

Curriculum Vitae



Personal details

Title(s)	Prof.dr.ir.
First name	Dick
Surname	den Hertog
Date of birth	4 February 1967

Master's degree

University	Technical University Delft, Faculty of Technical Mathematics and Informatics
Date of graduation	1989
Topic	Technical Mathematics, specialisation Operations Research Title MSc thesis: Interior point methods for linear programming
Distinction	Cum Laude

Doctorate

University	Technical University Delft, Faculty of Technical Mathematics and Informatics
Date of graduation	1992
Topic	Operations Research Title dissertation: Interior point approach to linear, quadratic and convex programming: algorithms and complexity
Distinction	Cum Laude

Professional affiliations

1989-1992	PhD student, Faculty of Technical Mathematics and Informatics, Technical University Delft
1992-1995	Consultant Operations Research at CQM
1995-1998	Senior Consultant Operations Research at CQM
1998-2000	Top Consultant Operations Research at CQM
2000-2020	Full Professor Operations Research, School of Economics and Management, Tilburg University

2002-2006	Coordinator Operations Research track of Business Graduate School, School of Economics and Management, Tilburg University
2006-2010	Vice-dean Research and Director CentER, School of Economics and Management, Tilburg University
2016-2019	Scientific Director <i>Data Science Center Tilburg (DSC/t)</i>
2017-2019	Leader of TiU Impact Theme "Creating Value from Data"
2019-present	Visiting Professor MIT, Cambridge, US – 7 weeks per year
2020-present	Full Professor Operations Research, Amsterdam Business School, University of Amsterdam
2022-present	Science To Impact Director of <i>Analytics for a Better World Institute</i>

Awards

1989	Delft University Fund Award for best faculty master thesis
1994	Finalist A.W. Tucker Prize of the Mathematical Programming Society, Ann Arbor
2000	EURO Best Applied Paper Award, Budapest (with H.P. Stehouwer)
2001	Teaching Quality Award (School level)
2003	Best Teacher Award (School level)
2004, 2005	Docent of the year (Departmental level)
2013	INFORMS Franz Edelman Award for dike height optimization project
2015	Research Valorization Award (School level)
2017	IISE Best Paper Award
2017	Best Teacher Data Expert Program (Professional Learning)
2021	INFORMS Franz Edelman Award for food supply chain UN World Food Programme.

Grants

2002	Grant from SamenwerkingsOrgaan Brabantse Universiteiten for PhD student Bart Husslage (200,000 euro)
2008	NWO Mozaiek grant for PhD student Mohammed Chahim (220,000 euro)
2009	NWO Graduate Program grant (800,000 euro)
2012	EU Marie Curie ITN Action "Mixed Integer Nonlinear Optimization" for PhD student Ahmadreza Marandi (225,000 euro)
2013	NWO Grant Free Competition for PhD student Jianzhe Zhen (200,000 euro)
2013	NWO Research Talent for PhD student Krzysztof Postek (160,000 euro)

2014	NWO Research Talent for PhD student Frans de Ruiter (160,000 euro)
2017	NWO Research Talent for PhD student Ernst Roos (214,000 euro)
2019	NWO SGW Open Competition PhD grant (252,000 euro)
2020	ENW-groot Grant, Main Applicant, with University of Amsterdam, TU Delft, Tilburg University, and CWI (2.5 million euro)
2020	EU grant for PhD in RAPTOR project (250,000 euro)
2021	ASF Grant (9,000 euro) for sustainability research
2021	Grant from Data Science Center UvA for Data Scientist
2021	Sustainability grant (6,400 euro) for developing cases in course Analytics for a Better World
2021	NWO grant for PhD position on optimizing infrastructure for hydrogen-based energy (250,000 euro)
2021	Outside-In PhD grant from Uva-FEB

