

Curriculum Vitae Rob Basten, d.d. 10 oktober 2017

Achternaam	Basten
Voornaam	Rob
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Werkervaring

augustus 2017 – heden	Universitair hoofddocent (associate professor) aan de Technische Universiteit Eindhoven, faculteit Industrial Engineering & Innovation Sciences, onderzoeksgroep Operations Planning, Accounting, and Control
oktober 2014 – juli 2017	Universitair docent (assistant professor) aan de Technische Universiteit Eindhoven, faculteit Industrial Engineering & Innovation Sciences, onderzoeksgroep Operations Planning, Accounting, and Control
oktober 2014 – februari 2015	Visiting scholar aan de Rensselaer Polytechnic Institute, School of Engineering, Department of Industrial and Systems Engineering
september 2011 – september 2014	Universitair docent (assistant professor) aan de Universiteit Twente, faculteit Construerende Technische Wetenschappen, leerstoel Maintenance Engineering
november 2010 – augustus 2011	Consultant bij Gordian Logistic Experts B.V.: projectmanager van ‘Planning Services’
februari 2010 – augustus 2011	Postdoc aan de Technische Universiteit Eindhoven, faculteit Industrial Engineering & Innovation Sciences, onderzoeksgroep Operations Planning, Accounting, and Control
oktober 2005 – januari 2010	Promovendus aan de Universiteit Twente, faculteit Management en Bestuur, vakgroep Operationele Methoden voor Productie en Logistiek Proefschrift: Designing logistics support systems. Level of repair analysis and spare parts inventories
september 2008 – januari 2009	Visiting PhD student aan de University of Texas at Austin, department of Mechanical Engineering, graduate program in Operations Research & Industrial Engineering: deel van mijn promotie-onderzoek uitgevoerd bij professor Erhan Kutanoglu
april – december 2004	Projectmedewerker bij Keypoint Consultancy: ondersteunende werkzaamheden voor de adviseurs/projectleiders
december 2003 – maart 2004	Stage bij Rabobank Nederland Corporate Clients Intern rapport: Het industriebeleid in Nederland. Een inventarisatie van de beleidsinitiatieven

Opleiding

- 2000 – 2005 Technische Informatica aan de Universiteit Twente, afstudeerrichting Taal, Kennis en Interactie, afgestudeerd augustus 2005 bij het Deutsches Forschungszentrum für Künstliche Intelligenz te Saarbrücken
Scriptie: Answering open-domain temporally restricted questions in a multi-lingual context
- 1999 – 2004 Technische Bedrijfskunde aan de Universiteit Twente, afstudeerrichting Financieel Management en BedrijfsEconomie, afgestudeerd december 2004 bij Keypoint Consultancy te Enschede
Afstudeeronderwerp: ontwikkeling van een model dat prognoses maakt voor parkeerbedrijven, van zowel de toekomstige financiële resultaten als bezettingsgraden op de verschillende parkeerplaatsen (scriptie is niet openbaar)
- 1993 – 1999 Middelbare school: Gymnasium Bernrode te Heeswijk

Financiering

- Increasing the usability, adoption, and acceptance of advanced planning and scheduling systems: Mede-aanvrager; hoofdaanvrager is dr. Philippe van de Calseyde (Technische Universiteit Eindhoven): 485 k€, gefinancierd door Topconsortium voor Kennis en Innovatie (TKI) Dinalog via de TKI Toeslag call.
- Pro-active service logistics for capital goods – the next steps (ProSeLoNext): Hoofdaanvrager en projectleider: 2.1 M€, gefinancierd door de Nederlandse Organisatie voor Wetenschappelijk Onderzoek (NWO) via de Accelerator call.
- Sustainability Impact of New Technology on After sales Service supply chains (SINTAS): Mede-aanvrager; hoofdaanvrager is dr. Matthieu van der Heijden (Universiteit Twente): 719 k€, gefinancierd door de Nederlandse Organisatie voor Wetenschappelijk Onderzoek (NWO) via de Duurzame Logistiek call.
- Optimizing railway maintenance by advanced data capturing and analysis: Hoofdaanvrager, samen met prof.dr.ir. Tiedo Tinga (Universiteit Twente): 1 M€, gefinancierd door Strukton.
- Optimization for Conflicting Performance Requirements of Rail Operation and Maintenance (OCPRM): Hoofdaanvrager: 657 k€, gefinancierd door de Nederlandse Organisatie voor Wetenschappelijk Onderzoek (NWO) via het Explorail programma.

