadoop day, 2010
- Best Demo Award, 17th European Conference on Machine Learning (ECML-PKDD), 2009

Grants

- Dutch Science Foundation (NWO) Commit2Data grant €854,045, Jul 2017
  - 'Dynamic Data Analytics through automatically Constructed Machine Learning Pipelines', Particip.
- DARPA Data Driven Discovery of Models program, €324,000, Apr 2017
  - 'AutoFlow: Automatic Workflow Construction and Optimization', Participant
- Microsoft Azure Research Award, €40,000, Sep 2016
  - 'A Cloud-Based Platform for Automated Machine Learning', Principal Investigator
- Dutch Science Foundation (NWO) Free Competition research grant, €240,000, Sep 2012 - Sep 2016
  - 'Massively Collaborative Data Mining', Principal Investigator
- EU PASCAL Harvest grant, €30,000, Aug 2012 - Feb 2013
  - 'MLOpen Machine Learning Platform', Principal Investigator

Invited Talks

- Spring Symposium (AI for collaborative data science), AAAI, Stanford, USA, Mar 2019
- AutoML Tutorial, NIPS, Montreal, Canada, Dec 2018
- MLOSS Workshop, NIPS, Montreal, Canada, Dec 2018
- AutoML Workshop, PRICAI, Nanjing, China, Aug 2018
- DEEM Workshop, SIGMOD, Houston, USA, Jun 2018
- National eScience Symposium, Amsterdam, The Netherlands, Oct 2017
- Reproducible Machine Learning workshop, ICML, Sydney, Australia, Aug 2017
- Big data tools for physics and astronomy workshop, Amsterdam, The Netherlands, Jun 2017
- Amazon Research, Berlin, Germany, Apr 2017 and Cambridge, UK, Feb 2017
- Challenges in Machine Learning Workshop, NIPS, Barcelona, Spain, Dec 2016
- Dutch Society for Pattern Recognition, Eindhoven, The Netherlands, Nov 2016
- IBM Watson Research Center, New York, USA, Jun 2016
- Machine Learning for High Energy Physics, Lund, Sweden, Jun 2016
- Open Data Science @ Sheffield workshop, Sheffield, UK, Dec 2015
- Horizon Talk, IDA, St Etienne, France, Oct 2015
- Statistical Computing (StatComp), Ulm, Germany, Jul 2015
- AutoML Workshop, ICML, Lille, France, Jul 2015
- European Conference on Data Analysis (ECDA), Bremen, Germany, Jul 2014

Video's available on *https://joaquinvanschoren.github.io*

Society Membership

- Open Machine Learning Foundation chairman, July 2018 - ...
- W3C ML-Schema Community Group co-chair, Oct 2015 - ...
- Dutch School for Information and Knowledge Systems (SIKS), Jan 2014 - ...

Scientific Service Activities (selection)

Conference organization:

- Program Chair, Discovery Science 2016, Limassol, Cyprus
- General Chair, Learning and Intelligent OptimizatioN Conference (LION 2016), Ischia, Italy
- Demo Chair, European Conference on Machine Learning (ECMLPKDD 2013), Prague, Czech Republic
- Program Chair, BeNeLearn 2010-2011, Leuven, Belgium and The Hague, The Netherlands

Conference Workshop chair:

- Meta-Learning, NIPS 2018
- Automatic Machine Learning, ICML 2016,2017,2018
- Automatic Machine Learning, ECMLPKDD 2017
- Meta-Learning and Algorithm Selection, ECMLPKDD 2015, ECAI 2014
- Learning from Unexpected Results, ECMLPKDD 2012, Bristol, UK
- Planning to Learn, ECAI 2012, Montpellier, France

Workshop chair:

- Open Machine Learning Workshops 2015-2018
- The Data Science Process, DALI 2017
- Configuration and Selection of Algorithms (COSEAL 2016), Eindhoven, The Netherlands

Conference Program Committee Member:

- SysML 2019
- Neural Information Processing Systems (NIPS 2016-2018) - Top 30% reviewer in 2018
- European Conference on Machine Learning (ECML-PKDD 2012-2017)
- European Conference on Artificial Intelligence (ECAI 2014-2016)
- ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD 2016)
- International Joint Conference on Neural Networks (IJCNN 2015)
- International Joint Conference on Artificial Intelligence (IJCAI 2015)

Journal referee for:

- Machine Learning Journal (MLJ)
- Journal of Machine Learning Research (JMLR)
- Data Mining and Knowledge Discovery (DaMi)