PhD thesis supervision

PhD students	- Mevlude Ebru Angun (Turkey) – 2004
- year of defense	- Lonneke Driessen (Netherlands) – 2006
	- Bart Husslage (Netherlands) – 2006
	- Erwin Stinstra (Netherlands) – 2006
	- Gamal Elabwabi (Sudan) – 2007
	- Alex Siem (Netherlands) – 2008
	- Katya Vladislavleva (Russia) – 2008
	- Gijs Rennen (Netherlands) – 2009
	- Elleke Janssen (Netherlands) – 2010
	- Ozge Ozdemir (Turkey) – 2013
	- Mohammed Chahim (Netherlands) – 2013
	- Ihsan Yanikoglu (Turkey) – 2014
	- Bram Gorissen (Netherlands) – 2014
	- Ehsan Mehdad (Iran) – 2015
	- Krzysztof Postek (Poland) – 2017
	- Marleen Balvert (Netherlands) – 2017
	- Ahmadreza Marandi (Iran) – 2017
	- Frans de Ruiter (Netherlands) – 2018
	- Jianzhe Zhen (China) – 2018
	- Ernst Roos (Netherlands) - 2021
	- Stefan ten Eikelder (Netherlands) - 2021

Current PhD students

- Koen Peters (Netherlands)
 - Valentijn Stienen (Netherlands, per September 2018)
 - Wouter van Eekelen (Netherlands, per September 2019)
 - Jorn Baayen (Netherlands, per November 2019)
 - Danique de Moor (Netherlands, per January 2020)
 - Meike Reusken (Netherlands, per May 2020)
 - Donato Maragno (Italy, per November 2020)
 - Merel Wemelsfelder (Netherlands, per September 2020)
 - Parvathy Krishnan (India, per Spring 2021)
 - Justin Starreveld (Netherlands, per September 2021)
 - Zihang Qiu (China, per September 2021)
 - Britt van Veggel (Netherlands, per January 2022)
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Journal editor**2000-2006**Editor for *STATOR***2000-2011**Associate editor for *Operations Research Letters***2008-2011**Associate editor for *Journal of Industrial and Management Optimization***2012-2019**Associate editor for *Management Science* – area Optimization**2012-present**Associate editor for *Operations Research* – area Optimization**2017-present**Associate editor for *INFORMS Journal on Optimization***Other academic activities****1989-1992**

Member of "Committee for Science", Technical University Delft

1990-1992

Member Board of Dept. Stochastics, Statistics and Operations Research, Technical University Delft

1989-1990

Member of organizing committee of symposium "Interior Point Methods for Linear Programming: Theory and Practice", Scheveningen, January 18-19

1994-1998

Secretary Board of the Dutch Operations Research Society

2000

Member jury A.W. Tucker Prize 2000 of Mathematical Programming Society

2000, 2002, 2006

Member of organizing committee of HPOPT 2000, HPOPT 2002 and HPOPT 2006

2000-2003

Member jury for the VVS thesis prize

2002

Chairman Wim Bogers Stichting conference

2002-2005

Chairman Wim Bogers Stichting

2004

Chairman Program Committee Operations Research

2005-2006

Chairman Education Committee, Tilburg School of Economics and Management, Tilburg University

2008	Member SIAG/Opt Prize 2008 Committee
2012-2016	Board member of "Dutch Network on the Mathematics of Operations Research (LNMB)"
2016-2020	Chairman of "Dutch Network on the Mathematics of Operations Research (LNMB)"
2016-2020	Research Coordinator Operations Research group, TiSEM
2018-2020	Board member of the Dutch Big Data Alliance
2020	Member Farkas Prize of INFORMS Optimization Society
2020-2021	Organizer Worldwide <i>Robust Optimization Webinar</i> (>180 subscriptions)
2020-present	Co-organizer Worldwide <i>Analytics for a Better World Webinar</i> (>630 subscriptions) (together with D. Bertsimas, MIT)
2020-present	Co-organizer Worldwide <i>Analytics for Practitioners Webinar</i> (> 400 subscriptions) (together with D. Bertsimas, MIT)
2021-present	Head of Operations Management group at Amsterdam Business School

