

prof. dr. M. C. Kaptein

CONTACT INFORMATION

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Principal Investigator
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SHORT RESEARCH SUMMARY

My research focusses on the development of novel statistical methods for personalization with applications in the social sciences. Initially, I worked on personalizing persuasive messages in e-health and e-commerce with prof. dr. Dean Eckles at Stanford University (now at MIT) and prof. dr. Panos Markopoulos at the TU/e. This work was published in highly influential journals such as the *Journal of Interactive Marketing* and the *International Journal of Human-computer Studies*. The work cumulated in a bestselling book called *Persuasion Profiling: how the internet knows what make you tick*.

Next, I became interested in theoretical and statistical properties of personalization strategies (or policies); I have worked on methods for evaluating and executing (personalized) sequential allocation policies. This work has (amongst others) been published in *Bayesian Analysis* and the *Journal of the Royal Statistical Society: Series C*.

Currently, I head the CP lab at JADS, consisting of 8 PhD students and one post-doc. The research is funded by a grant from CZ health-insurance, an NWO research talent grant, and various TiU and DSC/t grants. My students work in diverse areas of personalization ranging from personalized churn prevention, to personalized eHealth, to causal inference for personalization. Our lab has a strong focus on statistical and machine learning methods. My (former) PhD students have published work in influential journals such as the *Journal of Statistical Software* and *Computational Statistics & Data Analysis*.

ACADEMIC APPOINTMENTS

Note: Below I list the academic appointments that I have held over the years. I have also held several non-academic appointments; these are listed later on.

Professor “Data Science & Health”

August 2017 to present, .2Fte

Jheronimus Academy of Data Science, Den Bosch, the Netherlands & Tilburg University, Tilburg, the Netherlands.

- Professor by Special Appointment; Computational Personalization.

Principal Investigator

August 2016 to present

Jheronimus Academy of Data Science, Den Bosch, the Netherlands

- Group lead of the “Computational Personalization” research group (8 PhDs, 1 PostDoc).
- Please see www.nth-iteration.com.

Assistant Professor (Tenured)

February 2016 to present, .8Fte

Statistics and Research Methods, Tilburg University, Tilburg, the Netherlands.

- Currently outsourced as a PI at JADS (see Principal Investigator above).

Assistant Professor

August 2014 to January 2016, 1Fte

Artificial Intelligence, Radboud University, Nijmegen, the Netherlands.

Donders Centre for Cognition.

- Track leader of the Web & Language Master Track.

Assistant Professor

September 2012 to August 2014, .8Fte

Statistics and Research Methods, Tilburg University, Tilburg, the Netherlands.

Postdoctoral Researcher **September 2011 to December 2012**, .2Fte
Aalto School of Economics, Marketing Department, Helsinki, Finland.

Distinguished MediaX Visiting Scholar **2009-2011, 4-5 months a year**
Stanford University, Department of Communication, Stanford, CA, USA.
• Supervised by Prof. Clifford Nass.

PhD Student **September 2008 to March 2012**, 1Fte
Department of Industrial Design, Eindhoven University of Technology.
• Promotor: Prof. Emile Aarts, Co-promotors: Prof. Panos Markopoulos & Dr. Boris de Ruyter.

EDUCATION

Note: *Here I list the main educational programs I have been enrolled in and a selection of courses that I have followed over the years. I have omitted conference workshops, MOOCs, and short courses followed in recent years.*

Stanford University, Stanford, CA, USA.

Selected coursework, September 2009 to April 2011.

- During my stay as a distinguished MediaX visiting scholar at Stanford University I have attended numerous graduate level methods and statistics courses (e.g.): *Bayesian Statistics, Time Series Analysis, Multi-level and Hierarchical Models*.

Eindhoven University of Technology, Eindhoven, the Netherlands

PhD., Industrial Design, March 2012 (**graduated cum laude**).

- Thesis Topic: *“Personalized Persuasion in Ambient Intelligence”*.
- Promotor: Prof. Emile Aarts.
- Co-promotors: Prof. Panos Markopoulos & Dr. Boris de Ruyter
- Area of Study: Personalized persuasive communication.

PdEng., User System Interaction, September 2007.

- Thesis Topic: *“The digital workbook: Methods and applications of online contextmapping”*.
- Adviser: Prof. Panos Markopoulos.
- Area of Study: Usage of the contextmapping procedure—a participatory design method—in online environments.

University of Tilburg, Tilburg, the Netherlands

MS., Economic Psychology, June 2005.

- Thesis Topic: *“An Exploration of Fad Products and Explanations for their Unusually high Adoption Rates.”*
- Adviser: Prof. Fred van Raaij
- Area of Study: The emergence of Fads and Hypes. Quantitative analysis of factors relating to product adoption.

BS., Economic Psychology, August 2004.

- Adviser: Prof. Fred van Raaij
- Area of Study: Economic Psychology. General Psychology introduction, marketing communication, decision making.