Research Visits

- University of Waikato, New Zealand (August 14-19, 2017)
- Robert Gordon University, Aberdeen, UK (August 9-12, 2015)
- University of Bournemouth, UK (February 16-19, 2015)
- University of Paris-Sud, France (November 3-7, 2014)
- University of Dortmund, Germany (January 27-31, 2014)
- University of Waikato, New Zealand (February-March 2011)
- Universities of Geneva and Zurich, Switzerland (June 14-18, 2010)
- University of Porto, Portugal (June 7-11, 2010)
- University of Aberystwyth, UK (July-August, 2009)
- Jozef Stefan Institute, Slovenia (July 4-11, 2009)
- University of Waikato, New Zealand (March-June, 2008)
- University of Indiana, USA (August 2004)

Academic Supervision

Doctoral Advisor for PhD Students

- Bilge Celik, Eindhoven University of Technology, 2018-...
- Pieter Gijsbers, Eindhoven University of Technology, 2017-...
- Chao Zhang, Eindhoven University of Technology, 2015-...
- Rafael Mantovani, PhD, University of Sao Paolo University, 2014-2018
- Jan van Rijn, PhD, Leiden University, 2012-2016

Advisor for PDEng Students (Professional Doctorates)

- Yandre Lozano, PDEng, Predictive Maintenance for Smart Buildings, TU Eindhoven, 2018-...
- Karthik Srinivasan, PDEng, Preventing Burglaries and Other Incidents, TU Eindhoven, 2014-2015.

MSc Thesis supervision
See *https://joaquinvanschoren.github.io*

Teaching Activities (selection)

Bachelor-level Teaching:

- Data Mining, Jheronimus Academy of Data Science (JADS), The Netherlands (2016 - 2017)
  - 1st Bach. Introduction to data mining and machine learning. Evaluation: 84% - among highest
- Web Technology, Eindhoven University of Technology, The Netherlands (2014 - 2018)
  - 2nd Bach. Theory and practice of web development. Evaluation: 72%
- Data Mining, Leiden University, The Netherlands (2011 - 2014)
  - 3rd Bach. Theory of machine learning and data mining techniques. Evaluation: 76%

Master-level Teaching:

- Data Mining, Jheronimus Academy of Data Science (JADS), The Netherlands (2018 -...)
  - 1st MSc. Theory and practice of machine learning
- Foundations of Data Mining, Eindhoven University of Technology, The Netherlands (2015 - 2017)
  - 1st MSc. Theory and practice of machine learning. Evaluation: 78% - among highest
- Web-scale Information Systems, Eindhoven University of Technology, The Netherlands (2014 - 2015)
  - 1st MSc. Developing scalable web architectures. Evaluation: 77%

Advanced courses for PhD students:

- Introduction to Machine Learning, Geilo Winter School, Norway (2017). 128 students.
- Data Mining for Data Scientists, Eindhoven University of Technology (2015). 30 students.

Conference Tutorials:

- Automatic Machine Learning (NIPS, 2018)
- Automatic Machine Learning (ECMLPKDD, 2017)
- Connecting R to the Machine Learning Platform OpenML (UseR, 2017)
- Meta-learning and Algorithm Selection (ECMLPKDD, 2015 and ECAI, 2014)

Publications

All full texts available on *https://joaquinvanschoren.github.io*

*(those with 25+ citations in **bold**)*

Refereed Articles (Journal and Conference papers)