Main research interests

		publications
1989-1992	Interior Point Methods	[1-7,9-12,B1, R1-R5]
1992-2000	Practical projects	[13,18,26,C1-C3,P1-P3]
2000-2011	Derivative Free Optimization	[13-21,23-24,27-33,35-36,38-43,P4-P7]
	Applied research	[25,34,45-47]
2011-present	Robust Optimization	[48-51,55-57,59-60,62,63,65-73,75-77,80-81,83-85,87-89 R8,R10-R12,R14-R22]
	Applied research	[52-54,58,61,64,74,78-79,82,86,88,90,91,R13,R17]
2020-present	Optimization with Machine Learning	[R9]

Examples of applied projects

- **Configuration of telephone exchanges for AT&T (1992-1993)**
 - Publications: [C1]
- **Simulation-based optimization of different parts of the Philips TV (1994-1999)**
 - This work has been awarded with the "EURO Best Applied Paper Award" (2000).
 - Publications: [13]
- **Optimization of the European physical distribution structure of Philips Consumer Electronics (1995)**
 - Publications: [C2]
- **Optimal maintenance schedule for the Dutch rail infrastructure (1997-1999)**
 - Publications: [18,26]
- **Dike height optimization for the Dutch Government (2008 – 2016)**
 - Final results have been accepted by House of Parliament, and now stated in the Dutch Water Act.
 - Estimated savings: more than 7 billion euros.
 - Awarded with the INFORMS Franz Edelman Prize (2013)
 - Publications: [53,54,64,74]
- **Optimization in radiotherapy (2004 – current)**
 - Publications: [25,34,45-47,52,58,61,78,79,82,88,91,R13]
- **Optimal food supply chain for World Food Program (2016 – current)**
 - Optimization model has been applied to Yemen, Syria, Iraq, Ethiopia, and several countries in Africa.
 - Publication: [86,R17]
- **Optimization of health facility locations (2020 – current)**
 - In cooperation with the World Bank
 - Especially for the countries Timor-Leste and Vietnam.

Publication List

Journal papers:

[100] MAD dispersion measure makes extremal queue analysis simple

Den Hertog, D., Van Leeuwaarden, J.S.H. (2022), To appear in *INFORMS Journal on Computing*.

[99] Adjustable robust treatment-length optimization in radiation therapy

Ten Eikelder, S., Ajdari, A., Bortfeld, T., Den Hertog, D. (2022) To appear in *Optimization and Engineering*.

[98] Disjoint bilinear programming: a two-stage robust optimization perspective

Zhen, J., Marandi, A., den Hertog, D., Vandenberghe, L. (2022) To appear in *INFORMS Journal on Computing*.

[97] Improving Tractability of Real-Time Control Schemes via Simplified -Lemma

G. Banjac, J. Zhen, D. den Hertog, J. Lygeros (2022) To appear in *IEEE Transactions on Automatic Control*.

[96] Tight tail probability bounds for distribution-free decision making

Roos, E., Brekelmans, R., Van Eekelen, W., Den Hertog, D., Van Leeuwaarden, J. (2022) To appear in *European Journal on Operational Research*.

