

Thom Badings



// Personalia

First name
T.S. (Thom)

Surname
Badings

Nationality
Dutch

Date of birth
July 17th, 1995

E-mail address
thom.badings@ru.nl

// Expertise

Holistic problem solving

Mathematical modeling

Verification and optimization

Programming (Python, MATLAB)

// Hobbies

Playing water polo

Composing / playing music

Developing websites

// Education

- Aug 2017 - Oct 2019** Master Industrial Engineering and Management, Cum Laude, Faculty of Science and Engineering, University of Groningen, The Netherlands
Average grade 8.7 - Graduation project concluded with mark 9.5. Specialization: Smart Systems in Control and Automation
- Aug 2013 - July 2017** Bachelor Industrial Engineering and Management, Faculty of Science and Engineering, University of Groningen, The Netherlands
Average grade 7.8 - Specializations: (a) Product and Process Technology, (b) Production Technology and Logistics
- Feb 2014 - July 2016** Honours College Bachelor programme, University of Groningen, The Netherlands
Average grade 8.4
- Aug 2007 - July 2013** Pre-university secondary education (VWO), Meander College, Zwolle
Specialization: science and technology (natuur & techniek); Final paper about research on factors of skill and luck in Texas Hold 'em Poker, concluded with mark 9.4

// Work experience

- Sep 2020 - Today** PhD candidate, Radboud University
Involved as PhD candidate and academic researcher in the PrimaVera consortium on Predictive Maintenance
- Feb 2020 - Aug 2020** Consultant, power system analysis, DNV GL
Tasks included:
- Identifying market opportunities, developing existing services, writing commercial offers, and establishing new services;
- Developing new tools or models to optimize dispatch decisions
- May 2019 - Dec 2019** Graduate intern & junior consultant, DNV GL
Graduation project at DNV GL Oil & Gas in Groningen, which was continued for two more months, after the internship was finished in October 2019
- Sep 2018 - May 2019** Assistant in course development, University of Groningen
Involvement in the development of new courses for the first year of the Bachelor programme of Industrial Engineering and Management
- Sep 2014 - July 2018** Teaching assistant, University of Groningen
For multiple courses including Global Supply Chain Management, Algorithmics, Signals and Systems, and Orientation to IEM
- Aug 2007 - July 2013** Various jobs as all-round web developer
Including jobs as web designer, programmer, and text writer

// Secondary activities

- Sep 2017 - Oct 2018** Vice-chairman of G.S.Z.C. De Walvisch (water polo club)
Full year board function
- Sep 2015 - Oct 2016** Treasurer of G.S.Z.C. De Walvisch
Full year board function; subsequently included a three-year membership of the audit committee
- Sep 2014 - Jan 2016** General member of the IEM Programme Committee
Included the role as student representative in the IEM Evaluation Committee

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// Dissertations

- 1) Badings, T.S. (2019), *MSc Thesis, "Buildings-to-Grid Integration for Demand-Side Flexibility in Power Systems with Uncertain Generation,"* University of Groningen.
Awarded with grade 9 out of 10
Link: <http://fse.studenttheses.ub.rug.nl/id/eprint/19378> (open access)
- 2) Badings, T.S. (2019), *MSc Design Project, "Data Validation and Reconciliation for the Assessment of Gas Transport Systems,"* DNV GL Oil & Gas Groningen, University of Groningen.
Awarded with grade 9.5 out of 10
Link: <http://fse.studenttheses.ub.rug.nl/id/eprint/21127>

// Publications

- 1) Badings, T.S., Rostampour, V. and Scherpen, J.M.A. (2019), "Distributed Building Energy Storage Units for Frequency Control Service in Power Systems," *IFAC Workshop on Control of Smart Grid and Renewable Energy Systems*, June 2019.
Link: <https://doi.org/10.1016/j.ifacol.2019.08.190> (open access)
- 2) Rostampour, V., Badings, T.S. and Scherpen, J.M.A. (2019), "Buildings-to-Grid Integration with High Wind Power Penetration," *2019 IEEE 58th Conference on Decision and Control (CDC)*, December 2019.
Link: <https://doi.org/10.1109/CDC40024.2019.9030242>
- 3) Badings, T.S. and Van Putten, D.S. (2020), "Data Validation and Reconciliation for Error Correction and Gross Error Detection in Multiphase Allocation Systems," *Journal of Petroleum Science & Engineering*, 195.
Link: <https://doi.org/10.1016/j.petrol.2020.107567>
- 4) Rostampour, V., Badings, T.S. and Scherpen, J.M.A. (2020), "Demand Flexibility Management for Buildings-to-Grid Integration with Uncertain Generation," *Energies*, 13(24).
Link: <https://doi.org/10.3390/en13246532> (open access)
- 5) Thom Badings, Arnd Hartmanns, Nils Jansen & Marnix Suilen (2021), "Balancing Wind and Batteries: Towards Predictive Verification of Smart Grids," *To appear in NFM 2021*.
Link: <https://arxiv.org/pdf/2101.12496.pdf> (open access)
- 6) Thom Badings, Nils Jansen, Hasan Poonawala & Marielle Stoelinga (2021), "Filter-Based Abstractions with Correctness Guarantees for Planning under Uncertainty," *arXiv preprint arXiv:2103.02398*.
Link: <https://arxiv.org/pdf/2103.02398.pdf> (open access)