1. van Rijn, J.N., Holmes, G., Pfahringer, B., Vanschoren, J. (2018) The online performance estimation framework: Heterogeneous Ensemble Learning for Data Streams. *Machine Learning* 107 (1), 149-176
2. Olier, I., Sadawi, N., Bickerton, G.R., Vanschoren, J., Grosan, C., Soldatova, L., King, R.D. (2018) Meta-QSAR: learning how to learn QSARs. *Machine Learning* 107 (1), 285-311
3. Abdulrahman, S, Brazdil, P., van Rijn, J.N., Vanschoren, J. (2018) Speeding up Algorithm Selection via Meta-learning and Active Testing. *Machine Learning* 107 (1), 79-108
4. Casalicchio, G., Hofner, B., Lang, M., Kirchhoff, D., Kerschke, P., Seibold, H., Bossek, J., Vanschoren, J., Bischl, B. (2017) OpenML: An R Package to Connect to the Networked Machine Learning Platform. *Computational Statistics* 32 (3), 1-15
5. Mantovani, R.G., Horvath, T., Cerri, R., Carvalho, A.P.L.F., Vanschoren, J. (2016) Hyper-parameter Tuning of a Decision Tree Induction Algorithm, *Brazilian Conference on Intelligent Systems (BRACIS 2016)*
6. Eerikainen, L.M., Vanschoren, J., Rooijakkers, M.J., Vullings, R., Aarts, R.M. (2016) Reduction of false arrhythmia alarms using signal selection and machine learning. *Physiological Measurement*, 37 (8), 1204-1216
7. **Bischl, B., Kerschke, P., Kotthoff, L., Lindauer, M., Malitsky, Y., Frechette, A., Hoos, H., Hutter, F., Leyton-Brown, K., Tierney, K., Vanschoren, J. (2016) ASlib: A Benchmark Library for Algorithm Selection. *Artificial Intelligence*, 237, 41-58**
8. Gao, B., Berendt, B. and Vanschoren, J. (2016) Towards understanding online sentiment expression. An interdisciplinary approach with subgroup comparison and visualization. *Social Network Analysis and Mining*, 6 (1), 68:1-68:16
9. van Rijn, J.N., Abdulrahman, S.M., Brazdil, P. and Vanschoren, J. (2016) On the Evaluation of Algorithm Selection Problems. *Machine Learning Conference of Belgium and The Netherlands*, 1-2.
10. van Rijn, J.N., Holmes, G., Pfahringer, B., Vanschoren, J. (2015) Having a Blast: Meta-Learning and Heterogeneous Ensembles for Data Streams. *IEEE Proceedings of ICDM 2015*, 1003-1008.
11. Vanschoren, J., Bischl, B., Hutter, F., Sebag, M., Kegl, B., Schmid, M., Napolitano, G., Wolstencroft, K., Williams, A.R, and Lawrence, N (2015) Towards a Data Science Collaboratory. *Lecture Notes in Computer Science* (IDA 2015), 9385, XIX-XXI
12. **van Rijn, J.N., Abdulrahman, S.M., Brazdil, P. and Vanschoren, J. (2015) Fast Algorithm Selection Using Learning Curves. *Lecture Notes in Computer Science* (IDA 2015), 9385, 298-309**
13. Eerikainen, L.M., Vanschoren, J., Rooijakkers, M.J., Vullings, R., Aarts, R.M. (2015) Decreasing the False Alarm Rate of Arrhythmias in Intensive Care Using a Machine Learning Approach. *IEEE Computing in Cardiology*, 42, 293-297
14. Vanschoren, J,. van Rijn, J.N. and Bischl, B. (2015) Taking machine learning research online with OpenML. *JMLR Workshop and Conference Proceedings* (BigMine 2015), 41, 1-4.
15. van Rijn, J.N., Holmes, G., Pfahringer, B., Vanschoren, J. (2015) Case Study on Bagging Stable Classifiers for Data Streams. *Machine Learning Conference of Belgium and The Netherlands*, 1-6.
16. Gao, B., Berendt, B. and Vanschoren, J. (2015) Who is more positive in private? Analyzing sentiment differences across privacy levels and demographic factors in Facebook chats and posts. *IEEE/ACM Proceedings of ASONAM 2015*, 605-610
17. Mantovani, R.G., Rossi, A.D.L, Vanschoren, J., Bischl, B., Carvalho A.C.P.L.F. (2015) To tune or not to tune: recommending when to adjust SVM hyper-parameters via Meta-learning. *IEEE Proceedings of the International Joint Conference on Neural Networks (IJCNN 2015)*, 1-8
18. Mantovani, R.G., Rossi, A.D.L, Vanschoren, J., Bischl, B., Carvalho A.C.P.L.F. (2015) Effectiveness of Random Search in SVM hyper-parameter tuning. *IEEE Proceedings of the International Joint Conference on Neural Networks (IJCNN 2015)*
19. **van Rijn, J.N., Holmes, G., Pfahringer, B. and Vanschoren, J. (2014) Algorithm Selection on Data Streams. *Lecture Notes in Computer Science* (Discovery Science), 8777, 325-336.**
20. **Vanschoren, J., van Rijn, J.N., Bischl, B. and Torgo, L. (2013) OpenML: networked science in machine learning. *ACM SIGKDD Explorations*, 15 (2), 49-60.**