- [95] A Reformulation-Linearization Technique for Optimization over Simplices
A. Selvi, D. den Hertog, W. Wiesemann, (2022) To appear in *Mathematical Programming*.
- [94] Convex maximization via adjustable robust optimization
A. Selvi, A. Ben-Tal, R. Brekelmans, D. den Hertog, (2022) To appear in *INFORMS Journal on Computing*.
- [93] Extending the scope of robust quadratic optimization
Marandi, A., Ben-Tal, A., den Hertog, D., Melenberg, B. (2022) To appear in *INFORMS Journal on Computing*.
- [92] Robust optimization for models with uncertain SOC and SDP constraints
Zhen, J., De Ruiter, F.J.C.T., den Hertog, D. (2022) To appear in *INFORMS Journal on Computing*.
- [91] Conic formulation of fluence map optimization problems
Ten Eikelder, S., Ajdari, A., Bortfeld, T., Den Hertog, D. (2021) *Physics in Medicine & Biology*, 66(22), 225016.
- [90] Optimal depot locations for humanitarian logistics service providers using robust optimization
Stienen, V., Wagenaar, J., den Hertog, D., Fleuren, H. (2021), *Omega*, 104, 102494.
- [89] Probabilistic guarantees in Robust Optimization: a general methodology
Bertsimas, D., Den Hertog, D., Pauphilet, J. (2021) *SIAM Journal on Optimization*, 31(4), 2893-2920.
- [88] Robust dose-painting-by-numbers vs. nonselective dose escalation for non-small cell lung cancer patients
S.F. Petit, S. Breedveld, J. Unkelbach, D. den Hertog, M. Balvert (2021), *Medical Physics* 48(6):3096-3108.
- [87] A distributionally robust analysis of the program evaluation and review technique
Roos, E.R., den Hertog, D. (2021), *European Journal on Operational Research*, 291(3), 918-928.
- [86] The nutritious supply chain: Optimizing humanitarian food assistance
Peters, K., Fleuren, H., den Hertog, D., Kavelj, M., Silva, S., Goncalves, R. (2021), *INFORMS Journal on Optimization*, 3(2), 200-226.
- [85] A universal and structured way to derive dual optimization problem formulations
K. Roos, M. Balvert, B.L. Gorissen, D. den Hertog, (2020) *Informs Journal on Optimization*, 2(4), 229-255.
- [84] Optimal treatment plan adaptation using mid-treatment imaging biomarkers
Ten Eikelder, S.C.M., Ferjančič, P., Ajdari, A., Bortfeld, T., den Hertog, D., Jeraj, R. (2020), *Physics, Medicine and Biology*, 65 (24), 245011.
- [83] Reducing conservatism in Robust Optimization
Roos, E.R., den Hertog, D. (2020), *INFORMS Journal on Computing*, 32 (4), 1109-1127.
- [82] Optimal combined proton-photon therapy schemes based on the standard BED model
Ten Eikelder, S.C.M., den Hertog, D., Bortfeld, T.M., Perkó, Z. (2019) *Physics in Medicine and Biology* 64(6), 065011.
- [81] An approximation framework for two-stage ambiguous stochastic integer programs under mean-MAD information
Postek, K., Romeijnders, W., den Hertog, D., Van der Vlerk, M.H. (2019) *European Journal of Operational Research* 274 (2), 432-444
- [80] A survey of adjustable robust optimization
Yanikoğlu, İ., Gorissen, B., den Hertog, D. (2019), *European Journal of Operational Research* 277 (3), 799-813
- [79] Robust optimization of dose-volume metrics for prostate HDR-brachytherapy incorporating target- and OAR volume delineation uncertainties
Balvert, M., den Hertog, D., Hoffmann, A. (2019) *INFORMS Journal on Computing* 31(1), 100-114.