Promovendi

- Douniel Lamghari-Idrissi. 2017 – 2021. Service differentiation for high tech capital systems. Co-promotor. Promotor: prof.dr.ir. Geert-Jan van Houtum (Technische Universiteit Eindhoven).
- Bregje van der Staak. 2016 – 2020. Improving the use of decision support systems. Co-promotor. Promotor: prof.dr. Evangelia Demerouti (Technische Universiteit Eindhoven).
- Bram Westerweel. 2015 – 2019. The impact of additive manufacturing on after sales service supply chains. Co-promotor. Promotor: prof.dr.ir. Geert-Jan van Houtum (Technische Universiteit Eindhoven).
- Wienik Mulder. 2011 – 1 juni 2016. Supporting Developers in Addressing Maintenance Aspects. An Empirical Study in the Industrial Equipment Manufacturing Industry. Co-promotor. Promotor: prof.dr.ir. Leo van Dongen (Universiteit Twente).

- Adriaan Goossens. 2011 – 30 september 2015. Maintenance Policy Selection for Ships. An investigation using the Analytic Hierarchy Process. Co-promotor. Promotor: prof.dr.ir. Leo van Dongen (Universiteit Twente).
- Jorge Parada Puig. 2010 – 10 juni 2015. Serviceability of Passenger Trains During Acquisition Projects. Co-promotor. Promotor: prof.dr.ir. Leo van Dongen (Universiteit Twente).

Promotiecommissies

- Dennis Guck. 23 maart 2017. Reliable Systems. Fault Tree Analysis via Markov Reward Automata. Promotor: prof.dr.ir. Joost-Pieter Katoen (Universiteit Twente).
- Kim Verbert. 22 november 2016. Fault Diagnosis and Maintenance Optimization for Interconnected Systems with Applications to Railway and Climate Control Systems. Promotors: prof.dr.ir. Bart de Schutter & prof.dr. Robert Babuška (Technische Universiteit Delft).
- Frank Karsten. 28 november 2013. Resource Pooling Games. Promotor: prof.dr.ir. Geert-Jan van Houtum (Technische Universiteit Eindhoven).

PDEng-kandidaten

- Felipe Ramos Gaete. 2016 – 2018. Condition based maintenance. Daily supervisor.
- Alard Snippe. 2016 – 2018. Condition based maintenance. Daily supervisor.

Gepubliceerde artikelen in wetenschappelijke tijdschriften

- Poppe, J., Basten, R.J.I., Boute, R.N. and Lambrecht, M.R. (2016). Numerical study of inventory management under various maintenance policies *Reliability Engineering & System Safety*. 168: 262–273.
- Lin, X., Basten, R.J.I., Kranenburg, A.A., and Van Houtum, G.J. (2012). Condition based spare parts supply. *Reliability Engineering & System Safety*. 168: 240–248.
- Basten, R.J.I. and Arts, J.J. (2017). Fleet readiness: stocking spare parts and high-tech assets. *IIE Transactions*. 49 (4): 429–441.
- Arts, J.J., Basten, R.J.I. and Van Houtum, G.J. (2016). Repairable Stocking and Expediting in a Fluctuating Demand Environment: Optimal Policy and Heuristics. *Operations Research*. 64 (6): 1285–1301.
- Parada Puig, J.E. and Basten, R.J.I. (2015). Defining line replaceable units. *European Journal of Operational Research*. 247 (1): 310–320.
- Goossens, A.J.M. and Basten, R.J.I. (2015). Exploring maintenance policy selection using the Analytic Hierarchy Process; an application for naval ships. *Reliability Engineering & System Safety*. 142: 31–41.
- Basten, R.J.I., Van der Heijden, M.C., Schutten, J.M.J., and Kutanoglu, E. (2015). An approximate approach for the joint problem of level of repair analysis and spare parts stocking. *Annals of Operations Research*. 224 (1): 121–145.
- Wingerden, E. van, Basten, R.J.I., Dekker, R., and Rustenburg, W.D. (2014). More grip on inventory control through improved forecasting. A comparative study at three companies. *International Journal of Production Economics*. 157: 220–237.
- Basten, R.J.I. and Van Houtum, G.J. (2014). System-oriented inventory models for spare parts. *Surveys in Operations Research and Management Science*. 19 (1): 34–55.
- Karsten, F. and Basten, R.J.I. (2014). Pooling of spare parts between multiple users: How to share the benefits?. *European Journal of Operational Research*. 233 (1): 94–104.

- Basten, R.J.I. and Van Houtum, G.J. (2013). Near-optimal heuristics to set base stock levels in a two-echelon distribution network. *International Journal of Production Economics*. 143 (2): 546–552.
- Basten, R.J.I., Van der Heijden, M.C., and Schutten, J.M.J. (2012). Joint optimization of level of repair analysis and spare parts stocks. *European Journal of Operational Research*. 222 (3): 474–483.
- Basten, R.J.I., Van der Heijden, M.C., and Schutten, J.M.J. (2011). Practical extensions to a minimum cost flow model for level of repair analysis. *European Journal of Operational Research*. 211 (2): 333–342.
- Basten, R.J.I., Van der Heijden, M.C., and Schutten, J.M.J. (2011). A minimum cost flow model for level of repair analysis. *International Journal of Production Economics*. 133 (1): 233–242.
- Basten, R.J.I., Schutten, J.M.J. and Van der Heijden, M.C. (2009). An efficient model formulation for level of repair analysis. *Annals of Operations Research*. 172 (1): 119–142.

