

Novi Quadrianto

Date of birth: 04/11/1982

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Academic Positions

- 2014 – **Lecturer (US Equivalent Assistant Professor) in Machine Learning.** School of Engineering and Informatics, University of Sussex, UK.
School Chair: Diane Mynors
Developing machine learning methods and addressing interdisciplinary projects.
- 2012 – 2014 **Postdoctoral Researcher.** Engineering Department, University of Cambridge, UK.
Advisor: Zoubin Ghahramani
Developing nonparametric Bayesian methods for structured prediction and features learning.

Professional Services

- Associate Editor IEEE Trans. on Pattern Analysis and Machine Intelligence (Jan 2016–).
- Area Chair NIPS 2015.
- Journal Reviewer IEEE Trans. on Pattern Analysis and Machine Intelligence, Journal of Machine Learning Research, Machine Learning Journal, BMC Bioinformatics, PLoS ONE. (**selected**)
- Conference Reviewer/PC ICML, NIPS, AISTATS, ICCV/ECCV, CVPR, AAAI, and IJCAI. (**selected**)

Honours & Awards

- 2012 – 2014 **Newton International Fellowship, The Royal Society and The British Academy.** The value of award is £100,000 for project on *Nonparametric Bayesian Statistics for the Internet: Models and Algorithms*.
- 2013 – **Amazon AWS in Education Research (Machine Learning) Grant.** US\$ 17,500 in AWS credit.
- 2012 – 2015 **Wolfson College Junior Research Fellowship.** The three year fellowship comes with a research award of £700 annually.
- 2009 **Microsoft Research Fellowship.** The fellowship comes with a one time research award of US\$6,000.
- 2007 – 2011 **ANU-NICTA Tuition, Stipend, Assignment, and Supplementary Scholarship.** The scholarship covers the PhD and Master studies at ANU, Australia.

Education

- Jul. 2012 **Ph.D. in Machine Learning.** Computer Science Department. Australian National University, Australia. Thesis: *Learning for the Internet: Kernel Embeddings and Optimisation*.
Advisors: Alex Smola, Christoph Lampert, Dale Schuurmans, Tiberio Caetano, Wray Buntine.
Examiners: Francis Bach, Masashi Sugiyama, Tony Jebara.
- Dec. 2007 **Master in ICT.** Computer Science Department. Australian National University, Australia.
- Jun. 2005 **Bachelor in Electrical and Electronic Engineering (1st Class Honours).** Engineering Department. Nanyang Technological University, Singapore. Thesis: *Brain-Computer Interface*.
Advisors: Guan Cuntai and Wan Chunru.

Research Visits

- 2010 – 2012
14 Months Visiting Scientist. **IST Austria**, Klosterneuburg, Austria. Researching on multi-dataset and attribute-based representation for several computer vision problem. Host: Christoph Lampert.
- 2010
2 Months Visiting Scientist. **Fraunhofer IAIS**, Sankt Augustin, Germany. Researching on matrix decomposition for large scale applications. Host: Kristian Kersting.
- 2010
3 Months Visiting Scientist. **University of Alberta**, Edmonton, Canada. Working on large scale min-cost max-flow algorithm. Host: Dale Schuurmans.
- 2009
4 Months Research Intern. **Yahoo! Research**, Santa Clara, CA, US. Implementing Yahoo! page cache system. Host: Alex Smola and Kostas Tsoutsouloukalis.
- 2009
1 Month Visiting Scientist. **HIIT**, Helsinki, Finland. Exploring kernelized sorting based image browser. Host: Petteri Nurmi.

Publications

Journal papers

*With 5-year impact factors (ISI, 2012) of 6.144 and 4.284, respectively, **PAMI** and **JMLR** are ranked second and seventh in the area of Computer Science & Artificial Intelligence.*