- [78] Uncertainties in dose-response relations strongly affect the expected gains of robust dose-painting
 Petit, S., Breedveld, S., Unkelbach, J., Den Hertog, D., Balvert, M. (2018) *Radiotherapy and Oncology* 127, S478-S479.
- [77] When are static and adjustable robust optimization problems with constraint-wise uncertainty equivalent?
 Marandi, A., den Hertog, D. (2018) *Mathematical Programming* 170 (2), 555-568.
- [76] Adjustable robust optimization via fourier-motzkin elimination
 Zhen, J., den Hertog, D., Sim, M. (2018) *Operations Research* 66 (4), 1086-1100.
- [75] Robust optimization with ambiguous stochastic constraints under mean and dispersion information
 Postek, K., Ben-Tal, A., den Hertog, D., Melenberg, B. (2018) *Operations Research* 66 (3), 814-833.
- [74] Adjustable robust strategies for flood protection
 Postek, K., den Hertog, D., Kind, J. & Pustjens, C. (2019) *Omega* 82, 142-154.
- [73] Computing the maximum volume inscribed ellipsoid of a polytopic projection
 Zhen, J., den Hertog, D. (2017) *INFORMS Journal on Computing*, 30(1), 31-42.
- [72] Globalized robust optimization for nonlinear uncertain inequalities
 Ben-Tal, A., Brekelmans, R., den Hertog, D., Vial, J.-Ph. (2017) *INFORMS Journal on Computing*, 29(2), 350-366.
- [71] Robust shift generation in workforce planning
 van Hulst, D., den Hertog, D., Nuijten, W. (2017) *Computational Management Science*, 14(1), 115-134.
- [70] Centered solutions for uncertain linear equations
 Zhen, J., den Hertog, D. (2017) *Computational Management Science*, 14(4), 585-610.
- [69] Robust optimization of uncertain multistage inventory systems with inexact data in decision rules
 de Ruiter, F., Ben-Tal, A., Brekelmans, R. & den Hertog, D. (2017) *Computational Management Science*, 14(1), 45-66.
- [68] Adjustable Robust Optimisation approach to optimise discounts for multi-period supply chain coordination under demand uncertainty
 Buhayenko, V., den Hertog, D. (2017) *International Journal of Production Research* 55(22), 6801-6823.
- [67] Computationally tractable counterparts of distributionally robust constraints on risk measures
 Postek, K., den Hertog, D., Melenberg, B. (2016) *SIAM Review*, 58(4), 603-650.
- [66] The impact of the existence of multiple adjustable robust solutions
 de Ruiter, F., Brekelmans, R. & den Hertog, D. (2016) *Mathematical Programming*, 160(1-2), 531-545.
- [65] Multi-stage adjustable robust mixed-integer optimization via iterative splitting of the uncertainty set
 Postek, K. & den Hertog, D. (2016) *INFORMS Journal on Computing*, 28(3), 553-574.
- [64] Optimal strategies for flood prevention
 Eijgenraam, C., Brekelmans, R., den Hertog, D. & Roos, C. (2016) *Management Science*, 63(5), 1644-1656.
- [63] Globalized robust optimization for nonlinear uncertain inequalities
 Ben-Tal, A., Brekelmans, R., den Hertog, D. & Vial, J. P. (2017) *INFORMS Journal on Computing*, 29 (2), 350-366.
- [62] Robust dual-response optimization
 Yanikoglu, I., den Hertog, D. & Kleijnen, J. P. C. (2016) *IIE Transactions: Industrial Engineering Research and Development*, 48(3), 298-312.

- [61] A framework for inverse planning of beam-on times for 3D small animal radiotherapy using interactive multi-objective optimization
Balvert, M., van Hoof, S. J., Granton, P. V., Trani, D., den Hertog, D., Hoffmann, A. L. & Verhaegen, F. (2015) *Physics in Medicine and Biology*, 60(14), 5681-5698.
- [60] A practical guide to robust optimization
Gorissen, B., Yanikoglu, I. & den Hertog, D. (2015) *Omega* 53, 124-137.
- [59] Deriving robust counterparts of nonlinear uncertain inequalities
Ben-Tal, A., den Hertog, D. & Vial, J. P. (2015) *Mathematical Programming*, 149(1-2), 265-299.
- [58] Dwell time modulation restrictions do not necessarily improve treatment plan quality for prostate HDR brachytherapy
Balvert, M., Gorissen, B. L., den Hertog, D. & Hoffmann, A. L. (2015) *Physics in Medicine and Biology*, 60(2), 537-548.
- [57] Deriving robust and globalized robust solutions of uncertain linear programs having general convex uncertainty sets
Gorissen, B. L., Blanc, J. P. C., den Hertog, D. & Ben-Tal, A. (2014) *Operations Research*, 62(3), 672-679.
- [56] A mixed integer nonlinear optimization approach to optimize dike heights in the Netherlands
Brekelmans, R., Eijgenraam, C., den Hertog, D. & Roos, C. (2014) *Optima Mathematical Optimization Society Newsletter*, 94.
- [55] Hidden conic quadratic representation of some nonconvex quadratic optimization problems
Ben-Tal, A. & den Hertog, D. (2014) *Mathematical Programming*, 143(1-2), 1-29.
- [54] Economically efficient standards to protect the Netherlands against flooding
Eijgenraam, C., Kind, J., Bak, C., Brekelmans, R. C. M., den Hertog, D., Duits, M., Roos, C., Vermeer, P. J. & Kuijken, W. (2014) *Interfaces*, 44(1), 7-21.
- [53] An impulse control approach to dike height optimization
Chahim, M., Brekelmans, R. C. M., den Hertog, D. & Kort, P. M. (2013) *Optimization Methods and Software*, 28(3), 458-477.
- [52] Mixed integer programming improves comprehensibility and plan quality in inverse optimization of prostate HDR Brachytherapy
Gorissen, B. L., den Hertog, D. & Hoffmann, A. L. (2013) *Physics in Medicine and Biology*, 58(4), 1041-1058.
- [51] Robust counterparts of inequalities containing sums of maxima of linear functions
Gorissen, B. L. & den Hertog, D. (2013) *European Journal of Operational Research*, 227(1), 30-43.
- [50] Robust solutions of optimization problems affected by uncertain probabilities
Ben-Tal, A., den Hertog, D., De Waegenaere, A. M. B., Melenberg, B. & Rennen, G. (2013) *Management Science*, 59(2), 341-357.
- [49] Safe approximations of ambiguous chance constraints using historical data
Yanikoglu, I. & den Hertog, D. (2013) *INFORMS Journal on Computing*, 25(4), 666-681.
- [48] Approximating the Pareto set of multiobjective linear programs via robust optimization
Gorissen, B. L. & den Hertog, D. (2012) *Operations Research Letters*, 40(5), 319-324.
- [47] Feasibility of convex optimisation with radiobiological models for prostate HDR-brachytherapy
Steenbergen, F., den Hertog, D., Gorissen, B. L. & Hoffmann, A. L. (2012) *Radiotherapy and Oncology*, 103, S30-S31.

