

# CURRICULUM VITAE

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**Dr. ir. Johannes T. B. (Bas) Overvelde**

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[www.research.tue.nl/en/persons/bas-overvelde](http://www.research.tue.nl/en/persons/bas-overvelde)  
Website (group): [www.overvelde.com](http://www.overvelde.com)  
[www.amolf.nl/research-groups/soft-robotic-matter](http://www.amolf.nl/research-groups/soft-robotic-matter)  
Website (outreach): [www.studioovervelde.com](http://www.studioovervelde.com)  
[www.softcircuitstoolkit.com](http://www.softcircuitstoolkit.com)



## PROFILE

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An academic visionary, conveying a philosophy centered around creativity and inclusiveness, with a passion for interdisciplinary collaboration. Understands the importance of diverse perspectives and the power of a broad network whilst striving for academic excellence. Creates a safe atmosphere that stimulates teamwork and intellectual curiosity, fostering professional and personal growth. Driven by a commitment to open science, actively seeks opportunities for knowledge exchange in academia and with the general public, not only to impart knowledge but to inspire and encourage questions, innovations, and excellence. Sees and creates possibilities.

## IN SHORT

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Work: **Group Leader (tenured)** AMOLF, Soft Robotic Matter Group  
**Associate Professor** TU/e, Dynamics and Control Section of the Department of Mechanical Engineering, and the Institute for Complex and Molecular Systems (ICMS)

Group: Members: 2 Postdocs, 9 PhD students (+1 openings), 1 technician, 1 intern  
Alumni: 3 Postdocs, 3 PhD students, 2 visiting Postdoc, 2 visiting PhD students, 3 research assistants, 1 artist, 38 interns

Education: **PhD**, School of Engineering and Applied Sciences, Harvard University  
**SM** Applied Mathematics, School of Engineering and Applied Sciences, Harvard University  
**BSc & MSc** Mechanical Engineering (*cum laude*), Delft University of Technology

Grants: >**5M€**, a.o. NWA ORC (2023), ERC StG (2020), Veni (2017), H2020 Fet Open (2017)

Awards: KNAW Early Career Award (2022), Engineering Talent De Ingenieur (2020), Best Graduate TU Delft (2012)

Service: **Board Member** Centre for Unusual Collaboration (CUCo)  
Member Eindhoven Young Academy of Engineering (EYAE)  
Associate editor open access journal Programmable Materials, Cambridge University Press  
Chair staff meeting AMOLF  
Accredited confidential advisor AMOLF and ARCNL

Publications: Science, Nature, PNAS, Matter, PRL, Nature Reviews Cardiology, Advanced Materials, Nature Communications, Science Advances, Advanced Functional Materials, Soft Robotics, IEEE Transactions on Robotics, IEEE Transactions on Mechatronics, JMPS

Outreach: NEMO, Rijksmuseum Boerhaave, La Gaîté Lyrique, Cinekid, KIKK Festival, Dutch Design Week, Eindhoven Maker Faire, TEDx, PINC.18, Studium Generale

Media: TV: Klokhuis NTR, Atlas NTR, INScience NPO  
Radio: Nacht NTR Wetenschap, BNR Wetenschap, Nature Podcast, NPO1 Nieuws & Co  
Press: New Scientist, De Ingenieur, Het Parool, De Volkskrant, NRC Handelsblad, NRC Next, Elsevier, Scientific American, The Times, The Telegraph, Financial Times

## WORK EXPERIENCE

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- 2024-present: Centre for Unusual Collaboration (NL)  
**Board Member**
- 2020-present: Eindhoven University of Technology (NL)  
**Associate Professor**  
Dynamics and Control Section, Department of Mechanical Engineering and the Institute for Complex and Molecular Systems (ICMS)
- 2016-present: Soft Robotic Matter Group, AMOLF (NL)  
**Group Leader (Tenured)**  
Current Group members: Niels Commandeur (Technician), Sumit Mohanty, Stijn Koppen (Postdoc), Mannus Schomaker, Alberto Comoretto, Bob Huisman, Elif Kurt, Sergio Picella, Paul Ducarme, Katrien van Riet, Nienke Reitsma (PhD students), Maziar Arfaee (visiting PhD student), 1 Master intern  
Alumni: Florian Wruck, Udit Choudhury, Shibo Zou (Postdoc), Giorgio Oliveri, Agustin Iniguez-Rabago, Luuk van Laake (PhD students), Jelle de Vries, Cesare Carissimo, Chartlotte Bording (Research Assistant), Lyndsey Housdon (Artist), 1 visiting postdoc, 2 visiting PhD students, 8 Bachelor interns and 30 Master interns
- 2017-present: Studio Overvelde (NL)  
**Technical Consultant**
- 2011-2012: Femto Engineering (NL)  
**Consultant**, R&D and FEM engineer
- 2009-2010: Department of Industrial Design, Delft University of Technology (NL)  
**Warehouse and Personnel Manager**

## EDUCATION

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- 2012-2016: School of Engineering and Applied Sciences, Harvard University (US)  
**PhD** in Applied Mathematics  
PhD dissertation: 'Embracing Compliance and Instabilities to Achieve Function in Mechanical Metamaterials and Devices'. Advisor prof. Katia Bertoldi. [\[pdf\]](#)
- 2012-2013: School of Engineering and Applied Sciences, Harvard University (US)  
**SM** in Applied Mathematics
- 2009-2012: Delft University of Technology (NL)  
**MSc** in Mechanical Engineering  
*Cum laude*, Specialization: Solid and Fluid Mechanics, Master's thesis advisors prof. dr. ir. Fred van Keulen and prof. dr. ir. Matthijs Langelaar.  
Research internship at Harvard University (US), advisor prof. Katia Bertoldi.
- 2006-2009: Delft University of Technology (NL)  
**BSc** in Mechanical Engineering  
*Cum laude*
- 2004-2009: Delft University of Technology (NL)  
**P** (propaedeutic exam) in Applied Physics
- 1998-2004: CSG het Noordik, Almelo (NL)  
**VWO** (preparatory scientific education)

## TEACHING

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- 2021-present: TU/e (NL)  
**Lecturer** in Device Integrated Responsive Materials Project Course 6EMA62
- 2016-present: AMOLF (NL)  
**Mentor** of (inter)national Bachelor's (8) and Master's (30) students  
**Guest Lecturer** in Instabilities in Soft Structures
- 2015-present: ETH Zurich (CW), Harvard University (US), WUR (NL), TU Delft (NL), University of Amsterdam (NL) and the Royal Academy of Art (NL)  
**Guest Lecturer** in Soft Robotics and Mechanical Metamaterials
- 2014: School of Engineering and Applied Sciences, Harvard University (US)  
**Teaching Fellow** Computational Solid and Structural Mechanics ES128
- 2013-2015: Bertoldi Group, Harvard University (US)

- 2008-2009: **Mentor** of (inter)national Bachelor's (1) and Master's (9) students  
Department of Industrial Design, TU Delft (NL)  
**Lab Instructor** WBTP113-07 and WBTP115 drilling, milling, turning and welding
- 2008-2009: Cultural Center Delft (NL)  
**Instructor** weekly juggling workshops