- 2015 Sébastien Bratières, **Novi Quadrianto**, and Zoubin Ghahramani, Bayesian Structured Prediction using Gaussian Processes, IEEE Transactions on Pattern Analysis and Machine Intelligence (**PAMI**).
- 2015 **Novi Quadrianto** and Zoubin Ghahramani, A Very Simple Safe-Bayesian Random Forest, IEEE Transactions on Pattern Analysis and Machine Intelligence (**PAMI**).
- 2010 **Novi Quadrianto**, Alex J. Smola, Le Song, and Tinne Tuytelaars, Kernelized Sorting, IEEE Trans. on Pattern Analysis and Machine Intelligence (**PAMI**).
- 2010 W. P. Malcolm, **Novi Quadrianto**, and Lakhdar Aggoun, State Estimation Schemes for Independent Component Coupled Hidden Markov Models, Journal of Stochastic Analysis and Applications.
- 2009 **Novi Quadrianto**, Alex J. Smola, Tiberio S. Caetano, and Quoc V. Le, Estimating Labels from Label Proportions, Journal of Machine Learning Research (**JMLR**).

International conference papers

*All of my conference publications are at highly competitive conferences with less than 30% acceptance rate. With Google Scholar h5-median of 103 and 94, respectively, **ICML** and **NIPS** are the top 2 international conferences in Artificial Intelligence. While, with h5-median of 167, 138, and 96, respectively, **CVPR**, **ICCV**, and **ECCV** are the top 3 international conferences in Computer Vision & Pattern Recognition.*

- 2016 Viktoriia Sharmanska and **Novi Quadrianto**, Learning from the Mistakes of Others: Matching Errors in Cross Dataset Learning, Computer Vision and Pattern Recognition (**CVPR**).
- 2016 Viktoriia Sharmanska, Daniel Hernandez-Lobato, Jose Miguel Lobato, and **Novi Quadrianto**, Ambiguity Helps: Classification with Disagreements in Crowdsourced Annotations, Computer Vision and Pattern Recognition (**CVPR**).
- 2016 Chao Chen and **Novi Quadrianto**, Topographical Features of High-Dimensional Categorical Data and Their Applications to Clustering, International Conference on Machine Learning (**ICML**).
- 2016 Joseph Taylor, Viktoriia Sharmanska, Kristian Kersting, David Weir, and **Novi Quadrianto**, Learning using Unselected Features (LUF_e), International Joint Conference on Artificial Intelligence (**IJCAI**).

- 2014 Daniel Hernández-Lobato, Viktoriia Sharmanska, Kristian Kersting, Christoph H. Lampert, and **Novi Quadrianto**, Mind the Nuisance: Gaussian Process Classification using Privileged Noise, Advances in Neural Information Processing Systems (**NIPS**).
- 2014 Sébastien Bratières, **Novi Quadrianto**, and Sebastian Nowozin, Scalable Gaussian Process Structured Prediction for Grid Factor Graph Applications, International Conference on Machine Learning (**ICML**).
- 2013 **Novi Quadrianto**, Viktoriia Sharmanska, David Knowles, and Zoubin Ghahramani, The Supervised IBP: Neighbourhood Preserving Infinite Latent Feature Models, Uncertainty in Artificial Intelligence (**UAI**).
- 2013 Viktoriia Sharmanska, **Novi Quadrianto**, and Christoph H. Lampert, Learning to Rank Using Privileged Information, International Conference on Computer Vision (**ICCV**).
- 2012 **Novi Quadrianto**, Chao Chen, and Christoph H. Lampert, The Most Persistent Soft-Clique in a Set of Sampled Graphs, International Conference on Machine Learning (**ICML**).
- 2012 Viktoriia Sharmanska, **Novi Quadrianto**, and Christoph H. Lampert, Augmented Attribute Representations, European Conference on Computer Vision (**ECCV**).
- 2012 Tatiana Tommasi, **Novi Quadrianto**, Barbara Caputo, and Christoph H. Lampert, Beyond Dataset Bias: Multi-task Unaligned Shared Knowledge Transfer, Asian Conference on Computer Vision (**ACCV**).
- 2011 **Novi Quadrianto** and Christoph H. Lampert, Learning Multi-View Neighborhood Preserving Projections, International Conference on Machine Learning (**ICML**).
- 2010 **Novi Quadrianto**, Alex J. Smola, Tiberio S. Caetano, S.V.N. Vishwanathan, and James Petterson, Multitask Learning without Label Correspondences, Advances in Neural Information Processing Systems (**NIPS**).
- 2010 Gilbert Leung, **Novi Quadrianto**, Alex J. Smola, and Kostas Tsioutsoulis, Optimal Web-scale Tiering as a Flow Problem, Advances in Neural Information Processing Systems (**NIPS**).
- 2010 **Novi Quadrianto**, Kristian Kersting, Tinne Tuytelaars, and Wray L. Buntine, Beyond 2D-Grids: A Dependence Maximization View on Image Browsing, ACM International Conference on Multimedia Information Retrieval (**MIR**).
- 2009 **Novi Quadrianto**, James Petterson, and Alex J. Smola, Distribution Matching for Transduction, Advances in Neural Information Processing Systems (**NIPS**).
- 2009 **Novi Quadrianto**, Tiberio S. Caetano, John Lim, and Dale Schuurmans, Convex Relaxation of Mixture Regression with Efficient Algorithms, Advances in Neural Information Processing Systems (**NIPS**).
- 2009 **Novi Quadrianto**, Kristian Kersting, Mark D. Reid, Tiberio S. Caetano, and Wray L. Buntine, Kernel Conditional Quantile Estimation via Reduction Revisited, IEEE International Conference on Data Mining (**ICDM**).
- 2009 Akshay Asthana, Roland Goecke, **Novi Quadrianto**, and Tom Gedeon, Learning based Automatic Face Annotation for Arbitrary Poses and Expressions from Frontal Images Only, IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**).
- 2008 **Novi Quadrianto**, Le Song, and Alex J. Smola, Kernelized Sorting, Advances in Neural Information Processing Systems (**NIPS**).
- 2008 **Novi Quadrianto**, Alex J. Smola, Tiberio S. Caetano, and Quoc V. Le, Estimating Labels from Label Proportions, International Conference on Machine Learning (**ICML**).