21. **van Rijn, J., Bischl, B., Torgo, L., Gao, B., Umaashankar, V., Fischer, S., Winter, P., Wiswedel, B., Berthold, M.R., and Vanschoren, J. (2013) OpenML: A Collaborative Science Platform. *Lecture Notes in Computer Science* (ECML PKDD 2013), 8190, 645-649**
22. Vanschoren, J., Braun, M. and Ong, C.S. (2013) Open science in machine learning. *Proceedings of CLADAG 2013*, 462-465. ISBN: 9788867871179
23. van Rijn, J., Umaashankar, V., Fischer, S., Bischl, B., Torgo, L., Gao, B., Winter, P., Wiswedel, B., Berthold, M.R., and Vanschoren, J. (2013) A RapidMiner extension for Open Machine Learning. *Proceedings of RCOMM 2013*, 59-70. ISBN: 978-3-8440-2145-5
24. **Serban, F.*, Vanschoren, J.*, Kietz, J.U. and Bernstein, A. (2012) A Survey of Intelligent Assistants for Data Analysis. *ACM Computing Surveys*, 45 (3), Art. 31**
25. **Vanschoren, J., Blockeel, H., Pfahringer, B. and Holmes, G. (2012) Experiment Databases: A new way to share, organize and learn from experiments. *Machine Learning*, 87(2), 127-158**
26. Reutemann, P., Vanschoren, J. (2012) Scientific Workflow Management with ADAMS. *Lecture Notes in Computer Science* (ECML PKDD 2012), 7524, 833-837
27. Vespier, U., Knobbe, A.J., Nijssen, S., Vanschoren, J. (2012) MDL-Based Analysis of Time Series at Multiple Time-Scales. *Lecture Notes in Computer Science* (ECML PKDD 2012), 7524, 371-386
28. **Leite, R., Brazdil P., Vanschoren, J. (2012) Selecting Classification Algorithms with Active Testing. *Lecture Notes in Computer Science* (MLDM 2012), 7376, 117-13**1
29. Gao, B. and Vanschoren, J. (2011) Visualizations of Machine Learning Behavior with Dimensionality Reduction Techniques. *Machine Learning Conference of Belgium and The Netherlands*, 35-42.
30. Vespier, U., Knobbe, A., Vanschoren, J., Miao, S., Koopman, A., Obladen, B., and Bosma, C. (2011) Traffic Events Modeling for Structural Health Monitoring. *Lecture Notes in Computer Science* (IDA 2011), 7014, 276-387
31. **Vanschoren, J., Soldatova, S. (2010). Exposé: An Ontology for Data Mining Experiments. *Workshop on Third Generation Data Mining at ECML PKDD 2010*, 31-46.**
32. Vanschoren, J., Blockeel, H. (2009). A community-based platform for machine learning experimentation. *Lecture Notes In Computer Science* (ECML-PKDD 2009), 5782, 750-754 - Best demo award
33. Vanschoren, J., Pfahringer, B., Holmes, G. (2008). Learning from the past with experiment databases. *Lecture Notes in Artificial Intelligence* (PRICAI 2008), 5351, 485-496
34. Vanschoren, J., Blockeel, H., Pfahringer, B., Holmes, G. (2008). Organizing the world's machine learning information. *Comm. in Computer and Information Science* (ISOLA 2008), 17, 693-708
35. Vanschoren, J. (2008). Experiment databases for machine learning. *NIPS Workshop on Machine Learning Open Source Software at NIPS 2008.*
36. Vanschoren, J., Blockeel, H. (2008). Investigating classifier learning behavior with experiment databases. *Data Analysis, Machine Learning and Applications* (GfKL 2007), 421-428
37. **Blockeel, H.*, Vanschoren, J.* (2007). Experiment databases: Towards an improved experimental methodology in machine learning. *Lecture Notes in Computer Science* (ECML 2007), 4702, 6-17. (Best Demo Award)**
38. Vanschoren, J., Van Assche, A., Vens, C., Blockeel, H. (2007). Meta-learning from experiment databases: An illustration. *Machine Learning Conference of Belgium and The Netherlands*, 120-127.
39. Vanschoren, J., Blockeel, H. (2006). Towards understanding learning behavior. *Machine Learning Conference of Belgium and The Netherlands*, 89-96.