## GRANTS

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- 2024: Demonstrator, NWO (NL)  
**Co-applicant** "A Drop-in Sensing Method for Smart Handling of Fresh Fruits with Soft Pneumatic Grippers"
- 2023: AMOLF & TU/e collaboration (NL)  
**Main applicant** "Towards Human Interaction in Soft Robotics"
- 2023: NWA-ORC, NWO (NL)  
**Main applicant** "Holland Hybrid Heart"
- 2022: KIEM GoCI, NWO (NL)  
**Co-applicant** "Designing Shape-Changing Textiles"
- 2022: Zwaartekracht, NWO (NL)  
**Co-applicant** "Interactive Polymer Materials Research Center"
- 2021: ASML/ARCNL/AMOLF collaboration (NL)  
**Main applicant** "Mechanical Metamaterials for Positioning"
- 2020: Startup package, TU/e (NL)  
**Personal grant** to stimulate collaborations between the Soft Robotic Matter group and TU/e
- 2020: H2020-ERC StG, European Commission (EU)  
**Personal grant** "Smart fluidic circuits for autonomous soft robots"
- 2019: IPBooster, European Commission (EU)  
**Co-applicant** for IP related fees Hybrid Heart consortium
- 2019: Lorentz workshop @Snellius, Lorentz Center (NL)  
**Co-organizer workshop** "Autonomous behaviour in living and robotic matter"
- 2017: Veni Innovational Research Incentives Scheme, NWO (NL)  
**Personal grant** "Integrating mechanical metamaterials in soft robots"
- 2017: H2020-FETOPEN, European Commission (EU)  
**Co-chair consortium** "Hybrid Heart: Development of the first fully biocompatible, soft actuated heart"
- 2017: European cooperation project "Les Voyages de Capitaine futur" (EU),  
**Co-applicant** to build interactive art installation "Edge of Chaos"
- 2017: KIEM Creative Industry, NWO (NL)  
**Co-applicant** "Project Cairo: an intelligent, soft-robotic jacket"
- 2017: Internal competition to promote collaboration and hire Postdoc, AMOLF (NL)  
**Co-applicant** "Stochastic Molecular Matter"
- 2016: Startup package, AMOLF (NL)  
**Personal grant** to start the "Soft Robotic Matter" group
- 2014: Haythornthwaite Foundation Student Travel Award, ASME AMD (US)
- 2014: Robert L. Wallace Prize Fellowship, Harvard University (US)
- 2013: Robert L. Wallace Prize Fellowship, Harvard University (US)
- 2012: Fulbright Grant, The Fulbright Center (NL)
- 2012: University Fund Delft Grant, TU Delft (NL)
- 2010: Justus & Louise van Effen Excellence Scholarship, TU Delft (NL)

## AWARDS

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- 2022: Koninklijke Nederlandse Akademie van Wetenschappen Early Career Award (NL)
- 2020: Engineering Talent 2020, De Ingenieur (NL)
- 2018: Maker of Merit Award, Makerfaire Eindhoven (NL)
- 2017: Runner-up Soft Robotic Toolkit online competition, Harvard University (US)
- 2015: 1st prize winner of the Gallery of Mechanics at New.Mech 2015, Boston University (US)
- 2014: Certificate of Excellence and Distinction in Teaching for the course ES128, Derek Bok Center for Teaching and Learning, Harvard University (US)
- 2012: UfD-Best Graduate of 3mE Faculty Grant, TU Delft (NL)
- 2011: Employee of the Year Award, Femto Engineering (NL)
- 2009: Best Research Award, BSc thesis TU Delft (NL)

### *Nominations*

- 2024: NWO Communication Initiative Award (NL)
- 2023: Maker Faire Innovation Award (NL)
- 2022: TU/e Science Award (NL)
- 2018: New Scientists Scientific Talent award (NL)

## TEAM AWARDS

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- 2024: Van Riet, C.M., *Best Demonstration Award* for “Soft Circuits Toolkit”. Dutch Soft Robotics Symposium. Eindhoven (NL).
- 2024: Van Riet, C.M., *Best MSc thesis Industrial Design @ TU/e Academic Awards* for “Soft Circuits Toolkit”. Eindhoven University of Technology, (NL).
- 2024: Comoretto, A., *1st Place Award Soft robotics on a budget: democratization of soft robotics through embodied intelligence* for “Tubot”, IEEE Robosoft. San Diego, (US).
- 2024: Ducarme P. *Best Poster Award* for “Exotic functionalities enabled by counter-snapping instabilities”, Multifunctional Materials and Structures GRC Gordon Research Conferences, Ventura, (US).
- 2023: Comoretto, A., *Best Poster Award* for “Fluidic memory and sensing for autonomous soft robots”, Dutch Soft Robotics Symposium, University of Twente, (NL).
- 2023: Zou, S., Picella, S., *Runner up Best Poster Award* for “A retrofit sensing strategy for soft fluidic robots”, Dutch Soft Robotics Symposium, University of Twente, (NL).
- 2022: Comoretto, A., *Best Poster Award* for “Fluidic memory and sensing for autonomous soft robots”, Robotics GRC Gordon Research Conference, Ventura, (US).

## PROFESSIONAL SERVICE

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### **Associate editor**

ICRA, IEEE Robotics & Automation Society (2024)  
Open Access journal “Programmable Materials”, Cambridge University Press (2022-present)

### **Workshop and Conference session organizer**

Programme Committee “ICMS Annual Symposium”, ICMS (2025).  
Co-organizer “Bioinspired Autonomy: philosophical aspects meet technological challenges”, Robosoft (2025).  
Co-organizer “Autonomous Matter”, ICMS & AMOLF (2025).  
Co-organizer “Autonomous Behaviour in Living and Robotic Matter”, Lorentz workshop@Snellius (2020).  
Co-organizer AMOLF Autonomous Matter symposium (2023).  
Co-organizer of sessions at the APS March Meeting (2017-2020) and at SES (2018-2020).

### **PhD committees**

Promoter: L. Van Laake (2023), G. Oliveri, A. Iniguez-Rabago (2021).  
Member: P. Bartels, T. Guo, B. van Raemdonck, B. Caasenbrood (2024), A. Singh, S. Jafarzadeh (2023), Y. Zhang, D. Zrinscak, M. Essink (2022), N. Singh (2019), P. Dieleman, L. Lubbers (2018), B. Florijn (2016).

## MSc committees

K. Kieboom, O. Vaarkamp (2024), C.M. van Riet (2023), S. Rademaekers, J. Tait, M. Collaris (2022), S. Picella, J. de Vries (2021), M. Schomaker, C. Carissimo, G. Galiti (2020), A. Pasman (2019), R. Jongerius (2018), A. Sabbadini, A.A.T.M. Delissen (2016).

## Ad hoc reviewer

Science, Science Robotics, Science Advances, Nature, Nature Materials, Nature Physics, Nature Communications, Nature Energy, Nature Nanotechnology, PNAS, Matter, Soft Robotics, Soft Matter, PRL, PRX, PRE, Advanced Materials, Advanced Functional Materials, Advanced Science, Advanced Materials Technologies, EML, JAM, IEEE/ASME International Conference on Advanced Intelligent Mechatronics, IEEE Robosoft SIAM Journal on Scientific Computing.