- [46] Mixed integer programming for dose and dose-volume based optimization in prostate HDR-brachytherapy
Gorissen, B. L., den Hertog, D. & Hoffmann, A. L. (2012) *Radiotherapy and Oncology*, 103, S130.
- [45] Modulation restrictions do not necessarily improve treatment plan quality for HDR prostate brachytherapy
Balvert, M., Gorissen, B. L., den Hertog, D. & Hoffmann, A. L. (2012) *Radiotherapy and Oncology*, 103, S142.
- [44] Safe dike heights at minimal costs: The nonhomogeneous case
Brekelmans, R. C. M., den Hertog, D., Roos, C. & Eijgenraam, C. (2012) *Operations Research*, 60(6), 1342-1355.
- [43] A method for approximating univariate convex functions using only function value evaluations
Siem, A. Y. D., den Hertog, D. & Hoffmann, A. L. (2011) *INFORMS Journal on Computing*, 23(4), 591-604.
- [42] Enhancement of sandwich algorithms for approximating higher dimensional convex Pareto sets
Rennen, G., van Dam, E. R. & den Hertog, D. (2011) *INFORMS Journal on Computing*, 23, (4), 493-517.
- [41] Space-filling Latin hypercube designs for computer experiments
van Dam, E. R., den Hertog, D., Husslage, B. G. M. & Rennen, G. (2011) *Optimization and Engineering*, 12(4), 611-630.
- [40] Nested maximin Latin hypercube designs
Rennen, G., Husslage, B. G. M., van Dam, E. R. & den Hertog, D. (2010) *Structural and Multidisciplinary Optimization*, 41, 371-395.
- [39] On the importance of data balancing for symbolic regression
Vladislavleva, E., Smits, G. & den Hertog, D. (2010) *IEEE Transactions on Evolutionary Computation*, 14(2), 252-277.
- [38] One-dimensional nested maximin designs
van Dam, E. R., Husslage, B. G. M. & den Hertog, D. (2010) *Journal of Global Optimization*, 46(2), 287-306.
- [37] Solving the Battleship puzzle as an integer programming problem
Meuffels, W. J. M. & den Hertog, D. (2010) *INFORMS Transactions on Education*, 10(3), 156-162.
- [36] Order of nonlinearity as a complexity measure for models generated by symbolic regression via Pareto genetic programming
Vladislavleva, E., Smits, G. F. & den Hertog, D. (2009) *IEEE Transactions on Evolutionary Computation*, 13(2), 333-349.
- [35] Response surface methodology with stochastic constraints for expensive simulation
Angun, M. E., Kleijnen, J. P. C., den Hertog, D. & Gürkan, G. (2009) *The Journal of the Operational Research Society*, 60(6), 735-746.
- [34] Convex reformulation of biologically-based multi-criteria intensity-modulated radiation therapy optimization including fractionation effects
Hoffmann, A. L., Siem, A. Y. D., den Hertog, D., Kaanders, J. H. A. M. & Huizenga, H. (2008) *Physics in Medicine and Biology*, 53, 6345-6362.
- [33] Discrete least-norm approximation by nonnegative (trigonometric) polynomials and rational functions
Siem, A. Y. D., de Klerk, E. & den Hertog, D. (2008) *Structural and Multidisciplinary Optimization*, 35(4), 327-339.
- [32] Gradient estimation using Lagrange interpolation polynomials
Brekelmans, R. C. M., Driessen, L., Hamers, H. J. M. & den Hertog, D. (2008) *Journal of Optimization Theory and Applications*, 136(3), 341-357.
- [31] On the complexity of optimization over the standard simplex