Refereed Workshop Articles

40. Publio, C.G.., Esteves, D., Lawrynowicz, A., Panov, P., Soldatova, L., Soru, T., Vanschoren, J., Zafar, H. (2018) ML Schema: Exposing the Semantics of Machine Learning with Schemas and Ontologies. *ICML Workshop on Reproducibility in Machine Learning (RML 2018)*
41. Zhu, Y., Aoun, M., Krijn, M., Vanschoren, J. (2018) Data Augmentation using Conditional Generative Adversarial Networks for Leaf Counting in Arabidopsis Plants. *BMVC Workshop on Computer Vision Problems in Plant Phenotyping (CVPPP 2018)*
42. Gijsbers, P., Vanschoren, J., Olson, R.S. (2017) Layered TPOT: Speeding up Tree-based Pipeline Optimization. *Proceedings of the 2017 ECMLPKDD AutoML Workshop.*
43. Lawrynowicz, A., Esteves, D., Panov. P., Soru, T., Džeroski, S., Vanschoren, J (2016) An Algorithm, Implementation and Execution Ontology Design Pattern. *ISWC Workshop on Ontology and Semantic Web Patterns: 1-12*
44. Bernard, H. F., Heinrich, A., Vanschoren, J. (2016) Improved driver sleepiness prediction with CASH. *European Data Forum 2016.*

45. Zhang, C., van Wissen, A., Lakens, D., Vanschoren, J., de Ruyter, B.E.R., IJsselsteijn, W.A. (2016) Anticipating habit formation: a psychological computing approach to behavior change support. *UbiComp Adjunct 2016*: 1247-1254
46. Bischl, B., Bossek, J., Casalicchio, G., Hofner, B., Kerschke, P., Kirchhoff, D., Lang, M., Seibold, H., Vanschoren, J. (2016) Connecting R to the OpenML project for Open Machine Learning. *useR Conference 2016*.
47. Abdulrahman, S, Brazdil, P., van Rijn, J.N., Vanschoren, J. (2015) Algorithm Selection via Meta-learning and Sample-based Active Testing. *CEUR Workshop Proceedings* (ECMLPKDD 2015 Workshop on Metalearning and Algorithm Selection), 1455, 55-66
48. Mantovani, R.G., Rossi, A.L.D., Vanschoren, J., Carvalho, A.C.P.L.F. (2015) Meta-learning Recommendation of Default Hyper-parameter Values for SVMs in Classification Tasks. *CEUR Workshop Proceedings* (ECMLPKDD 2015 Workshop on Metalearning and Algorithm Selection), 1455, 80-92
49. van Rijn, J.N., Vanschoren, J. (2015) Sharing RapidMiner Workflows and Experiments with OpenML. *CEUR Workshop Proceedings* (ECMLPKDD 2015 Workshop on Metalearning and Algorithm Selection), 1455, 93-103
50. Vukicevic, M., Radovanovic, S., Vanschoren, J., Napolitano, G., Delibasic, B. (2015) Towards a Collaborative Platform for Advanced Meta-Learning in Healthcare Predictive Analytics. *CEUR Workshop Proceedings* (MetaSel @ ECMLPKDD 2015), 1455, 112-114
51. Knobbe A.J., Meeng M. Vanschoren J., Rees Jones S., Merlo Penning S. (2015) Reconstructing Medieval Social Networks from English and Latin Charters. Population Reconstruction 2014
52. van Rijn, J.N., Holmes, G., Pfahringer, B. and Vanschoren, J. (2014) Towards Meta-learning on Data Streams. Workshop on Meta-learning and Algorithm Selection *CEUR Workshop Proceedings* (MetaSel @ ECMLPKDD 2014), 1201, 37-38.
53. van Rijn, J. and Vanschoren, J. (2013) OpenML: An Open Science Platform for Machine Learning. *Machine Learning Conference of Belgium and The Netherlands*, 99-100.
54. Vanschoren, J. (2012). The Experiment Database for Machine Learning. *CEUR Workshop Proceedings* (ECAI 2012 Workshop on Planning to Learn), 950, 30-37.
55. Vespier, U., Knobbe, A., Nijssen, S., Vanschoren, S. (2012). MDL-Based Identification of Relevant Temporal Scales in Time Series. *Workshop on Information Theoretic Methods in Science and Engineering, WITMSE 2012*.
56. Miao, S., Knobbe, A., Vanschoren, J., Vespier, U., Koopman, A., Cachucho, R., Chen, X. (2011). A Range of Data Mining Techniques to Correlate Multiple Sensor Types. *Dutch-Belgian Database Day*, Art.5.
57. Vanschoren, J., Soldatova, S. (2010). Collaborative Meta-Learning. *Planning to Learn workshop at ECAI 2010*, 37-46.
58. Vanschoren, J., Blockeel, H. (2009). Stand on the shoulders of giants: towards a portal for collaborative experimentation in data mining. *3rd Generation DM Workshop, ECML PKDD '09*, 88-99
59. Vanschoren, J., Blockeel, H., Pfahringer, B., Holmes, G. (2008). Organizing the world's machine learning information. *Workshop on Third Generation Data Mining at ECML PKDD 2008*.
60. Vanschoren, J., Blockeel, H., Pfahringer, B., Holmes, G. (2008). Experiment databases: Creating a new platform for meta-learning research. *Planning to Learn Workshop, ICML 2008*, 10-15.