## Reviewer grant proposals and scholarships

EU StG, SNSF, NWO Rubicon, JKU LIT, TTW OTP, ENIAC scholarship

## Professional membership

Eindhoven Young Academy of Engineering (2022-2026)

Dutch Soft Robotics Consortium

The American Society of Mechanical Engineers (ASME)

American Physical Society (APS)

Society of Engineering Science (SES)

## @Harvard University (US)

Social and year-end event committee for Materials Science and Mechanical Engineering (2014-2016)

## @AMOLF (NL)

Chair staff meeting (2024-present)

Accredited Confidential Advisor (2023-present)

Data management team (2019-2020), chair data management team (2020-2024)

Organizer open day (2016-2019)

Improving AMOLF website (2016-2017)

## INVITED TALKS

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| 2025 | APS Global Physics Summit, Anaheim (US)<br><b>Invited talk:</b> Exploiting mechanofluidic instabilities to enable soft autonomous machines                               |
| 2025 | ICMS & AMOLF Autonomous Matter workshop, Eindhoven University (NL)<br><b>Invited talk:</b> Embodying Autonomy in Soft Machines   |
| 2025 | Nanoseminar, Utrecht University (NL)<br><b>Invited talk:</b> Exploiting mechanofluidic instabilities to enable soft autonomous machines                                  |
| 2025 | Infomatter colloquium series, AMOLF (NL)<br><b>Invited talk:</b> Autonomous behaviour arising through interactions   |
| 2024 | AMOLF alumni Day, AMOLF (NL)<br><b>Invited talk:</b> Soft robots that harness the physics of everyday objects  |
| 2024 | Biological fluid mechanics and soft matter, Wageningen University (NL)<br><b>Invited talk:</b> Synchronized self-oscillating actuators for ultrafast soft fluidic robots |
| 2024 | NWO, Utrecht (NL)<br><b>Invited talk:</b> Van een sputterende ketchupfles naar een hartslag voor een zacht kunsthart   |
| 2024 | SES, Hangchou (CH)<br><b>Invited talk:</b> Synchronized self-oscillating actuators for ultrafast soft fluidic robots   |
| 2024 | Pint of Science, Eindhoven (NL)<br><b>Invited talk:</b> From sputtering ketchup bottles to soft robots   |
| 2024 | Princeton University Mechanical Engineering Department, Princeton (US)<br><b>Invited talk:</b> Synchronized self-oscillating actuators for ultrafast soft fluidic robots |
| 2024 | IEEE Robosoft, San Diego (US)<br><b>Invited talk:</b> Synchronized self-oscillating actuators for ultrafast soft fluidic robots  |
| 2024 | REM seminar series, TU/e (NL)<br><b>Invited talk:</b> Towards Physical intelligence in soft robotic devices  |
| 2024 | Embodied Intelligence conference, online<br><b>Invited talk:</b> Autonomous phototaxis in soft modular robots enabled by embodied learning                               |
| 2024 | Meet the committee members, KU Leuven (BE)   |

- Invited talk:** There's no Silicon in these Silicone robots!
- 2023 Convergence? Interfaces of the digital and the living, Austrian Academy of Sciences(NL)  
**Invited talk:** Physcial Intelligence in Soft Robots [\[web\]](#)
- 2023 Dutch Soft Robotics Symposium, Twente (NL)  
**Invited talk:** There's no Silicon in these Silicone robots!
- 2023 IEEE Robosoft conference, Singapore (SG)  
**Invited talk:** Harnessing Instabilities to Embody Intelligence in Soft Robots
- 2023 IEEE Robosoft conference, Singapore (SG)  
**Invited talk:** Fluidic Sensing and Memory in Soft Robots
- 2023 Physics colloquium, Eindhoven University of Technology, Eindhoven(NL)  
**Invited talk:** Embodied Fluidic Circuits to Control Soft Robots
- 2023 Interactive Design colloquium, Eindhoven University of Technology, Eindhoven(NL)  
**Invited talk:** Embodying Intelligence in Soft Fluidic Robots
- 2022 Soft Matter seminar University of Amsterdam, Amsterdam (NL)  
**Invited talk:** Continuous learning of emergent behavior in robotic matter
- 2021 NWO, online (NL)  
**Invited talk:** Zachte Robots
- 2021 TU/e Polymer Technology group, online (NL)  
**Invited talk:** Embodied fluidic circuits to control soft robots
- 2021 IBEC - ICMS joint symposium, online (NL)  
**Invited talk:** Embodied intelligence in soft robots
- 2021 Princeton University PRISM seminar series, online (US)  
**Invited talk:** Embodied fluidic circuits to control soft robots
- 2020 BioRob Cardio workshop, online (US)  
**Invited talk:** Embodied fluidic circuits to control soft robots
- 2020 ETCH Zurich seminar series on robotics, online (CH)  
**Invited talk:** Embodied fluidic circuits to control soft robots
- 2020 Lunch Meeting TU/e D&C, online (NL)  
**Invited talk:** Embodied fluidic circuits to control soft robots
- 2020 INM virtual mini-symposium, online (GE)  
**Invited talk:** Rational design of reconfigurable and multistable metamaterials
- 2020 IEEE Robosoft, online (US)  
**Invited talk:** Continuous learning of emergent behavior in robotic matter
- 2020 Living Machines Conference, online (GE)  
**Keynote talk:** Adaptive behavior through decentralized learning in soft robotic matter
- 2019 Topics in IC, Utrecht (NL)  
**Invited talk:** Soft Robots
- 2019 FlexMOF, Dresden (GE)  
**Invited talk:** Origami-inspired Mechanical Metamaterials
- 2019 ICMS Colloquia, Eindhoven (NL)  
**Invited talk:** Soft Robotic Matter
- 2019 General Physics Colloquium, Groningen (NL)  
**Invited talk:** Embedded Control of Soft Robots
- 2019 ESA, Noordwijk (NL)  
**Invited talk:** Embedded Control of Soft Robots
- 2019 livMatS, Freiburg (GE)  
**Invited talk:** Embedding Fluid Logic and Self-learning in Soft Robotic Matter
- 2019 Gordon Conference Crystal Growth and Assembly, Manchester US  
**Invited talk:** Transforming Materials
- 2019 Hyber, Helsinki (FI)  
**Invited talk:** Soft Robotic Matter
- 2019 ICMS Outreach Symposium, Eindhoven (NL)  
**Invited talk:** Sequential Actuation of Soft Robots by Harnessing Soft Fluidic Networks