- de Klerk, E., den Hertog, D. & Elfadul, G. E. E. (2008) *European Journal of Operational Research*, 191, 773-785.
- [30] Robust optimization using computer experiments
Stinstra, E. & den Hertog, D. (2008) *European Journal of Operational Research*, 191(3), 816-837.
- [29] The effect of transformations on the approximation of univariate (convex) functions with applications to Pareto curves
Siem, A. Y. D., den Hertog, D. & Hoffmann, A. L. (2008) *European Journal of Operational Research*, 189(2), 347-362.
- [28] Efficient line searching for convex functions
den Boef, E. & den Hertog, D. (2007) *SIAM Journal on Optimization*, 18(1), 338-363.
- [27] Maximin Latin hypercube designs in two dimensions
van Dam, E. R., den Hertog, D., Husslage, B. G. M. & Melissen, H. (2007) *Operations Research*, 55(1), 158-169.
- [26] The Netherlands schedules track maintenance to improve track workers' safety
van Zante-de Fokkert, J. I., den Hertog, D., van den Berg, F. J. & Verhoeven, J. H. M. (2007) *Interfaces*, 37(2), 133-142.
- [25] Derivative-free generation and interpolation of convex Pareto optimal IMRT plans
Hoffmann, A. L., Siem, A. Y. D., den Hertog, D., Kaanders, J. H. A. M. & Huizenga, H. (2006) *Physics in Medicine and Biology*, 51(24), 6349-6369.
- [24] On D-optimality based trust regions for black-box optimization problems
Driessen, L., Brekelmans, R. C. M., Hamers, H. J. M. & den Hertog, D. (2006) *Structural and Multidisciplinary Optimization*, 31(1), 40-48.
- [23] Response surface methodology's steepest ascent and step size revisited: Correction
Kleijnen, J. P. C., den Hertog, D. & Angun, M. E. (2006) *European Journal of Operational Research*, 170(2), 664-666.
- [22] Solving Rummikub problems by integer linear programming
den Hertog, D. & Hulshof, P. B. (2006) *The Computer Journal*, 49(6), 665-669.
- [21] The correct Kriging variance estimated by bootstrapping
den Hertog, D., Kleijnen, J. P. C. & Siem, A. Y. D. (2006) *The Journal of the Operational Research Society*, 57(4), 400-409.
- [20] Constrained optimization involving expensive function evaluations: A sequential approach
Brekelmans, R. C. M., Driessen, L., Hamers, H. J. M. & den Hertog, D. (2005) *European Journal of Operational Research*, 160(1), 121-138.
- [19] Gradient estimation schemes for noisy functions
Brekelmans, R. C. M., Driessen, L., Hamers, H. J. M. & den Hertog, D. (2005) *Journal of Optimization Theory and Applications*, 126(3), 529-551.
- [18] Optimal working zone division for safe track maintenance in the Netherlands
den Hertog, D., van Zante-de Fokkert, J. I., Sjamaar, S. A. & Beusmans, R. (2005) *Accident Analysis and Prevention*, 37(5), 890-893.
- [17] Response surface methodology's steepest ascent and step size revisited
Kleijnen, J. P. C., den Hertog, D. & Angun, M. E. (2004) *European Journal of Operational Research*, 159(1), 121-131.
- [16] Collaborative metamodelling: Coordinating simulation-based product design

- Husslage, B. G. M., van Dam, E. R., den Hertog, D., Stehouwer, H. P. & Stinstra, E. (2003) *Concurrent Engineering: Research and Applications*, 11(4), 267-278.
- [15] Constrained maximum designs for computer experiments
Stinstra, E., den Hertog, D., Stehouwer, H. P. & Vestjens, A. (2003) *Technometrics*, 45(4), 340-346.
- [14] On convex quadratic approximation
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Other publications:

Advancing society in a digital era: Science with a soul.