Book chapters

- 2016 Viktoriaa Sharmanska and **Novi Quadrianto**. In the Era of Deep Convolutional Features: Are Attributes still Useful Privileged Data? Rogerio Feris, Devi Parikh, Christoph H. Lampert (Eds.), Springer.
- 2016 Viktoriaa Sharmanska and **Novi Quadrianto**, Learning using Privileged Information, Encyclopedia of Machine Learning and Data Mining, Claude Sammut and Geoff Webb (Eds.), Springer.
- 2013 **Novi Quadrianto** and Christoph H. Lampert, Kernel-based Learning, Encyclopedia of Systems Biology, Werner Dubitzky, Olaf Wolkenhauer, Kwang-Hyun Cho, Hiroki Yokota (Eds.), Springer.
- 2010 **Novi Quadrianto**, Kristian Kersting, and Zhao Xu, Gaussian Processes, Encyclopedia of Machine Learning, Claude Sammut and Geoff Webb (Eds.), Springer.
- 2010 **Novi Quadrianto** and Wray L. Buntine, Regression, Encyclopedia of Machine Learning, Claude Sammut and Geoff Webb (Eds.), Springer.
- 2010 **Novi Quadrianto** and Wray L. Buntine, Linear Regression, Encyclopedia of Machine Learning, Claude Sammut and Geoff Webb (Eds.), Springer.
- 2010 **Novi Quadrianto** and Wray L. Buntine, Linear Discriminant, Encyclopedia of Machine Learning, Claude Sammut and Geoff Webb (Eds.), Springer.

Workshop Organization

- 2016 The 1st Workshop on BeyondLabeler – Human is More Than a Labeler (co-located with IJCAI 2016 in New York City). Our invited speakers include Vladimir Vapnik (Facebook AI Research), Rogerio Feris (IBM Research), Michael Littman (Brown University), and Rich Caruana (Microsoft Research). For more information: <http://smileclinic.alwaysdata.net/ijcai16workshop/>.

Institutional Responsibilities

- 2016 – Informatics Convenor for MSc in Data Science
- 2014 – Informatics Placement Tutor

Teaching Activities and Supervision of Graduate Students

- 2016 – Computer Vision G6032 (\pm 20 UG students).
- 2015 – Machine Learning G6061 (\pm 90 UG students).
- 2014 – Machine Learning 934G5 (\pm 20 PG students).

Patent

- 2014 US Patent 8849775B2. Caching web documents in two or more caches. Assignee: Yahoo! Inc.