- 2019 Studium Generale, Groningen (NL)  
**Keynote talk:** Origami-inspired Materials and Robots
- 2018 ASME IMECE, Pittsburgh (US)  
**Invited talk:** Computational Design of Multistable Prismatic Architected Materials
- 2018 Fablearn, Eindhoven (NL)  
**Masterclass:** RainMaker: from Mechanical Metamaterial to Interactive Art Installation
- 2018 The Hamlyn Symposium on Medical Robotics, London (UK)  
**Invited talk:** Programming the Response of Fluidic Soft Actuators by Harnessing Nonlinearities
- 2018 ReMAR, Delft (NL)  
**Invited talk:** Transforming Materials
- 2018 Equinix, Amsterdam (NL)  
**Keynote talk:** Mathemagical interconnections
- 2018 Nationale Wiskundedagen, Noordwijkerhout (NL)  
**Invited talk:** Van Origami-materialen naar Zachte Robots
- 2018 Physics@Veldhoven, Veldhoven (NL)  
**Invited talk:** Rational Design of Reconfigurable Architected Materials
- 2018 Gordon Conference Multifunctional Materials and Structures, Ventura (US)  
**Invited talk:** Finding the Mechanically Stable States in Prismatic Architected Materials
- 2017 SURFnet, Utrecht (NL)  
**Invited talk:** Van Origami-materialen naar Zachte Robots
- 2017 Ars and Mathesis, Utrecht (NL)  
**Invited talk:** Transforming Materials
- 2017 ARCNL, Amsterdam (NL)  
**Invited talk:** Embracing compliance and instabilities in mechanical systems
- 2017 TEDxGroningen, Groningen (NL)  
**Invited talk:** What can we learn from crumpling a piece of paper?
- 2017 AMOLF Open Dag, Amsterdam (NL)  
**Invited talk:** Van Origami-materialen naar Zachte Robots
- 2017 HMC Zomeracademie, Rotterdam (NL)  
**Invited talk:** Magic Materials make Soft Robots
- 2017 Soft and Biological Matter Seminar, Leiden (NL)  
**Invited talk:** Rational Design of Reconfigurable Architected Materials
- 2017 PINC.18 Conference, Utrecht (NL)  
**Invited talk:** Magic Materials make Soft Robots
- 2017 SMS Europe, Paris (FR)  
**Invited talk:** Rational Design of Reconfigurable Architected Materials
- 2017 AMOLF, Amsterdam (NL)  
**public colloquium:** Rational Design of Reconfigurable Devices and Architected Materials
- 2016: AMOLF, Amsterdam (NL)  
**Friday seminar:** Soft Robotic Matter
- 2016: 3D Printing Materials Conference, Maastricht (NL)  
**Invited talk:** Embracing Compliance in Robots to Achieve Function
- 2015: Designer Matter, AMOLF (NL)  
**Invited talk:** Controlling Soft Structures and Devices by Embedded Actuation and Sensing
- 2015: Aerospace Structures and Computational Mechanics, TU Delft (NL)  
**Invited talk:** Actuated Materials, Smart Actuated Structures and Devices that Harness Compliance and Instabilities
- 2015: Institute Lorentz, Leiden University (NL)  
**Soft Matter Physics Seminar:** Mechanical Metamaterials that Harness Instabilities and Folding
- 2015: School of Engineering and Applied Sciences, Harvard University (US)  
**MSME Year End Event:** From Origami to Transformable Metamaterials
- 2014: Wyss Institute for Biologically Inspired Engineering, Harvard University (US)

- Soft Robotics General Meeting:** Finite Element Analysis of Soft Liquid Embedded Strain Sensors
- 2014: School of Engineering and Applied Sciences, Harvard University (US)  
**Mech & Math:** Instabilities in Pressure-Volume relation of inflatable Membranes
- 2014: Graduate School of Design, Harvard University (US)  
**Guest Lecturer** in Computational Material Distributions and Gradients of Compliance (SCI 0642500)
- 2012: School of Engineering and Applied Sciences, Harvard University (US)  
**Mech & Math:** Shape Optimization of Soft Periodic Structures
- 2010: School of Engineering and Applied Sciences, Harvard University (US)  
**Abaqus Masterclass**

## CONFERENCES & COLLOQUIA TALKS

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- (112) **Mohanty S., Comoretto, A.,** Baconnier, P., van Heck, M., **Overvelde, J.T.B.** (2025) Buckling-induced navigational autonomy and sensing in soft-robots, APS Global Summit, Anaheim, US. *Presentation.*
- (111) **Picella, S., van Riet, C. M., Comoretto A., Verkaamp, Overvelde, J.T.B.,** (2024) From Marionette systems to Autonomous (Soft) Robots, Workshop on Interplay of Fluids and Soft Materials, Oslo, NO. *Invited presentation.*
- (110) **Ducarme, P.,** Weber, B., van Hecke, M., **Overvelde, J.T.B.** (2024) Exotic properties enabled by counter-snapping instabilities, 2024 SES Annual Technical Meeting, Hangzhou, CN. *Poster and Presentation.*
- (109) **Zou, S., Van Laake, L.C., Overvelde, J.T.B.** (2024) System Integration of Power, Control, Actuation and Sensing in a Soft Walking Robot, 2024 SES Annual Technical Meeting, Hangzhou, CN. *Presentation.*
- (108) **Chang, Z.,** Geers, M., **Overvelde, J.T.B.,** Rokos, O. (2024) 3D Printing Magnetic Metamaterials: From Manufacturing Techniques to Soft Robotic Applications, 2024 SES Annual Technical Meeting, Hangzhou, CN. *Presentation.*
- (107) **Mohanty S., Comoretto, A., and Overvelde, J.T.B.** (2024) Harnessing physical intelligence of biological cilia for autonomy in soft robots, Dutch soft robotics symposium, TU Eindhoven, NL, *Invited presentation.*
- (106) **Zou., S., De Vries, J., Van Laake, L.C., Overvelde, J.T.B.** (2024) Energy Efficiency Analysis of Soft Pneumatic Bellow Actuator. , Dutch soft robotics symposium, TU Eindhoven, NL, *Poster*
- (105) **Comoretto, A., Schomaker, H.A.H., Overvelde, J.T.B.** (2024) Physical synchronization of soft self-oscillating limbs for fast and autonomous locomotion, Dutch Soft Robotics Symposium, Eindhoven, NL. *Presentation.*
- (104) **Mohanty S., Comoretto, A., and Overvelde, J.T.B.** (2024) Harnessing buckling for autonomy in soft robots, 35th Dutch soft matter meeting, University of Twente, NL. *Soundbite presentation.*
- (103) **Van Riet, C.M., Zou, S., Overvelde, J.T.B.** (2024) Soft Circuits Toolkit: A Teaching Kit for Soft Fluidic Circuits to Control Soft Devices. Soft Robotics PhD Conference, Leuven, BE. *Poster.*
- (102) **Ducarme, P.,** Weber, B., van Hecke, M., **Overvelde, J.T.B.** (2024) Exotic properties enabled by counter-snapping instabilities. Soft Robotics PhD Conference, Leuven, BE. *Poster.*
- (101) **Picella, S., Comoretto A., Veerkaamp, O., Overvelde, J.T.B.** (2024) Thermopneumatic Energy Harvesting through circadian Oscillations, Soft Robotics PhD Conference, Leuven, BE. *Poster.*
- (100) **Van Riet, C.M., Zou, S., Overvelde, J.T.B.** (2024) Soft Circuits Toolkit, Dutch Soft Robotics Symposium. Eindhoven, NL. *Demonstration.*
- (99) **Picella, S., van Riet, C. M., Overvelde, J.T.B.** (2024) Fluidic Coding for Soft Robots. Dutch Soft Robotics Symposium. Eindhoven, NL. *Demonstration.*
- (98) **Mohanty S., Overvelde, J.T.B.** (2024) Autonomous soft robotic walkers powered by vibration of artificially designed cilia, , GRS and GRC Robotics, Ventura, US. *Poster.*
- (97) **Picella, S., van Riet, C. M., Overvelde, J.T.B.** (2024) Enabling High-level programmability in Pneumatic Soft Robots, GRS and GRC Robotics, Ventura, US. *Presentation and poster.*