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Brekelmans, R. C. M. & den Hertog, D. (2010) *STAtOR*, December Issue, p. 24-27.

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Integral product optimization: Get more out of your simulation models (in dutch)

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Efficient optimization technics implemented in DOT-software of CQM

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Fleuren, H. A., den Hertog, D. & Tuyt, H. L. (1995) *CA Techniek: Tijdschrift voor Industriële Automatisering*, 14(10), 24-28.

Invited lectures (since 2013 only):

Economically efficient standards to protect the Netherlands against flooding, INFORMS Meeting, Finalist Franz Edelman Award, April 7-9, 2013. Keynote speaker.

Practical Robust Optimization: a tutorial, Annual Danish OR workshop, June 28-30, 2013. Invited speaker.

Robust optimization using computer experiments, 7th International Conference on *Sensitivity Analysis of Model Output*, MASCOT-SAMO 2013, July 1-4. Invited speaker.

Practical Robust Optimization, IBM seminar, Dublin, Ireland, May 14, 2013. Invited speaker.

Practical robust optimization: an introduction, International Conference on Operations Research, OR2013, Rotterdam, The Netherlands, September 4-6, 2013. Semi-plenary speaker.

Economically efficient standards to protect the Netherlands against flooding, INFORMS annually meeting, October 6-9, 2013. Keynote speaker (Franz Edelman Award Winning Presentation).

Robust Optimization, 7th PhD Summer Academy, June 16-July 11, 2014 at the Zaragoza Logistics Center in Zaragoza, Spain. Invited course teacher.

Adjustable robust optimization for sustainable water policy pathways, Third Annual Workshop on Decision Making Under Deep Uncertainty, November 3-5, Delft, The Netherlands, 2015. Invited speaker.

A tutorial on Robust Optimization, Workshop "Robust Optimization in Applied Probability", November 8-10, 2015, Eurandom institute in Eindhoven, Invited speaker.

Two ways to solve a robust nonlinear optimization problem: via the primal or the dual, 12th International Conference on Computational Management Science 2015, Prague, May 27-29, 2015. Keynote speaker.

Robust optimization with ambiguous stochastic constraints under mean and dispersion information, MIT, Boston, ORC seminar, May 5th 2016. Invited speaker.

Tutorial on Robust Optimization, HEC, Montreal, May 9th, 2016. Invited speaker.

Robust optimization with ambiguous stochastic constraints under mean and dispersion information, Technion, Conference on "Continuous Optimization: Challenges and Applications", September 5-8, 2016, Haifa, Israel. Invited speaker.

Robust optimization with ambiguous stochastic constraints under mean and dispersion information, EPFL, Lausanne, Switzerland, September 22nd, 2016. Invited speaker.

Tutorial on Robust Optimization, International Workshop "Models and Methods of Robust Optimization", Fraunhofer ITWM, Kaiserslautern, Germany, March 9-10, 2017. Invited speaker.

Is DRO the only approach for optimization problems with convex uncertainty?, Workshop on "Distributional Robust Optimization", Banff, March 4-9, 2018. Invited speaker.

Tutorial on Robust Optimization, INFORMS meeting, 2019, Austin. Invited for tutorial.

What every OR practitioner should know about Robust Optimization, EURO conference, 2019, Dublin. Plenary speaker.

Robust Convex Optimization: A New Perspective That Unifies And Extends, MIT, Boston, ORC seminar, September 24th 2020. Invited speaker.

Optimization for Zero Hunger, International Workshop, Fraunhofer ITWM, Kaiserslautern, Germany, October, 2021. Invited speaker.

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