Note: *I have an interdisciplinary track record. Most of my publications are in the fields of statistical science, communication, marketing, computer science, and human-computer interaction (HCI). Recently, I have also published in the health-domain. My h-index according to Google Scholar is 18, with an i10-index of 28. I have over 1350 citations. In total I have published 32 journal articles (20 as a first author and 4 as the sole author), 38 peer reviewed conference papers, 3 books, and 1 patent.*

- [1] Eckles, D. & Kaptein, M.C. (2018) Bootstrap Thompson Sampling and Sequential Decision Problems in the Behavioral Sciences. Accepted at *SAGE Open*.
- [2] Kaptein, M.C. (2019) A practical approach to sample size calculation for fixed populations. Accepted at *Contemporary Clinical Trials*.
- [3] Ippel, L., Kaptein, M.C., & Vermunt, J. (2019) Online Estimation of Individual-Level Effects using Streaming Shrinkage Factors. Accepted at *Computational Statistics and Data Analysis*.
- [4] Kruijswijk, J., van Emden, R., Parvinen, P. & Kaptein, M.C. (2019) StreamingBandit; Experimenting with Bandit Policies. Accepted at *The Journal of Statistics Software*.
- [5] Kaptein, M.C. (2019) Personalization in biomedical-informatics: Methodological considerations and recommendations. *Journal of biomedical informatics*, 90, 103088.
- [6] Ippel, L., Kaptein, M.C., & Vermunt, J. (2019) Estimating Multilevel Models on Data Streams L Ippel, MC Kaptein, *Psychometrika*, 1-24.
- [7] Streitz, N., Charitos, D., Kaptein, M.C. & Bhlen, M. (2019) Grand challenges for ambient intelligence and implications for design contexts and smart societies. *Journal of Ambient Intelligence and Smart Environments*, 11(1), 87-107.
- [8] Eckles, D. & Kaptein, M.C. (2018) Response to: Optimal treatment allocations in space and time for online control of an emerging infectious disease, *Journal of the Royal Statistical Society: Series C*, 67 (4), 777-778.
- [9] Kaptein, M.C., McFarland, R., & Parvinen, P. (2018) Automated Adaptive Selling, *European Journal of Marketing*, 52 (5/6), 1037-1059.
- [10] Kaptein, M.C. (2018) Customizing Persuasive Messages; the Value of Operative Measures, *Journal of Consumer Marketing*, 35, 2.
- [11] Kaptein, M.C., Van Emden, R. & Iannuzzi, D. (2017) Uncovering noisy social signals: using optimization methods from experimental physics to study social phenomena. *Plos ONE*
- [12] Ippel, L., Kaptein, M.C. ,& Vermunt, J. (2017) Dealing with data streams: an online, row-by-row, estimation tutorial. *Methodology: European Journal of Research Methods for the Behavioral and Social Sciences*.
- [13] Kaptein, M. C., Van Emden, R. & Iannuzzi, D. (2016) Tracking the decoy: Maximizing the decoy effect through sequential experimentation. *Palgrave Communications*, 2, Online first.
- [14] Mohammadi, A. & Kaptein, M.C. (2016) Efficient metropolis-hastings proposal mechanisms for bayesian regression tree models comment. *Bayesian Analysis*, 11, 3, 938–940.
- [15] Ippel, L., Kaptein, M.C. & Vermunt, J. (2016) Estimating random-intercept models on data streams. *Computational Statistics & Data Analysis*, 104, 169–182.
- [16] Kaptein, M.C., Parvinen, P. & Poyry, E. (2015) The Danger of Engagement: Behavioral Observations of Online Community Activity and Service Spending in the Online Gaming Context. *International Journal of Electronic Commerce*.

- [17] Kaptein, M.C., Markopoulos, P., de Ruyter, B. & Aarts, E. (2015). Personalizing Persuasive Technologies: Explicit and Implicit Personalization using Persuasion Profiles. *International Journal of Human Computer Studies*, 77, 38-51.
- [18] Vidotto, D., Vermunt, J. & Kaptein, M.C. (2015) Multiple Imputation of Missing Categorical Data using Latent Class Models: State of Art. *Psychological Test and Assessment Modeling*.
- [19] Kaptein, M.C. & Parvinen, P. (2014) Advancing E-Commerce Personalization: A Process Framework and Case Study. *International Journal of Electronic Commerce*, 19(3), 7-33.
- [20] Parvinen, P., Oinas-Kukkonen, H. & Kaptein, M.C. (2014) E-selling: a new avenue of research for service design and online engagement. *Electronic Commerce, Research and Applications*, online first: <http://www.sciencedirect.com>.
- [21] Kaptein, M.C., Markopoulos, P. & Nass, C. (2014). The effects of familiarity and similarity on compliance in social networks, *International Journal of Internet Marketing and Advertising*, 8, 222-238.
- [22] Kaptein, M. C. (2014). The Use of Thompson Sampling to Increase Estimation Precision *Behavior Research Methods*, online first: <http://link.springer.com/article/10.3758/s13428-014-0480-0>.
- [23] Kaptein, M. C. (2014). RStorm: Developing and Testing Streaming Algorithms in R *R-Journal*, 6(1), 123-132.
- [24] Kaptein, M. C., Fernandez, N., Castaneda, D. & Nass, C. (2013). Extending the Similarity-Attraction Effect: The Effects of When-Similarity in Mediated Communication. *Journal of Computer-Mediated Communication*, 19(3), 342-357.
- [25] Kaptein, M. C. & van Halteren, A. (2013). Adaptive Persuasive Messaging to Increase Service Retention. *Journal of Personal and Ubiquitous Computing*, 17(6), 1173-1185.
- [26] Kaptein, M. C. & Duplinsky, S. (2012). Combining Multiple Influence Strategies to Increase Consumer Compliance. *International Journal of Internet Marketing and Advertising*. 8(1), 32-53.
- [27] Kaptein, M. C. & Eckles, D. (2012). Heterogeneity in the Effects of Online Persuasion. *Journal of Interactive Marketing*, 26(3), 176-188.
- [28] Kaptein, M. C., de Ruyter, B., Markopoulos, P. & Aarts, E. (2012). Tailored Persuasive Text Messages to Reduce Snacking. *Transactions on Interactive Intelligent Systems*, 2(2), 45-63.
- [29] Kaptein, M. C., Eckles, D. & Davis, J. (2011). Envisioning Persuasion Profiles: Challenges for Public Policy and Ethical Practice. *ACM Interactions*, 18(5), 66-69.
- [30] Kaptein, M. C., Markopoulos, P., Ruyter, B. & Aarts, E. (2010). Two acts of social intelligence: the effects of mimicry and social praise on the evaluation of an artificial agent. *AI & SOCIETY*, 26(3), 261-273.
- [31] Kaptein, M. C., Markopoulos, P., Ruyter, B. & Aarts, E. (2009). Persuasion in ambient intelligence. *Journal of Ambient Intelligence and Humanized Computing*, 1(1), 43-56.
- [32] Kaptein, M. C., Weisscher, A., Terken, J. M. B. & Nelissen, H. (2009). Online contextmapping; using the opportunities of Web 2.0 for the contextmapping procedure. *CoDesign*, 5(4), 213-228.