Books

61. Hutter, F., Kotthoff, L., Vanschoren, J., (Eds.): Automatic Machine Learning: Methods, Systems, Challenges. Springer 2018

Book chapters

62. Lawrynowicz, A., Esteves, D., Panov. P., Soru, T., Džeroski, S., Vanschoren, J (2016) An Algorithm, Implementation and Execution Ontology Design Pattern. *In: Studies on the Semantic Web 25* (Hitzler. P., Gangemi, A., Janowicz, K., Krisnadhi, A., Presutti, V., eds.) IOS Press.
63. Vanschoren, J., Vespier, U., Miao, S., Cachucho, R. and Knobbe, A. (2013) Large-scale sensor network analysis. *In: Big Data Management, Technologies, and Applications* (Hu W.C., Kaabouch, N., eds.), IGI Global.
64. Vanschoren, J. (2011) Meta-learning architectures. *In: Meta-learning in Computational Intelligence* (N. Jankowski, W. Duch, K. Grabczewski, eds.), Springer.
65. **Berendt, B., Vanschoren, J. and Gao, B. (2011) Datenanalyse und -visualisierung. In: Handbuch Forschungsdatenmanagement (S. Büttner, H-C. Hobohm, L. Müller, eds.), Bock+Herchen.**

66. Vanschoren, J., Blockeel, H. (2010) Experiment Databases. *In: Inductive Databases and Constraint-Based Data Mining* (S. Dzeroski, B. Goethals, P. Panov, eds.), Springer.

Proceedings edited

67. Soldatova, L., Vanschoren, J., Ceci, M., Papdopoulos, G., (Eds.): Discovery Science 2018, *Lecture Notes in Artificial Intelligence, 11198, Springer.*
68. Hutter, F., Kotthoff, L., Vanschoren, J., (Eds.): Automatic Machine Learning 2016. Proceedings of the ICML Workshop on Automatic Machine Learning, *Proceedings of Machine Learning Research, 64.*
69. Festa, P., Sellmann, M., Vanschoren, J., (Eds.): Learning and Intelligent Optimization 2016, *Lecture Notes in Computer Science, 10079, Springer.*
70. Vanschoren, J., Brazdil, P., Soares, C., Kotthoff, L. (Eds.): Meta-learning and Algorithm Selection 2015. Proceedings of the ECMLPKDD Workshop on Meta-learning and Algorithm Selection, *CEUR Workshop Proceedings, 1455* (2015). Online CEUR-WS.org/Vol-1455.
71. Vanschoren, J., Brazdil, P., Soares, C., Kotthoff, L. (Eds.): Meta-learning and Algorithm Selection 2014. Proceedings of the ECMLPKDD Workshop on Meta-learning and Algorithm Selection, *CEUR Workshop Proceedings, 1201* (2014). Online CEUR-WS.org/Vol-1201.
72. Vanschoren, J., Brazdil, P., Kietz, J-U (Eds.): Planning to Learn 2012. Proceedings of the ECAI Workshop on Planning to Learn (PlanLearn 2012), *CEUR Workshop Proceedings, 950* (2012). Online CEUR-WS.org/Vol-950, urn:nbn:de:0074-560-7.
73. van der Putten, P.H.W, Veenman, C., Vanschoren, J., Israel, M., Blockeel, H. (Eds.): Proceedings of the 20th Annual Belgian-Dutch Conference on Machine Learning (BENELEARN 2011). The Hague, Universiteit Leiden (2011)

Dissertations

74. **Vanschoren, J. (2010). Understanding Machine Learning Performance with Experiment Databases. PhD Thesis, Katholieke Universiteit Leuven.**