- (96) **Ducarme, P.**, Weber, B., van Hecke, M., **Overvelde, J.T.B.** (2024) Exotic functionalities enabled by counter-snapping instabilities, GRS and GRC Multifunctional Materials and Structures, Ventura, US. *Presentation and poster.*
- (95) **Comoretto, A.**, **Schomaker, M.**, **Overvelde, J.T.B.** (2024) Synchronized kink waves for ultra-fast fluidic robots, GRS and GRC Robotics, Ventura, US. *Presentation and poster.*
- (94) **Comoretto, A.**, **Overvelde, J.T.B.** (2023) Fluidic memory and sensing for autonomous soft robots, Dutch Soft Robotics Symposium, University of Twente, (NL). *Poster*
- (93) **Ducarme, P.**, Weber, B., Van Hecke, M., **Overvelde, J.T.B.** (2023) Exotic Functionalities Enabled by Structures Showing Counter-snapping Instabilities, GRS, Ventura, California, US. *Presentation.*
- (92) **Ducarme, P.**, Weber, B., Van Hecke, M., **Overvelde, J.T.B.** (2023) Surprising deformations in structures made out of flexible building blocks, Creative Differences Workshop (London Design Biennale), London, (UK). *Presentation.*
- (91) **Comoretto, A.**, **Overvelde, J.T.B.**, (2023) Fluidic memory and sensing for autonomous soft robots, Autonomous Matter Symposium @AMOLF, Amsterdam, (NL). *Poster.*
- (90) **Comoretto, A.**, **Schomaker, H.A.H.**, **Overvelde, J.T.B.** (2023) Harnessing kink wave instabilities for fast untethered pneumatic soft robots, Klein Colloquium AMOLF, Amsterdam, NL. *Presentation*
- (89) **Schomaker, M.**, **Picella, S.**, **Kung, A.**, **Van Laake, L.C.**, **Overvelde, J.T.B.**, (2023) Decentralized control in soft robots: distributing the brain over the body, Autonomous Matter Symposium @AMOLF, Amsterdam, (NL). *Poster.*
- (88) **Ducarme, P.**, Weber, B., Van Hecke, M., **Overvelde, J.T.B.**, (2023) Unique structural functions enabled by a novel mechanical instability, Autonomous Matter Symposium @AMOLF, Amsterdam, (NL). *Poster.*
- (87) **Mohanty, S.**, **Overvelde, J.T.B.**, (2023) Bridging the size-gap in soft robots, Autonomous Matter Symposium @AMOLF, Amsterdam, (NL). *Poster.*
- (86) **Van Riet, C.M.**, **Zou, S.**, **Overvelde, J.T.B.**, (2023) Soft Circuits Toolkit, Autonomous Matter Symposium @AMOLF, Amsterdam, (NL). *Poster.*
- (85) **Schomaker, M.**, **Picella, S.**, **Kung, A.**, **Van Laake, L.C.**, **Overvelde, J.T.B.**, (2023) Decentralized control in soft robots: distributing the brain over the body, APS March Meeting. Las Vegas, (US). *Presentation.*
- (84) **Comoretto, A.**, **Overvelde, J.T.B.**, (2023) Fluidic memory and sensing for autonomous soft robots, APS March Meeting, Las Vegas, (US). *Presentation.*
- (83) **Ducarme, P.**, Weber, B., Van Hecke, M., **Overvelde, J.T.B.**, (2023) Exotic properties enabled by counter-snapping instabilities, APS March Meeting, Las Vegas, (US). *Presentation.*
- (82) **Picella, S.**, **Van Riet, C.M.**, **Overvelde, J.T.B.**, (2023) Endowing soft robots with counting capabilities, APS March Meeting, Las Vegas, (US). *Presentation.*
- (81) **Arfaee, M.**, Kluin, J., **Overvelde, J.T.B.**, (2023) Modeling the behavior of elastic pouch motors, IEEE Robosoft conference, Singapore, (SG). *Presentation.*
- (80) **Overvelde, J.T.B.**, (2022) Towards Autonomous Soft Robots by Using Smart Fluidic Circuits, Soft Robotics Summer School, Delft, (NL). *Presentation.*
- (79) **Schomaker, M.**, **Picella, S.**, **Kung, A.**, **Van Laake, L.C.**, **Overvelde, J.T.B.**, (2022) Decentralized control in soft robots: distributing the brain over the body, Klein Colloquium @ AMOLF, Amsterdam, (NL). *Presentation.*
- (78) **Comoretto, A.**, **Overvelde, J.T.B.**, (2022) Fluidic memory and sensing for autonomous soft robots, GRC Gordon Robotics, Ventura, (US). *Presentation.*
- (77) **Schomaker, M.**, **Picella, S.**, **Kung, A.**, **Van Laake, L.C.**, **Overvelde, J.T.B.**, (2022) Decentralized control in soft robots: distributing the brain over the body, GRC Gordon Robotics, Ventura, (US). *Presentation.*
- (76) **Ducarme, P.**, Weber, B., Van Hecke, M., **Overvelde, J.T.B.**, (2022) Design of a mechanical metamaterial with a negative-displacement transition, ASML Tech Meeting, Veldhoven, (NL). *Presentation.*
- (75) **Picella, S.**, **Overvelde, J.T.B.**, (2022) Towards emergent behavior in modular soft robots, ICMS Annual Symposium, Eindhoven, (NL). *Poster.*
- (74) **Zou, S.**, **De Vries, J.**, **Picella, S.**, Kortman, V., Sakes, A., **Overvelde, J.T.B.**, (2022) Can a Soft Actuator Be a Sensor? Klein Colloquium @AMOLF, Amsterdam, (NL). *Presentation.*