- [33] Parvinen, P., Kaptein, M.C., Pyry, E. & Hamari, J. (2017). Introduction to Customer Analytics and Data-Led Omnichannel Commerce Minitrack. In *Proceedings of the 50th Annual Hawaii International Conference on System Sciences (HICSS)*, Hawaii, USA.
- [34] Pyry, E., Hietaniemi, N., Parvinen, P., Hamari, J. & Kaptein, M.C. (2017). Personalized Product Recommendations: Evidence from the Field. In *Proceedings of the 50th Annual Hawaii International Conference on System Sciences (HICSS)*, Hawaii, USA, January 4-7. Best paper nominee.
- [35] Kaptein, M.C., van Emden, D. & Iannuzzi, D. (2017). Lock-in and Human Behavior: Experimental Physics for the Social Sciences. In *Proceedings of Physics at Veldhoven*, poster presentation.
- [36] Kaptein, M.C. (2016) Using generalized linear (mixed) models in hci. In *Modern Statistical Methods for HCI*. Springer International Publishing, pp. 251274.
- [37] Robertson, J. & Kaptein, M.C. (2016) Improving statistical practice in hci. In *Modern Statistical Methods for HCI*. Springer International Publishing, pp. 331348.
- [38] Robertson, J. & Kaptein, M.C. (2016) An introduction to modern statistical methods in hci. In *Modern Statistical Methods for HCI*. Springer International Publishing, pp. 114.
- [39] Kaptein, M.C. & Kruijswijk, J. (2016) Streamingbandit: A platform for developing adaptive persuasive systems. In *Proceedings of the International Workshop on Personalization in Persuasive Technology (PPT16)*, Salzburg, Austria.
- [40] Berkovsky, S., Kaptein, M.C. & Zancanaro, M. (2016) Adaptivity and personalization in persuasive technologies. In *Proceedings of the International Workshop on Personalization in Persuasive Technology (PPT16)*, Salzburg, Austria.
- [41] Kaptein, M.C. (2016) Treatment Personalization using Bayesian Decision Theory. Poster presented at *the International Society of Bayesian Analysis 2016*.
- [42] Kaptein, M.C. & Kruijswijk, J. (2016) StreamingBandit: A platform for developing adaptive persuasive systems. Poster presented at *Persuasive 2016*.
- [43] Siebeling, J., van der Putten P & Kaptein, M.C. (2016) Do Warriors, Villagers, and Scientists Decide Differently? The Impact of Role on Message Framing. In *Proceedings of INTETAIN 2016*. (best paper award)
- [44] Kaptein, M.C. & Iannuzzi, D. (2015) Lock in Feedback for stochastic optimization. In *proceedings of Benelearn 2015*.
- [45] Kaptein, M.C. (2015) Formalizing Customization in Persuasive Technologies. In *proceedings of Persuasive 2015*.
- [46] Kaptein, M.C. & Parvinen, P. (2014), Real-Time Adaptation of Influence Strategies in Online Selling. *proceedings of the 2014 47th Hawaii International Conference on System Sciences (HICSS)* pp.3100-3109
- [47] Kaptein, M.C. (2013). Latent Class Models in Marketing: Trading off Classification Certainty and Costs of Data Collection. *Abstract accepted at IFCS 2013*.
- [48] Parvinen, P. & Kaptein, M.C. (2013). Theory vs. Data-Driven Learning in Future E-Commerce *In the proceedings of HICSS 2013*.
- [49] Kaptein, M.C., Nass, C., Parvinen, P. & Markopoulos, P. (2013). Nice to Know You: Familiarity and Influence in Social Networks. *In the proceedings of HICSS 2013*.

