

CURRICULUM VITAE

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

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www.amolf.nl/research-groups/soft-robotic-matter
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WORK EXPERIENCE

- 2020-present: Eindhoven University of Technology (NL)
Associate Professor
Dynamics and Control Group, Department of Mechanical Engineering and the Institute for Complex and Molecular Systems (ICMS)
- 2016-present: Soft Robotic Matter Group, AMOLF (NL)
Principal Investigator (Tenured)
Current Group members: Niels Commandeur (Technician), Shibo Zou (PostDoc), Luuk van Laake, Mannus Schomaker, Alberto Comoretto, Sergio Picella, Paul Ducarme (PhD-students), Maziar Arfae (guest PhD-student)
Alumni: Florian Wruck, Udit Choudhury (PostDoc), Giorgio Oliveri, Agustin Iniguez-Rabago (PhD-students), Jelle de Vries, Cesare Carissimo (Research Assistant), Lyndsey Housdon (Artist), 7 Bachelor interns and 24 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, TU Delft (NL)
Warehouse and Personnel Manager

EDUCATION

- 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 Meta-materials and Devices'. Advisor prof. Katia Bertoldi. [\[pdf\]](#)
- 2012-2013: School of Engineering and Applied Sciences, Harvard University (US)
SM in Applied Mathematics
- 2009-2012: TU Delft (NL)
MSc in Mechanical Engineering
Cum laude (GPA 4.0 - 8,7/10).
Specialization: Solid and Fluid Mechanics.
Master's thesis: 'The Moving Node Approach in Topology Optimization - An Exploration to a Flow-inspired Meshless Method-based Topology Optimization Method'. Advisors prof. dr. ir. Fred van Keulen and dr. ir. Matthijs Langelaar. [\[pdf\]](#)
Research Internship: 'The Effect of Shape on Periodic Structures Undergoing Elastic Instability', Harvard University (US).
- 2006-2009: TU Delft (NL)
BSc in Mechanical Engineering
Cum laude (GPA 3.9 - 7,9/10).
Bachelor's thesis: 'Cavitation-treatment Times of a Liquid'. [\[pdf\]](#)
- 2004-2009: TU Delft (NL)
P (propaedeutic exam) in Applied Physics
- 1998-2004: CSG het Noordik, Almelo (NL)
VWO (preparatory scientific education)

TEACHING

- 2021-present: Mechanical Engineering, TU/e (NL)
Project Course 6EMA62 Device Integrated Responsive materials
- 2016-present: Soft Robotic Matter Group, AMOLF (NL)
Mentoring (inter)national Bachelor's (7) and Master's (24) students
- 2015-present: ETH Zurich (CW), Harvard University (US), WUR (NL), TU Delft (NL), and the Royal Academy of Art (NL)
Guest lectures in Soft Robotics and Mechanical Metamaterials
- 2014: School of Engineering and Applied Sciences, Harvard University (US)
Teaching Fellow ES128 Computational Solid and Structural Mechanics
- 2013-2015: Bertoldi Group, Harvard University (US)
Mentoring (inter)national Bachelor's (1) and Master's (9) students
- 2008-2009: 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

- 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)
To initiate 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)
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

- 2022: Nominated for TU/e Science award (NL)
- 2020: Engineering Talent 2020, De Ingenieur (NL)

- 2019: Invention Disclosure Form (with L. C. van Laake), AMOLF (NL)
 2018: Nominated for New Scientists Scientific Talent award (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)

PROFESSIONAL SERVICE

Associate editor

Open Access journal “Programmable Materials”, Cambridge University Press

Workshop organizer

Co-organizer Lorentz workshop@Snellius 2020

Conference session organizer and chair

Co-organizer of sessions at the APS March Meeting (2017-2020) and at SES (2018-2020)

PhD Committees

Promoter: G. Oliveri, A. Iniguez-Rabago (2021)

Member: Y. Zhang, D. Zrinscak, M. Essink (2022), N. Singh (2019), P. Dieleman, L. Lubbers (2018), B. Florijn (2016)

MSc Committees

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, 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, SIAM Journal on Scientific Computing

Reviewer grant proposals and scholarships

NWO Rubicon, JKU LIT, TTW OTP, ENIAC scholarship

Professional membership

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)

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

Organizer open day (2016-2019)

Improving AMOLF website (2016-2017)

INVITED TALKS

- 2022 Soft Matter seminar University of Amsterdam, online (NL)
Invited talk: Continuous learning of emergent behavior in robotic matter
- 2021 NWO, online (NL)
Invited talk: Zachte Robots
- 2021 Biosystems Engineering, Wagening University & Research, online (NL)
Guest lecture: Soft robotics: pneumatic actuation
- 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 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 Royal Academy of Art, Den Haag (NL)
- Guest lecture and workshop:** Origami-inspired Materials and Robots
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 School of Architecture, TU Delft (NL)
Guest lecture: Robotic Building - Media Studies
- 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
- 2015: Graduate School of Design, Harvard University (US)
Guest Lecturer in Computational Material Distributions and Gradients of Compliance (SCI 0642500)
- 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

- (62) **Zou, S., De Vries, J., Picella, S., Overvelde, J.T.B.**, (2022). Towards Soft Autonomous Robots with Smart Fluidic Circuits. Shaping the Future of Robotics through Materials Innovation. Max Planck Schloss Ringberg (GE). *Poster*.
- (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

- (58) Snellink, Marjolein. (2022) “Soft Hardware.” NWO Resultaat 24 Januari. [\[web\]](#)
- (57) Elisabeth van Nimwegen. (2021) “Van een chipszak tot een Nobelprijs voor softe robotica”, Atlas NTR 3 November. [\[web\]](#)
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- (6) “RainMaker” (Sep 2018), exhibition at FabLearn and Maker Faire (*Winner of the Maker of Merit Award*), Eindhoven (NL).
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