Artikelen ingestuurd naar wetenschappelijke tijdschriften

- Peeters, J.F.W., Basten, R.J.I. and Tinga, T. (2017). Improving failure analysis efficiency by combining FTA and FMEA in a recursive manner. *BETA working paper* 528. Submitted for publication.
- Westerweel, B., Basten, R.J.I. and Van Houtum, G.J. (2016). Traditional or Additive Manufacturing? Assessing component design options through lifecycle cost analysis. *BETA working paper* 519. Submitted for publication.
- Arts, J.J. and Basten, R.J.I. (2016). Single-Item Models with Minimal Repair for Multi-Item Maintenance Optimization. *BETA working paper* 513. Submitted for publication.
- Goossens, A.J.M., Basten, R.J.I., Hummel, J.M. and Van der Wegen, L.L.M. (2015). Structuring AHP-based maintenance policy selection. *BETA working paper* 488. Submitted for publication.
- Basten, R.J.I. and Ryan, J.K. (2015). Inventory Management with Two Demand Streams: A Maintenance Application. *BETA working paper* 480. Submitted for publication.
- Goossens, A.J.M. and Basten, R.J.I. (2015). Maintenance policy selection for ships: finding the most important criteria and considerations. *BETA working paper* 472. Submitted for publication.

Gepubliceerde artikelen in ISI conference proceedings

- Goossens, A.J.M., Basten, R.J.I., and Van Dongen, L.A.M. (2014). Exploring the use of the Analytic Hierarchy Process for maintenance policy selection. *22nd Annual Conference on European Safety and Reliability (ESREL)*: 1027–1032.
- Puig, Parada J.E., Basten, R.J.I., and Van Dongen, L.A.M. (2013). Investigating maintenance decisions during initial fielding of rolling stock. 2nd International Through-Life Engineering Services Conference (TESConf). *Procedia CIRP*. 11: 199–203.
- Mulder, W., Basten, R.J.I., Jauregui Becker, J.M., and Van Dongen, L.A.M. (2013). Work in progress: developing tools that support the design of easily maintainable rolling stock. 2nd International Through-Life Engineering Services Conference (TESConf) *Procedia CIRP*. 11: 204–206.
- Mulder, W., Basten, R.J.I., Jauregui Becker, J.M., and Van Dongen, L.A.M. (2013). Towards Structured Integration of Maintenance Knowledge in Industrial Equipment Design. 19th International Conference on Engineering Design (ICED). *International Conference on Engineering Design*. 6.

Proefschrift

- Basten, R.J.I. (2010). *Designing logistic support systems. Level of repair analysis and spare parts inventories*. PhD thesis, BETA research school, D128, Eindhoven (The Netherlands).

Vakken

- Verantwoordelijk docent voor het Bachelor-vak Maintenance & Service Logistics (1CK60; gewaardeerd met 3.9 en 4.1 uit 5 in 2015–2016 en 2016–2017).
- Begeleider van groepjes studenten in het Master-vak Modeling and Analysis of Manufacturing Systems (1CM10; gewaardeerd met 8.2 uit 10 in 2015–2016).
- Werkcollegedocent in het Bachelor-vak Microeconomics (1CK90; gewaardeerd met 3.8 uit 5 in 2015–2016).
- Docent voor een klein deel van het Master-vak Service Supply Chains for Capital Goods (1CM30; gewaardeerd met 3.3 uit 5 in 2014–2015).
- Verantwoordelijk docent voor Master-vak Maintenance Engineering & Management (geen waardering in 2012–2013; gewaardeerd met 3.7 en 3.9 uit 5 in 2013–2014 en 2014–2015).