- [50] Kaptein, M.C. & Parvinen, P. (2012). Dynamically Adapting Sales Influence Tactics in E-Commerce. *Proceedings of the 2012 Academy of Marketing Science Annual Conference* .
- [51] Kaptein, M.C. & Parvinen, P. (2012). Sequential Learning of Optimal Sales Prices. *Proceedings of the 2012 Academy of Marketing Science Annual Conference* .
- [52] Lindholm, J., Kaptein, M.C. & Parvinen, P. (2012). The Price of Customer Engagement: How Substitution in Online Services Leads to Decreasing Revenues *Proceedings of the 2012 Academy of Marketing Science Annual Conference* .
- [53] Kaptein, M. C. & Robertson, J. (2012). Rethinking Statistical Methods for HCI. In *Proceedings of the 2011 annual conference on Human factors in computing systems, CHI 2012*.
- [54] Zwinderman, M.J., Shirzad, A., Ma, X., Bajracharya, P., Sandberg, H. & Kaptein, M.C. (2012) Phone row: a smartphone game designed to persuade people to engage in moderate-intensity physical activity. in *Proceedings of the 7th international conference on Persuasive Technology*.
- [55] Sakai, R., Peteghem, S. van, Sande, L. van de, Banach, P. & Kaptein, M. C. (2011). Personalized Persuasion in Ambient Intelligence: the APStairs System. In *Proceedings of Ambient Intelligence (AmI) 2011*. Amsterdam.
- [56] Lindholm, J., Kaptein, M. C. & Parvinen, P. (2012). The Trade-off between Online Community Activity and Consumption. In *Proceedings of HICSS 2012*. Hawaii.
- [57] Kaptein, M. C. (2011). Adaptive Persuasive Messages in an E-commerce Setting: The use of Persuasion Profiles. In *Proceedings of ECIS 2011*. Helsinki.
- [58] Kaptein, M. C., & Eckles, D. (2011). Magnitude and Structure of Heterogeneity in the Effects of Influence Strategies. In *Proceedings of Persuasive Technology 2011*. Ohio.
- [59] Kaptein, M. C., Duplinsky, S. & Markopoulos, P. (2011). Means based adaptive persuasive systems. In *Proceedings of the 2011 annual conference on Human factors in computing systems (pp. 335-344)*. New York, NY, USA: ACM.
- [60] Kaptein, M. C., Lacroix, J. & Saini, P. (2010). Individual Differences in Persuadability in the Health Promotion Domain. In T. Ploug, P. Hasle, & H. Oinas-Kukkonen (Eds.), *Persuasive Technology (pp. 94-105)*. Springer Berlin / Heidelberg. (best paper award)
- [61] Kaptein, M. C. & Eckles, D. (2010). Selecting Effective Means to Any End: Futures and Ethics of Persuasion Profiling. In T. Ploug, P. Hasle, & H. Oinas-Kukkonen (Eds.), *Persuasive Technology (pp. 82-93)*. Springer Berlin / Heidelberg.
- [62] Scherini, T., Melo, P., van Craenendonck, T., Zou, W. & Kaptein, M. C. (2010). Enhancing the sleeping quality of partners living apart. In *Proceedings of the 8th ACM Conference on Designing Interactive Systems - DIS 2010 (pp. 171-179)*. New York, New York, USA: ACM Press.
- [63] Kaptein, M. C., Nass, C. & Markopoulos, P. (2010). Powerful and consistent analysis of likert-type ratingscales. In *Proceedings of the 28th international conference on Human factors in computing systems - CHI 2010 (pp. 2391-2401)*. New York, New York, USA: ACM Press.
- [64] Kaptein, M. C., de Ruyter, B., Markopoulos, P. & Aarts, E. H. L. (2009). Simple Ways to Make Friends. In *Proceedings of the 8th International Workshop on Social Intelligence*.