- (73) **Overvelde, J.T.B.**, (2022) Soft Robotic Matter group, Shaping the Future of Robotics through Material Innovation, Kreuth, (DE). *Presentation*.
- (72) **Comoretto, A., Overvelde, J.T.B.**, (2022) Smart fluidic circuits for electronics-free untethered soft robots, APS March Meeting 2022, Chicago, (US). *Presentation*.
- (71) **Comoretto, A., Overvelde, J.T.B.**, (2022) Fluidic memory and sensing for autonomous soft robots, ESMC 2022, Galway, (IE). *Presentation*.
- (70) **Comoretto, A., Overvelde, J.T.B.**, (2022) Fluidic memory and sensing for autonomous soft robots, Dutch Soft Robotics Symposium 2022, Delft, (NL). *Presentation*.
- (69) **Schomaker, M., Picella, S., Kung, A., Van Laake, L.C., Overvelde, J.T.B.**, (2022) Decentralized control in soft robots: distributing the brain over the body, APS March Meeting, Chicago, (US). *Presentation*.
- (68) **Zou, S., De Vries, J., Picella, S., Kortman, V., Sakes, A., Overvelde, J.T.B.**, (2022) A Universal Fluidic Sensing Strategy for Soft Robots, Dutch Soft Robotics Symposium, Delft, (NL). *Presentation*.
- (67) **Zou, S., Overvelde, J.T.B.**, (2022) Towards Soft Autonomous Robots with Smart Fluidic Circuits, 2022 Shaping the Future of Robotics through Material Innovation, Kreuth, (DE). *Poster*.
- (66) **Zou, S., De Vries, J., Picella, S., Kortman, V., Sakes, A., Overvelde, J.T.B.**, (2022) Can a Soft Actuator Be a Sensor? 31st Dutch Soft Matter Meeting, Delft, (NL). *Presentation*.  
Presentation.
- (65) **Van Laake, L.C., Overvelde, J.T.B.** (2022) Reprogrammable Sequential Activation of soft Actuators, IEEE Robosoft conference. Edinburgh, (IE). *Presentation*.
- (64) **Van Laake, L.C., Overvelde, J.T.B.** (2022) Non-linear Fluidic Control Circuits Enable Autonomy in Soft Robotics, International Workshop on Embodied Intelligence. *Online Presentation*.
- (63) **Van Laake, L.C., Overvelde, J.T.B.** (2022) Experimental Characterization and Numerical Simulation of Soft total Artificial Hearts, ESMC (IE). *Presentation*.
- (62) **Van Laake, L.C., Overvelde, J.T.B.** (2022) Fluidic Control of Soft Robots for Future Medical Applications, HTRIC kick-off event, Groningen (NL). *Invited presentation*.
- (61) **Zou, S., De Vries, J., Picella, S., Kortman, V., Sakes, A., Overvelde, J.T.B.**, (2022). Can a soft actuator be a sensor. Dutch Soft Matter Meeting. Delft (NL). *Presentation*.
- (60) **Zou, S., De Vries, J., Picella, S., Kortman, V., Sakes, A., Overvelde, J.T.B.**, (2022). Can a soft actuator be a sensor. Klein Colloquium @AMOLF. Amsterdam (NL). *Presentation*.
- (59) **Schomaker, M., Picella, S., Kung, A., Van Laake, L.C., Overvelde, J.T.B.**, (2022). Towards emergent control with minimal resources. Klein Colloquium @AMOLF. Amsterdam (NL). *Presentation*.
- (58) **Comoretto, A., Van Laake, L.C., Overvelde, J.T.B.**, (2022) Smart fluidic circuits for electronics-free untethered soft robots. APS March meeting. Chicago (US). *Presentation*.
- (57) **Schomaker, M., Picella, S., Kung, A., Van Laake, L.C., Overvelde, J.T.B.**, (2022). Harnessing stigmergy for emergent adaptive control, in soft modular systems. APS March meeting. Chicago (US). *Presentation*.
- (56) **Arfaee, M., Overvelde, J.T.B., Kluin, J.**, (2021). A soft robotic fluidic transmission systems. ICTAM. (US). *Online poster*.
- (55) **Van Laake, L.C., Overvelde, J.T.B.**, (2021). A heartbeat for soft robots. Physics@Veldhoven, Veldhoven (NL). *Online presentation*.
- (54) **Van Laake, L.C., Overvelde, J.T.B.**, (2021). Responsive and mechanically programmable sequential actuation of fluid-driven soft actuators. Conversations on Bioinspired Engineering. (US). *Online presentation*.
- (53) **Wruck, F., Overvelde, J.T.B.**, Tans, S., (2021). Stochastic Molecular Matter. ICMS annual symposium TU/e. (NL). *Online poster*.
- (52) **Schomaker, M., Picella, S., Overvelde, J.T.B.**, (2021). Towards the design of emergent phenomena in robotic materials. ICMS annual symposium TU/e. (NL). *Online poster*.
- (51) **Schomaker, M., Comoretto, A.**, (2021). Soft robotic research at AMOLF. AUC springboard event. (NL). *Online poster*.
- (50) **Arfaee, M., Overvelde, J.T.B., Kluin, J.**, (2021). A soft robotic fluidic transmission systems. SES. (US). *Online poster*.

- (49) Van Laake, L.C., De Vries, J., Malek Kani, S., Overvelde, J.T.B., (2021). Responsive and mechanically programmable sequential actuation of fluid-driven soft actuators. SES. (US). *Online poster*.
- (48) Schomaker, M., Picella, S., Overvelde, J.T.B., (2021). Towards decentralized emergent control in dynamic locomotion tasks. SES. (US). *Online poster*.
- (47) Iniguez-Rabago, A., Overvelde, J.T.B., (2021). Elastic origami metamaterials and how to control their folding behavior. EMI2021-IC. Durham (UK). *Online presentation*.
- (46) Iniguez-Rabago, A., Overvelde, J.T.B., (2021). Elastic origami metamaterials and how to control their folding behavior. Physics@Veldhoven. Veldhoven (NL). *Online presentation*.
- (45) Van Laake, L., Malek Kani, S., Overvelde, J.T.B., (2020). Programming Soft Robots Using Non-linear Fluidic Circuits. Physics@Veldhoven. Veldhoven (NL). *Poster*.
- (44) Iniguez-Rabago, A., Milleret, A., Overvelde, J.T.B., (2020). Towards Origami Tessellations with Bistable Folds. Gordon Conference - Multifunctional Materials and Structures. Ventura (US). *Poster*.
- (43) Oliveri, G., Van Laake, L., Carissimo, C., Miette, C., Overvelde, J.T.B., (2020). Decentralized Reinforced Learning of Emergent Behavior in Robotic Matter. Gordon Conference - Multifunctional Materials and Structures, Ventura (US). *Poster*.
- (42) Oliveri, G., Overvelde, J.T.B., (2020). Inverse Design of Mechanical Metamaterials that Undergo Buckling. Gordon Conference - Multifunctional Materials and Structures, Ventura (US). *Poster*.
- (41) Van Laake, L., Malek Kani, S., Overvelde, J.T.B., (2020). Programming Soft Robots Using Non-linear Fluidic Circuits. Gordon Conference - Robotics. Ventura (US). *Poster*.
- (40) Oliveri, G., Van Laake, L., Carissimo, C., Miette, C., Overvelde, J.T.B., (2020). Decentralized Reinforced Learning of Emergent Behavior in Robotic Matter. Gordon Conference - Robotics, Ventura (US). *Poster*.
- (39) Van Laake, L., Malek Kani, S., Overvelde, J.T.B., (2019). Towards Fully Soft Robots Using Fluidic Circuits. Chains. Veldhoven (NL). *Invited presentation*.
- (38) Oliveri, G., Van Laake, L., Carissimo, C., Miette, C., Overvelde, J.T.B., (2019). Adaptive and Self-learning Robotic Matter. SES. St. Louis (US). *Presentation*.
- (37) Van Laake, L., Malek Kani, S., Overvelde, J.T.B., (2019). Responsive and Mechanically Programmable Sequential Actuation of Fluid-driven Soft Actuators. SES. St. Louis (US). *Presentation*.
- (36) van Laake, L., Overvelde, J.T.B., (2019). A Heartbeat for Soft Robots. Klein Colloquium @AMOLF. Amsterdam (NL). *Presentation*.
- (35) Oliveri, G., Van Laake, L., Carissimo, C., Miette, C., Overvelde, J.T.B., (2019). Decentralized Reinforced Learning of Emergent Behavior in Robotic Matter. Soft Matter Meeting. Utrecht (NL). *Soundbite presentation*.
- (34) Iniguez-Rabago, A., Overvelde, J.T.B., (2019). Boundary Effects in Origami Tessellations with Bistable Folds. Soft Matter Meeting. Utrecht (NL). *Soundbite presentation*.
- (33) van Laake, L., Overvelde, J.T.B., (2019). A Heartbeat for Soft Robots. Soft Matter Meeting. Eindhoven, Netherlands (NL). *Soundbite presentation*.
- (32) Van Laake, L., Iniguez-Rabago, A., Oliveri, G., (2019). Soft Robotics Research at AMOLF. Springboard 2019 @AUC. Amsterdam (NL). *Invited presentation*.
- (31) van Laake, L., Overvelde, J.T.B., (2019). Soft Fluidic Networks Driving Soft Robots. Workshop ESPCI-UVA-AMOLF. Amsterdam, Netherlands (NL). *Invited presentation*.
- (30) van Laake, L., Overvelde, J.T.B., (2019). Mechanically Programmable Sequential Actuation of Fluid-driven Soft Actuators. APS March Meeting. Boston (US). *Presentation*.
- (29) Iniguez-Rabago, A., Li, Y., Overvelde, J.T.B., (2019). Computational Design of Mechanically Multistable Prismatic Metamaterials. APS March Meeting. Boston (US). *Presentation*.
- (28) Oliveri, G., Overvelde, J.T.B., (2019) Inverse Design of Mechanical Metamaterials that Harness Instabilities. APS March Meeting. Boston (US). *Presentation*.
- (27) Oliveri, G., Overvelde, J.T.B., (2019) Inverse Design of Mechanical Metamaterials that Harness Instabilities. Physics@Veldhoven. Veldhoven (NL). *Poster*.
- (26) Oliveri, G., Overvelde, J.T.B., (2018). Mechanical Metamaterials: Shape Matters. Future Materials - Koers Lustrum Talks 2018. Eindhoven (NL). *Invited presentation*.
- (25) Oliveri, G., Overvelde, J.T.B., (2018) Inverse design of mechanical metamaterials that harness instabilities. SES. Madrid (AU). *Presentation*.