Selectie van gegeven presentaties op uitnodiging

- *On-site additive manufacturing of spare parts*. Invited seminar at the University of Twente. Enschede, The Netherlands. 23 March 2017.
- *Service Supply Chains*. Workshop at the WCM Summer School 2016. Breda, The Netherlands. 4 August 2016.
- *Inventory Management with Two Demand Streams: A Maintenance Application*. Invited seminar at the University of Nebraska-Lincoln. Lincoln, NE, USA. 30 October 2015.
- *Design-for-Maintenance*. Workshop at the WCM Summer School 2015. Breda, The Netherlands. 6 August 2015.
- *On fleet readiness of trains: stocking spare parts and high-tech assets*. Invited seminar at the Rensselaer Polytechnic Institute. Troy, NY, USA. 19 November 2014.
- *On fleet readiness of trains: stocking spare parts and high-tech assets*. Invited seminar at the University of Massachusetts Amherst. Amherst, MA, USA. 27 October 2014.
- *Rolling stock acquisition and maintenance*. Guest lecture in the course Railway Stock Acquisition and Management at the Technical University of Denmark. Lyngby, Denmark. 18 June 2014.
- *Condition based spare parts supply*. Invited seminar at the Zurich University of Applied Sciences - ZHAW. Zürich, Switzerland. 30 April 2014.
- *Design-for-Maintenance*. Workshop at the WCM Summer School 2013. Breda, The Netherlands. 29 August 2013.
- *Chair of Maintenance Engineering. University of Twente*. Lloyd's Register Foundation Research Workshop. Seoul, South Korea. 16 April 2013.
- *Design-for-Maintenance*. Workshop at the WCM Summer School 2012. Breda, The Netherlands. 30 August 2012.
- *LORA and Spare Parts at Thales Nederland*, NGB day LNMB conference. Lunteren, The Netherlands. 20 January 2011
- *Level of repair analysis and spare parts stocking*. Invited seminar at the University of Texas at Austin. Austin, TX, USA. 21 January 2009

Selectie van overige gegeven presentaties

- *On the benefits of Additive Manufacturing for spare parts supply: Which parts to print?*. INFORMS Annual Meeting. Nashville, TN, USA. 15 November 2016.
- *The value of maintenance flexibility for improved spare parts inventory management*. ISIR 2016. Budapest, Hungary. 23 August 2016.
- *The value of maintenance flexibility for improved spare parts inventory management*. POMS 27th Annual Conference. Orlando, FL, USA. 7 May 2016.
- *Inventory Management with Two Demand Streams: A Maintenance Application*. INFORMS Annual Meeting. Philadelphia, PA, USA. 4 November 2015.
- *Spare parts supply for combined planned and unplanned maintenance*. IIE Annual Conference. Nashville, TN, USA. 2 June 2015.
- *Optimal and Heuristic Repairable Stocking and Expediting in a Fluctuating Demand Environment*. INFORMS Annual Meeting. San Francisco, CA, USA. 10 November 2014.
- *Optimal and Heuristic Repairable Stocking and Expediting in a Fluctuating Demand Environment*. 8th International Conference on Modelling in Industrial Maintenance and Reliability (MIMAR). Oxford, United Kingdom. 10 July 2014.
- *Fleet sizing and spare parts stocking*. INFORMS Annual Meeting. Minneapolis, MN, USA. 9 October 2013.
- *Fleet sizing and spare parts stocking*. OR 2013, Rotterdam, The Netherlands. 5 September 2013.
- *An operations research contribution to logistic support analysis: LRU-definition, LORA, and spare parts*. INFORMS Annual Meeting. Phoenix, AZ, USA. 17 October 2012.
- *Forecasting demand for slow-moving spare parts: A comparative study at three companies*. ISIR Symposium. Budapest, Hungary. 20 August 2012.
- *Condition based spare parts supply*. POM World Conference. Amsterdam, The Netherlands. 4 July 2012.
- *Condition based spare parts supply*. IIE Annual Conference. Orlando, FL, USA. 20 May 2012.
- *Level Of Repair Analysis for REMM*. Guest lecture in the course Reliability Engineering and Maintenance Management. Enschede, the Netherlands. 14 March 2012.
- *Design-for-maintenance voor Productiesystemen 2* (in Dutch). Guest lecture in the course Productiesystemen 2. Enschede, the Netherlands. 13 March 2012.
- *A heuristic to determine near-optimal base stock levels in a two-echelon distribution network*, MSOM conference, Ann Arbor, MI, USA. 26 June 2011
- *LORA en reserve-onderdelen bij Thales Nederland* (in Dutch), Final symposium of the IOP-IPCR project Life cycle oriented design of capital goods, Breda, The Netherlands, 2 December 2010
- *A Heuristic to Determine Near-optimal Base Stock Levels in a Two-echelon Distribution Network*, INFORMS annual meeting, Austin, TX, USA, 7 November 2010
- *A heuristic to determine close to optimal base stock levels in a two-echelon distribution network*, ISIR symposium, Budapest, Hungary, 23 August 2010
- *Designing logistic support networks. On LORA and spare parts stocking*, INFORMS annual meeting, San Diego, CA, USA, 11 October 2009
- *LORA and spare parts*, INFORMS MSOM conference, Boston, MA, USA, 29 June 2009
- *Level of repair analysis*, GOR conference, Augsburg, Germany, 3 September 2008
- *Level of repair analysis*, ISIR symposium, Budapest, Hungary, 22 August 2008
- *Life cycle oriented design of capital goods: the state of the art in theory and practice*, INFORMS annual meeting, Pittsburgh, PA, USA, 7 November 2006