- [65] Kaptein, M. C., de Ruyter, B., Markopoulos, P. & Aarts, E. (2009). Measuring the Subjective User Experience. In *Proceedings of the 12th IFIP TC 13 International Conference - INTERACT* (pp. 944-945).
- [66] Kaptein, M. C., de Ruyter, B., Markopoulos, P. & Aarts, E. (2009). Persuading you: Individual differences in susceptibility to persuasion. In *Proceedings of the 12th IFIP TC 13 International Conference - INTERACT* (pp. 24-28). Uppsala, Sweden: ACM Press.
- [67] Soute, I., Kaptein, M. C. & Markopoulos, P. (2009). Evaluating outdoor play for children. In *Proceedings of the 8th International Conference on Interaction Design and Children - IDC 2009* (p. 250). New York, New York, USA: ACM Press.
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- [69] Al Mahmud, A., Kaptein, M. C., Moran, O., Van De Garde-Perik, E. & Markopoulos, P. (2007). Understanding Compliance to Privacy Guidelines Using Text-and Video-Based Scenarios. In *Proceedings of HumanComputer Interaction INTERACT 2007* (pp. 156-168). Springer Berlin / Heidelberg.
- [70] Romero, N., Szóstek, A. M., Kaptein, M. C. & Markopoulos, P. (2007). Behaviours and Preferences when Coordinating Mediated Interruptions : Social and System influence. In *Proceedings of CSCW 2007* (pp. 123-132). Kluwer Press.
- ARXIV SUBMISSIONS [71] Mohammadi, R., Pratola, M. & Kaptein, M.C. (2019) Continuous-Time Birth-Death MCMC for Bayesian Regression Tree Models. <https://arxiv.org/abs/1904.09339>
- [72] van Emden, R. & Kaptein, M.C. (2018) Contextual: Evaluating Contextual Multi-Armed Bandit Problems in R. <https://arxiv.org/abs/1811.01926>
- [73] Kaptein, M.C., & Ketelaar P. (2018) Maximum likelihood estimation of a finite mixture of logistic regression models in a continuous data stream. <http://arXiv:1802.10529>
- [74] Kaptein, M.C., van Emden, R., and Iannuzzi, D. (2016) Investigation of the concept of beauty via a lock-in feedback experiment. <http://arXiv:1607.08108>
- [75] Kaptein, M.C. & Kruijswijk, J. (2016). StreamingBandit: Developing Adaptive Persuasive Systems. <http://arxiv.org/abs/1602.06700.pdf>
- [76] Kaptein, M.C. & Iannuzzi, D. (2015). Lock in Feedback in Sequential Experiments. <http://arxiv.org/pdf/1502.00598.pdf>
- [77] Eckles, D. & Kaptein, M.C. (2014). Thompson Sampling with the Online Bootstrap. <http://arxiv.org/abs/1410.4009>
- PATENTS [78] Van Halteren, A. T., Lacroix, J. P. W., Geleijnse, G., Pijl, M. J., Saini, P. K., Kaptein, M.C., Ferron, J.L.G. & Holmes, R. (2013). Coaching system that builds coaching messages for physical activity promotion. U.S. Patent Application 14/056,152.
- BOOKS [79] Kaptein, M.C. & van den Heuvel, E. (2019) *Statistics for Data Scientists*. Springer, Berlin-Heidelberg. UPCOMING 2019.
- [80] Kaptein, M.C. (2019) *Hallo Wereld, Hallo Computer*. Business Contact, Amsterdam.
- [81] Kaptein, M.C. & Robertson, J. (2016) *Modern Statistical Methods for Human Computer Interaction*. Springer, Berlin-Heidelberg.
- [82] Kaptein, M.C. (2012). *Digitale Verleiding: Hoe beïnvloedingsprofielen de online marketing op z'n kop zetten*. Business Contact, Amsterdam, the Netherlands.

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- [84] Parvin, P., Kaptein, M.C., & Paterno, F. (2019) Personalized Real-time Anomaly Detection and Health Feedback for Older Adults. Submitted to: *Journal of Ambient Intelligence and Smart Environments*.
- [85] van Emden, R. & Kaptein, M.C. (2019) Contextual: Evaluating Contextual Multi-Armed Bandit Problems in R. Submitted to: *Journal of Machine Learning Research*.
- [86] Kruijswijk, J., Boeing-Messing, F., van Emden, R. & Kaptein, M.C. (2019) Bandits with Dependent Observations. Submitted to: *Computational Statistics and Data Analysis*.
- [87] van der Burg, J., Aziz, A., Kaptein, M.C., Breteler, M., Jansen, J., van Vliet, L., Winkeler, D., van Anken, A., Kasteleyn, & M. Chavannes, N. (2019) Long-term Effects of Telemonitoring on Healthcare Usage in Patients with Heart Failure and COPD. Submitted to: *Journal of Medical Internet Research*.
- OTHER PUBLICATIONS [88] Kaptein, M.C. (2018). *Computational Personalization; Data science methods for personalized health*. Inaugural address at the University of Tilburg.
- [89] Kaptein, M.C. (2012). *Personalized Persuasion in Ambient Intelligence*. PhD. thesis at the Eindhoven University of Technology.
- [90] Kaptein, M.C. (2007). *The Digital Workbook: Methods and Applications of Online Contextmapping*. PdEng. thesis at the Eindhoven University of Technology
- [91] Kaptein, M.C. (2005). *An Exploration of Fad Products and Explanations for their Unusually high Adoption Rates*. Master Thesis at the University of Tilburg.
- MEDIA **Note:** Here I list a number of my appearances in the popular media; this list is not at all complete but gives an impression of the impact that I have made outside the academic world.

Featured in popular media (selection):

- Various articles reviewing my book “Hallo Wereld, Hallo Computer” (2019). (e.g., [link](#))
- Various articles based on my inaugural address (2018) (e.g., [link](#))
- Professional speaker on Data Science / Machine learning for “The Next Speaker” (2015-now)
- Speaker for “De Universiteit van Nederland” (2015) ([link](#)), public lecture broadcasted on national television.
- Personalized Persuasion (Volkskrant – 2014) ([link](#))
- Persuasion profiling (Wired – 2011) ([link](#))
- Interview Persuasion Profiling (Blink – 2012) ([link](#))
- Interview on “Digitale Verleiding” (Managementboek – 2012) ([link](#))

GRANTS **Note:** Throughout my career I have been active in applying for grants and I have managed to secure (or contributed to securing) close to 2 million Euro’s in funding. Below I list my current open grant applications and the my approved grant applications.

- UNDER REVIEW: NWO Zwaartekracht

Co-application in grant application “Fairness in the Data Society.”
Currently in second round (interviews).

- GRANTED: TiU UniversiteitsFonds

Grant to support a Post doc project in joint supervision with Prof. Dr. Inge Bongers: “Artificie intelligentie in Serious gaming ter verbetering van zelfbewustzijn bij chronische lage rugpijn.”
By the University of Tilburg, 2018 (300k).