- (24) **Iniguez-Rabago, A., Li, Y., Overvelde, J.T.B.**, (2018). Finding the Mechanically Stable States of Prismatic Architected Materials. Solvay. Brussel, (BE). *Presentation*.
- (23) **Oliveri, G., Overvelde, J.T.B.**, (2018) Reprogramming the elastic properties of mechanical metamaterials by amplifying imperfections. Solvay. Brussel, (BE). *Presentation*.
- (22) **Iniguez-Rabago, A., Li, Y., Overvelde, J.T.B.**, (2018). Finding the Mechanically Stable States in Prismatic Architected Materials. Klein Colloquium @AMOLF. Amsterdam (NL). *Presentation*.
- (21) **Iniguez-Rabago, A., Li, Y., Overvelde, J.T.B.**, (2018). Finding the Mechanically Stable States in Prismatic Architected Materials. APS March Meeting. Los Angeles (US). *Presentation*.
- (20) **Oliveri, G., Overvelde, J.T.B.**, (2018) Reprogramming the Elastic Properties of Mechanical Metamaterials by Amplifying Imperfections. APS March Meeting. Los Angeles (US). *Presentation*.
- (19) **Iniguez-Rabago, A., Li, Y., Overvelde, J.T.B.**, (2017). Finding the Mechanically Stable States in Prismatic Architected Materials. Physics@Veldhoven. Veldhoven (NL). *Poster*. [top three in both categories]
- (18) **Iniguez-Rabago, A., Li, Y., Overvelde, J.T.B.**, (2017). Finding the Mechanically Stable States in Prismatic Architected Materials. Soft Matter Meeting. Enschede (NL). *Soundbite presentation*.
- (17) **Oliveri, G., Overvelde, J.T.B.**, (2017) Reprogramming the Elastic Properties of Mechanical Metamaterials by Amplifying Imperfections. Soft Matter Meeting. Enschede (NL). *Soundbite presentation*.
- (16) **Overvelde, J.T.B.**, Weaver, J., Hoberman C., Bertoldi, K., (2017) Rational Design of Reconfigurable Architected Materials. Metamaterials Conference, Marseille (AU). *Presentation*.
- (15) **Overvelde, J.T.B.**, Weaver, J., Hoberman C., Bertoldi, K., (2017). Rational Design of Reconfigurable Prismatic Architected Materials. American Physical Society Meeting. New Orleans (US). *Presentation*.
- (14) **Overvelde, J.T.B.**, Dykstra, D.M.J., de Rooij, R., Weaver, J., Bertoldi, K., (2017). Tension Instability in a thick elastic body. American Physical Society Meeting, New Orleans (US). *Presentation*.
- (13) **Oliveri, G., Overvelde, J.T.B.**, (2017). Reprogramming the Elastic Properties of Mechanical Metamaterials by Amplifying Imperfections. ICMS Complexity Science Winter School, Eindhoven (NL). *Poster*.
- (12) **Overvelde, J.T.B.**, Dykstra, D.M.J., de Rooij, R., Weaver, J., Bertoldi, K., (2016). Tensile Instability in a Thick Elastic Body. Soft Matter Meeting (NL). *Soundbite Presentation*.
- (11) **Overvelde, J.T.B.**, de Jong, T.A., Becerra, S.A., Shevchenko, Y., Whitesides, G.M., Weaver, J., Hoberman, C., Bertoldi, K., (2015). Transformable Origami-inspired Prismatic Metamaterials. Wyss retreat. Boston (US). *Movie and Demo*.
- (10) **Overvelde, J.T.B.**, Bertoldi, K., (2015). Amplifying the Response of Soft Actuators by Harnessing Instability. New England Workshop on the Mechanics of Materials and Structures. Boston (US). *movie*.
- (9) **Overvelde, J.T.B.**, Kloek, T., D'haen J., Bertoldi, K., (2015). Harnessing Instability in Soft Actuators. AMOLF Designer Matter Workshop International Mechanical Engineering Conference. Amsterdam (NL). *Presentation*.
- (8) **Overvelde, J.T.B.**, de Jong, T.A., Weaver, J., Hoberman, C., Bertoldi, K., (2015). Actuated Origami-like Structures with Tunable Volume and Stiffness. APS March Meeting. San Antonio (US). *Presentation*.
- (7) **Overvelde, J.T.B.**, Kloek, T., D'haen J., Bertoldi, K., (2014). Harnessing Instability in Soft Actuators. ASME International Mechanical Engineering Conference. Montréal, CA. *Presentation*.
- (6) **Overvelde, J.T.B.**, Bertoldi, K., (2013). Putting Soft Sensors to the Test. New England Workshop on the Mechanics of Materials and Structures. Amherst (US). *movie*.
- (5) **Overvelde, J.T.B.**, Bertoldi, K., (2013). Topology Optimization of Inflatable Stretchable Structures. ASME International Mechanical Engineering Conference. San Diego (US). *Presentation*.
- (4) **Overvelde, J.T.B.**, Shan, S., Bertoldi, K., (2012). Compaction Through Buckling in 2D Periodic, Soft and Porous Structures: Effect of Pore Shape. New England Workshop on the Mechanics of Materials and Structures. Providence (US). *movie*.
- (3) **Overvelde, J.T.B.**, Langelaar, M., Keulen, F. van, (2012). The Moving Node Approach in Topology Optimization - An Exploration to a Flow-inspired Meshless Method-based Topology Optimization Method. New England Workshop on the Mechanics of Materials and Structures. Providence (US). *Poster*.

(2) **Overvelde, J.T.B.**, Shan, S., Bertoldi, K., (2012). Non-linear Response of Soft Porous Structures: Effect of Pore Shape on their Response. Society of Engineering Science – 49th Annual Technical Meeting. Atlanta (US). *Presentation*.

(1) **Overvelde, J.T.B.**, Langelaar, M., Keulen, F. van (2012). Influence of the Nodal Distribution on Element-Free Galerkin Accuracy in a Topology Optimization Context. European Congress on Computational Methods in Applied Sciences and Engineering. Vienna (AU). *Presentation*.