- GRANTED: NWO Research Talent

Grant to support a PhD project in joint supervision with dr. Joris Mulder: “Making the most of clinical trials: Increasing efficiency using novel Bayesian methods for information sharing within and between trials. ”

By the NWO, 2018 (300k).

- GRANTED: TiU Data Science PhD grant

Grant to support a PhD project in joint supervision with dr. Aurelie Lemmens: “Churn and sequential decision making.”

By the University of Tilburg, 2017 (300k).

- GRANTED: ERC writing grant

Grant to support writing ERC starting grant application

By the University of Tilburg, 2016 (15k).

- GRANTED: FOM Valorisation grant

Grant for work on Lock-in Amplification.

PI: Prof. Dr. Davide Iannuzzi (VU, Amsterdam). July 2015 (40k).

- GRANTED: Donders Centre for Cognition Student Assistant Grant

Grant for a student assistant for software development. November 2014 (5k).

- GRANTED: K2, Tekes Strategic Research initiative

(PI: Petri Parvinen)

Contributed to writing the proposal. Proposal funded my Post Doc position (487k).

- GRANTED: Aalto visiting Scholar Travel Grant

“Excellent visitors grant”, February 2012.

Visit to Aalto University school of Economics to lecture on the topic of persuasion profiling (25k).

- GRANTED: Philips / Stanford Media X scholarship grant

Partly funded my PhD project

Awarded by Philips research 2009 (100k).

INTERNATIONAL
ACTIVITIES

Note: *Throughout my academic career I have studied, worked, and collaborated abroad. Here I single out a number of my visits abroad as well as my positions abroad.*

Mar-Jun 2018: Visited by prof. dr. Matthew Pratola

Ohio State, Ohio, USA. Worked on paper called: Continuous-time BD-MCMC for Regression Trees.

Aug 2017: Visited prof. dr. Dean Eckles

Sloan School of Management, MIT, Cambridge, USA. Worked on bootstrap Thompson sampling.

Feb-Dec 2015: Collaboration with prof. dr. Judy Robertson

University of Edinburgh, UK. Working on book Modern Statistical Methods for HCI. Occasional visits / meetings.

May 2015: Visited dr. Evan Karapanos

Madeira Interactive Technologies Institute, Portugal. Work on persuasive technologies.

Jun 2014: Visited Facebook Core Data Science team

Palo Alto, CA, USA.

2012-2013: Worked as a Post-doc at the Aalto school of economics

Aalto school of economics, Helsinki, Finland.

2010-2012: Distinguished visiting researcher at the CHIME lab of Prof Clifford Nass

Stanford University (Stanford, CA, USA)

TEACHING
EXPERIENCE

Note: Ever since 2003, when I first started as a student assistant supporting statistics and research method courses at Tilburg University, I have been an active teacher. I have taught large scale course (> 300 students), I have independently developed several new courses at both the Bachelor and Master level, and I have won several awards for my teaching. Furthermore, I have been active in teaching innovations (e.g., “flip the classroom”). I hold a BKO.

- Modeling**

Role: Responsible lecturer.

Course content: Statistical methods, modeling, inference.

Location: JADS Den Bosch.

Additional comments: I developed this course from scratch for the pre-master program at JADS. I actively experimented with “flip-the-classroom” concept and I used video lectures.

September 2018 to current
- Data Mining**

Role: (co-) Responsible lecturer.

Course content: Data mining & machine learning methods.

Location: Tilburg University & Eindhoven University of Technology.

Additional comments: Together with Joaquin Verschoren I developed this Bachelor course from scratch. The course was well-evaluated, and we received an “outstanding teacher” award.

September 2016 to January 2017
- Data Challenge**

Role: (co-) Responsible lecturer.

Course content: Interactive course for mining Twitter data.

Location: Tilburg University & Eindhoven University of Technology.

Additional comments: This innovative, group-work, course was developed from scratch by Dirk Fahland and myself for the Bachelor Data Science. The course was well-evaluated, and we received an “outstanding teacher” award.

September 2016 to January 2017
- Data Statistics**

Role: (co-) Responsible lecturer.

Course content: Statistics and modeling introduction.

Location: Tilburg University & Eindhoven University of Technology.

Additional comments: I developed this course from scratch together with Edwin van den Heuvel for the Bachelor Data Science. The lecture notes will be published as a book (“Statistics for Data Scientists”) by Springer in 2019.

September 2016 to current
- AI at a Webscale**

Role: Responsible lecturer

Course content: Machine learning methods, Reinforcement learning, dealing with large datasets.

Location: Radboud University, Nijmegen.

Additional comments: I developed this Master-level course from scratch. The course was very well evaluated: 8.5 out of 10.

August 2014 to February 2016
- Multi-level models for categorical data**

Role: Responsible lecturer

Course content: Multi-level modeling.

Location: Tilburg University.

Additional comments: This Research Master-level course was an intense, 8 week, course with a small group of students and was well-evaluated.

September 2012 to August 2014
- Analysis and Construction of Questionnaires**

Role: Responsible lecturer

Course content: Questionnaire design and analysis.

Location: Tilburg University.

Additional comments: I taught this Bachelor level course to over 300 students. The course was well-evaluated (4.3 out of 5), and served to obtain my BKO.

September 2012 to August 2014

- **Persuasive Technology** August 2011 to September 2016
Role: Responsible lecturer
Course content: Persuasive technology and UX design
Location: Eindhoven University of Technology.
Additional comments: *This week long, intensive course (full-time) ran several years within the PdEng. program User-System Interaction.*
- **Sales Management** From October 2011 to April 2013
Role: Lecturer / instructor
Course content: Sales management and online selling
Location: Aalto school of economics, Helsinki, Finland.
- **Quantitative Analysis Methods** April 2007 to August 2010
Role: Responsible lecturer
Course content: Data analysis and applied usage of SPSS
Location: Eindhoven University of Technology.
Additional comments: *This course was part of the PdEng. program User-System Interaction.*
- **Statistics and Research Methods (various)** August 2003 to August 2005
Role: Student assistant / TA
Course content: Various statistical methods courses.
Location: Tilburg University.

STUDENT
SUPERVISION

Note: *Throughout my academic career I have actively, and successfully, supervised a large number of students. I have supervised over 10 BSc. student (at Stanford, Tilburg, Nijmegen), and over 20 MSc. students (Tilburg, Nijmegen, JADS). Of these, two students graduated cum laude. I have successfully completed the supervision of one PhD student, and I currently supervise 8 PhD students in my lab. All my Ph.D. students are currently “on track”.*

Hongyi Chen MSc.

Ph.D. Student on Bayesian model averaging for causal inference. JADS Ph.D. Defense planned September 2023.
Hongyi has successfully submitted one workshop abstract and is currently nearing the completion of his first manuscript.

Lingjie Shen MSc.

Ph.D. Student on personalized treatment allocation in oncology. CSC grant. Defense planned September 2023.
Lingjie actively collaborates with IKNL and is nearing the completion of her first manuscript.

Xynthia Kavelaars MSc.,

Ph.D Student on Bayesian adaptive trials. NWO Talent Grant. Defense planned September 2023.
Xynthia currently has finished her first manuscript on Bayesian adaptive trials with multiple outcome measures.

Zoltan Puha MSc.,

Ph.D. Student churn prediction and sequential learning. TiU DSc/t grant. Defense planned September 2023.
Zoltan has successfully submitted abstracts to two conferences and has a working paper on active experimentation for churn management.

Bas Willemse MSc.,

Ph.D. Student eHealth effectiveness and personalization. CZ funding. Preliminary thesis title: *“The health telescope: data science methods for studying e-Health effectiveness”*. In progress. Defense planned September 2022.
Bas has completed his first manuscript describing the protocol of the health-telescope and has obtained ERB approval for this large panel study.

Ylva Hendriks MSc.,

Ph.D. Student eHealth adoption. TiU IMPACT grant. Preliminary thesis title: “*e-Health adoption and personalization*”. In progress. Defense planned September 2022.

Ylva has conducted two empirical studies concerning the choice process of eHealth applications.

Robin van Emden MSc.,

Ph.D. Student on bandit algorithms. JADS Ph.D. Defense planned September 2022.

Robin is a part-time PhD student but has already submitted work to the journal of machine learning research and is nearing the completion of a manuscript for BMJ.

Jules Kruijswijk MSc.,

Ph.D. Student Sequential decision making. TiU Ph.D. Preliminary thesis title: “*Hierarchical, dependent, and nested bandit problems*”. Defense planned September 2020.

Jules has published one paper in the Journal of Statistical Software, and currently has two manuscripts ready for submission.

Lianne Ippel MSc.,

Ph.D. Student Research Methods and Statistics. TiU Ph.D. Thesis “*Online Estimation of Treatment Heterogeneity*”. Graduated September 2017.

Lianne successfully defended her Ph.D. and published four articles based on her dissertation in various, high-impact journals (e.g., Psychometrika, Computational Statistics and Data Analysis).

**PROFESSIONAL
SERVICE**

Note: *I have always been active within the academic community: I am an associate editor for two journals, and I am a frequent reviewers. Also, I have organized / contributed to organizing various conferences and workshops. Here I provide a selection of my activities.*

Editorial Services (Selected)

- Associate editor for Behaviour & Information Technology (TBIT). 2017 - now.
- Associate editor for Electronic Commerce Research and Applications (ECRA). 2016 - now.

Referee Service (Selected)

- *Psychological Methods*
- *International Journal of Electronic Commerce*
- *Communications in Statistics*
- *International Conference System Sciences (HICSS)*.
- *Journal of Interactive Marketing*.
- *British Journal of Mathematical Psychology*.
- *International Conference on Human Computer Interaction (CHI)*.
- *International Conference on Persuasive Technology (Persuasive)*.
- *Transaction on Interactive Intelligent Systems*.
- *Personal and Ubiquitous Computing*.

Organizing committee member for Persuasive 2016,2017,2019

- Workshop chair.
- Chair of session on Modeling and Methods.

Organizing committee member for HICSS 2015,2016,2017

- Workshop & session chair.

Organizer iWAPS 2012

- Organizer of mini-conference at Philips Research.