## SELECTED MEDIA COVERAGE

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(67) Borghouts, Floris (2025) “Fulbright Alumni Spotlight: Bas Overvelde.” Fulbright Netherlands [\[web\]](#)

(66) Boelsums, Anita (2025) “De Kracht van Zachte Robots.” Buurtkrant Dwars 20 March [\[web\]](#)

(65) Goossens, Stijn (2024) “Hoe zachte robots levens kunnen redden.” De nacht van NTR wetenschap 12 December [\[web\]](#)

(64) Mate, Christian (2024) “Soft Robots: Like primitive insects or bacteria.” Digital Doctor 4 September [\[web\]](#)

(63) Kluin, Jolanda (2023) “Een zacht implanteerbaar robothart voor mensen met ernstig hartfalen.” BNR Radio 11 July [\[web\]](#)

(62) Schenk, Dorine (2022) “Dode spin begint nieuw leven als mechanische robotgrijper.” Het Parool 4 August. [\[web\]](#)

(61) Schenk, Dorine (2022) “Sputterende Ketchupfles laat zachte robot bewegen en reageren.” New Scientists 13 July. [\[web\]](#)

(60) Van Laake, Luuk (2022) “Zachte Robots Gebaseerd op een Sputterende Ketchupfles.” BNR Radio 11 July. [\[web\]](#)

(59) Editors (2022) “Zachte Robot Beweegt Dankzij Ventiel Ketchupfles.”, De Ingenieur 11 July. [\[web\]](#)

(58) Snellink, Marjolein (2022) “Soft Hardware.” NWO Resultaat 24 Januari. [\[web\]](#)

(57) Van Nimwegen, Elisabeth (2021) “Van een chipszak tot een Nobelprijs voor softe robotica”, Atlas NTR 3 November. [\[web\]](#)

(56) Golson, Jordan (2021) “Five lines of code could change the way we think about AI.” inverse.com 12 May. [\[web\]](#)

(55) Timmer, John (2021) “Programming a robot to teach itself how to move.” arstechnica.com 11 May. [\[web\]](#)

(54) Meinders, Karlijn (2021) “Zo simple kan een autonoom en zelflerend robotje zijn.” BNR Radio 11 May. [\[web\]](#)

(53) Heirbaut, Jim (2021) “Eenvoudige robotjes leren onbewust samenwerken.” De Ingenieur 10 May. [\[web\]](#)

(52) Dijk, Pancras (2020) “Als ideeën beginnen te stromen.” De Ingenieur 12 November. [\[web\]](#)[\[web\]](#)

(51) Delbert, Caroline (2020) “Morphing Materials.” Scientific American April issue. [\[web\]](#)

(50) Mandemaker, Arnold (2020) “Robothart moet levens redden.” Eindhovens Dagblad 4 February. [\[web\]](#)

(49) Burgess, Kaya (2020) “Beat that: robotic heart aims to win competition for £30m grant.” The Times 23 January. [\[pdf\]](#) [\[web\]](#)

(48) Bawden, Tom (2020) “Revolutionary wireless ‘hybrid heart’ prototype for humans could be ready by 2028.” The I 23 January. [\[pdf\]](#) [\[web\]](#)

(47) Bagot, Martin (2020) “World’s first totally robotic heart will end need for transplants in 10 years.” The Mirror 23 January. [\[pdf\]](#) [\[web\]](#)

(46) Knapton, Sarah (2020) “Robo-heart could solve organ transplant crisis.” The Telegraph 23 January. [\[pdf\]](#) [\[web\]](#)

(45) Spencer, Ben (2020) “Soft robotic heart that uses synthetic material combined with layer of lab-grown human cells could put an end to human transplants by 2028.” The Daily Mail 23 January. [\[pdf\]](#) [\[web\]](#)

(44) Bagot, Martin (2020) “Roboheart: Professor hopes save thousands of lives with world’s first ‘hybrid organ’ by 2028.” The Express 23 January. [\[pdf\]](#)

(43) Howe, Nick and Bundell, Shamini (2019) “Podcast: A rapid, multi-material 3D printer, and a bacterium’s role in alcoholic hepatitis” Nature Podcast 13 November. [\[web\]](#)

- (42) Noordermeer, Barbara (2019) “Studeren in de VS? Deze Nederlanders vertellen hoe ze Harvard binnenkwamen” *Intermediair* 1 August. [\[web\]](#)
- (41) Grob, Bart (2018) “Het zachte robothart van Bas.” *De Vrolijke Frankenstein* 16 March.
- (40) Woo, Marcus. (2018) “Finding Future Tech in Ancient Art.” *Nova Next* 24 January. [\[web\]](#)
- (39) Overvelde, Bas (2017) “Natuurkundige Bas Overvelde gaat het bouwen: een robotboom die tot bloei komt waar je bij staat.” *Trouw* 11 November. [\[web\]](#)
- (38) Waterval, Dirk (2017) “Programmeerbare Metamaterialen” *Quantum Universe* 19 September. [\[web\]](#)
- (37) Van Calmthout, Martijn (2017) “Aan tafel met Frankenstein - De gemaakte natuur.” Talk show Museum Boerhaave - Nacht van Kunst en Kennis 16 September.
- (36) Visscher, Marc-Robin (2017) “Zacht robotisch kunsthart in de maak.” Radio show NPO1 Nieuws en Co 4 August. [\[web\]](#)
- (35) Iking, Harm (2017) “Toekomstmaterialen.” *Hypothese* 12 May. [\[pdf\]](#)
- (34) Van Calmthout, Martijn (2017) “Hogere knutselkunde.” *De Volkskrant* 11 March. [\[web\]](#)[\[web\]](#)
- (33) Beekhuis, Mark (2016) “Een origami-materiaal dat geluid verandert.” Radio show BNR Wetenschap vandaag 28 November. [\[web\]](#)
- (32) Karhof, Joost (2016) “Wetenschappers adopteren Origami.” Radio show NPO1 Nieuws en Co 4 November. [\[web\]](#)
- (31) Vives, Francois-Xavier (2016) “The Origami Code.” Documentary at Inscience Festival 2-6 November.
- (30) Aan de Brugh, Marcel (2016) “Octopus als Robot.” *NRC Handelsblad* and *NRC Next* 3 September. [\[pdf\]](#) [\[pdf\]](#)
- (29) Van Kasteren, Joost (2016) “Dichte muur krijgt gaten met een keertje vouwen.” *NRC Handelsblad* 16 April. [\[pdf\]](#)
- (28) Cookson, Clive (2016) “Origami comes into the tech fold.” *Financial Times* 26 March. [\[pdf\]](#)
- (27) Hansman, Heather (2016) “A New Material Could Make Medical Devices That Expand and Collapse.” *Smithsonian* 18 March. [\[web\]](#)
- (26) Joosten, Carla (2016) “Zachte Robotica.” *Elsevier* 17 March. [\[pdf\]](#)
- (25) Knapton, Sarah (2016) “Bizarre shape-shifting material invented by Harvard.” *The Telegraph* 11 March. [\[web\]](#)
- (24) Web editor (2016) “Researchers design versatile shapeshifting material.” *ResearchGate* 11 March.
- (23) Ceurstemont, Sandrine (2016) “Shape-shifting matter could let houses crumple themselves away.” *New Scientist* 11 March. [\[web\]](#)
- (22) Reader, Ruth (2016) “Researchers Have Created a Shapeshifting Material Inspired by Origami.” *Mic* 11 March. [\[web\]](#)
- (21) Web editor (2016) “Harvard team develops origami-inspired 3D structural material.” *The Engineer* 11 March.
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- (8) “Designing with Mathemagic” (Feb 2020), workshop at Amsterdam University of Applied Sciences, Amsterdam (NL).
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- (5) “Frankie - The artificial starfish” (Mar 2018 - Oct 2018), exhibition at Rijksmuseum Boerhaave, Leiden (NL)
- (4) “Edge of Chaos” (Dec 2017 - Jan 2019), exhibition on world tour at (WoeLab in Lomé (TG); La Gaité Lyrique in Paris (FR); Cinekid in Amsterdam (NL); KIKK Festival in Namur (BE).
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