PROFESSIONAL
EXPERIENCE &
APPOINTMENTS

Note: *I have held several appointments outside the academic world. I am currently an advisor (formally or informally) to a number of companies (Xomnia b.v., Conversionmob b.v., MediaMachine Oy., etc.). Below I list my larger non-academic appointments.*

De Verhalenmarkt, Amsterdam, the Netherlands

Advisor to the board, scientific advisor

December 2016 to now

- Startup aimed to improve freelance journalism
- Responsible for recommendation systems and back-end technology
- Secured > 1 million Euro's in funding round from Adessium early 2018

PersuasionAPI / Science Rockstars, Amsterdam, the Netherlands

Founder, Owner, and Chief Scientist

October 2011 to December 2015

- Founder of a startup together with Arjan Haring, Jay de Groot, and Sjoerd Mulder.
- Provides an API for a set of machine learning algorithms to dynamically adapt influence strategy selection to individual customers.
- Company sold to Webpower B.V. in November 2014.
- Clients (e.g.): UPC, Booking.com, Rovio, KLM, NIBC, ING, G-Star, etc.

Philips Research, Eindhoven, the Netherlands

Research Scientist

September 2008 to August 2012

- Member of the Brain Body and Behavior Group
- Research projects in collaboration with Philips DirectLife aimed at improving the performance of their persuasive technology (the Philips Activity Monitor)
- Supervisor: Dr. Boris de Ruyter

De Vos en Jansen Marktonderzoek, Nijmegen, the Netherlands

Research Development Manager

September 2007 to September 2008

- Responsible for the development of new standardized research methods.
- Software engineer writing the online analysis software of the company. Implementing (e.g.) linear regression and analysis of variance in PHP.
- Supervisor: Drs. Ronald Jansen

Vodafone Group R&D, Maastricht, the Netherlands

Customer Insight Specialist

January 2007 to September 2007

- Member of the Customer Insight Group
- Development and implementation of digital research tools

SOFTWARE
DEVELOPMENT

Note: *My students and I have always been active developing and disseminating software.*

- `ssev` author of a package for computing sample sizes for finite populations. *Released January 2019.*
- `contextual` co-author of package for offline bandit evaluation. *Released September 2018.*
- `StreamingBandit` co-author of a Python REST server for bandit policies. *Released January 2018.*
- `oFMLR` author of a package to estimate online finite mixtures of logistic regression models. *Released January 2016.*
- `RStorm` author of a package for the development of online algorithms based on the design of Storm. *Released September 2013.*
- `nParLD` package for non-parametric statistics. Provided an online interface to the package for CHI 2011. *Released May 2011.*

PUBLIC SPEAKING (SELECTION)	<p>Note: <i>I am an active presenter at several academic and commercial conferences and have given numerous talks at Universities both nationally and internationally. Below I list a selection of my talks.</i></p> <ul style="list-style-type: none"> • Academic (e.g.): <ul style="list-style-type: none"> • Keynote speaker at: <i>Etmaal voor communicatie</i>, 2017, <i>Dutch national pediatrics convention</i>, 2017, <i>Persuasive 2016 Workshop on Personalized Persuasion</i>, <i>Ambient Intelligence</i> 2014, <i>Persuasive</i> 2012. • Speaker at: <i>CPDP</i>, 2018, <i>IKNL</i>, 2017, <i>DSC/t</i> 2016, <i>IFCS</i> 2013, <i>HICSS</i> 2013, <i>Persuasive</i> 2009, 2010, <i>CHI</i> 2010, 2011, 2012, <i>Interact</i> 2009. • Non-academic (e.g.): <ul style="list-style-type: none"> • Keynote speaker at: <i>Consumentenbond</i>, 2019, <i>Johnson & Johnson</i>, 2018, <i>AFAS live</i>, 2017, <i>Digital Marketing</i>, 2015, <i>The Webanalytics conference</i>, 2013, <i>Neuro Marketing World Forum</i> 2013. • Speaker at: <i>TEDxTilburg</i>, 2012, <i>Philips MediaX Summer Sessions</i> 2010, <i>TEDxHU</i> 2011, <i>Design for Conversion</i> 2011, <i>Digital Marketing Life</i> 2012. and many others. • Speaker for “De Universiteit van Nederland” (October 2014). Public lecture series on research methods and statistics broadcasted on national television.
AWARDS	<p>Note: <i>Throughout my career I have been the recipient of a number of awards honoring my scientific work.</i></p> <p>2016: Best Paper Award at Intertain 2016</p> <ul style="list-style-type: none"> • For paper entitled: “<i>Do Warriors, Villagers, and Scientists Decide Differently? The Impact of Role on Message Framing</i>”. Together with Broekhuijsen, M. & van der Putten, P. <p>2013: Outstanding Doctoral Research Award at BCSI 2013</p> <ul style="list-style-type: none"> • For paper entitled: “<i>Pricing new Products with Pay-What-You-Want</i>”. Together with Poyry, E. & Parvinen, P. <p>2013: Best Doctoral Thesis TU/e (Industrial Design) 2012</p> <ul style="list-style-type: none"> • Best doctoral thesis: “<i>Personalised Persuasion in Ambient Intelligence</i>.” <p>2010: Best Paper Award Persuasive 2010</p> <ul style="list-style-type: none"> • Best paper award for the paper entitled: “<i>Individual Differences in Persuadability in the Health Promotion Domain</i>” <p>2005: Unilever Research Prize 2005</p> <ul style="list-style-type: none"> • Best master thesis 2005 for the thesis “<i>An Exploration of Fad Products and Explanations for their Unusually high Adoption Rates</i>.”
REFERENCES	References available upon request.
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