REG. ARCH. DR. DIPL. -ING. HENRIETTE H. BIER

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Associate / **TU Delft Robotics Institute**

Founder/ leader Robotic Building Lab (http://www.roboticbuilding.eu/rblab/ and https://www.tudelft.nl/bk/onderzoek/onderzoeksfaciliteiten/robotic-building-lab/)
Member of Steering Board D:Dream (https://www.tudelft.nl/ddream)
Co-founder/ member of International Network Adaptive Environments (www.adaptive-environments.eu)
Editor- in-Chief Springer Book Series Adaptive Environments (https://www.springer.com/series/15693)
Editor Robotic Building (https://link.springer.com/book/10.1007%2F978-3-319-70866-9)
Editor Spool Cyber-physical Architecture (https://spool.ac/index.php/spool/about/editorialTeam)
Editor ArchiDoct (http://www.archidoct.net/committees.html)

CURRICULUM VITAE

Education

2004-08	Dr. System-embedded Intelligence in Architecture, Technical University (TU) Delft, Netherlands
1993-98	Dipl.-Ing. Architecture, Karlsruhe Institute of Technology (aka. TU Karlsruhe), Germany

Work Experience

2020-21	Visiting Researcher Polytechnical University Milano (PoliMi), Italy
2020-21	Visiting Professor Computer-aided Architectural Design, Anhalt University of Applied Sciences (AUAS), Germany for Vietnamese German University (VGU), Vietnam
2017-19	Visiting Professor, Computer-aided Architectural Design and Robotics in Architecture, AUAS, Germany
2016-	Associate Professor, Leader Robotic Building Lab, Faculty of Architecture and the Built Environment (ABE), TU Delft, Netherlands
2007-12	Assistant Professor, Digital Architecture (aka. Hyperbody) and Border Conditions, ABE, TU Delft, Netherlands
2004-07	PhD Researcher, Digital Architecture (aka. Hyperbody) and Border Conditions, ABE, TU Delft, Netherlands
2002-03	Research Associate, Institute for Experimental Studies in Architecture, TU Innsbruck, Austria
1998-01	Architect, Morphosis, United States of America
1993-98	Student Assistant, Faculty of Architecture, TU Karlsruhe, Germany

(Selected) Academic Activities

Lectures/ Workshops/ Seminars
1. Advances in Robotic Building, Descartes College, Interdisciplinary Honours Programme, University of Utrecht, Netherlands.
2. Robotic 3D Printing in Architecture and Building Construction, POM Limburg, Belgium (2023)

3. Rhizomatic off-Earth Habitat, Institute of Informatics, University of Antwerp, Netherlands (2023)
4. Robotic and Human Agency in Architecture, National University of Singapore, Republic of Singapore (2022)
5. Multi-agent Robotic Building, SHE Robots, University of Sydney, Sydney, Australia (2022)
6. Off-Earth Manufacturing and Construction, European Science Open Forum, Leiden, Netherlands (2022)
7. Robotic Building, European Robotics Forum, Rotterdam, Netherlands (2022)
8. Advancing Robotics in Architecture, Second Autumn Session of the Innovation Forum at Foster and Partners, London, UK (2021)
9. Robotic Building for on- and off-Earth Applications, Emerging Fields at TU Vienna, Austria (2021)
10. Experiments in Robotic Building, Experimental Architecture Biennial[1], Prague, Czech Republic (2021)
11. Robotics in Architecture, University of Leeds, UK (2021)
12. Computational Design and Robotics in Architecture, University of Catania, Italy (2021)
13. Applications of Informatics and Robotics in Architecture, Polytechnical University Milan, Italy (2021)
14. Towards Cyber-physical Architecture, Cornell University, US (2020)
15. Robotic Building, Architecture as a Living Machine, Doctor of Design Conference, Harvard Graduate School, US (2020)[2]
16. Robotics in Architecture, 100 Years Bauhaus: What now? Dessau Institute of Architecture, Germany (2019)
17. Education of an Architect in the Age of Robotic Building, Polytechnical University Milan, Italy (2019)
18. Architecture in the Age of Robotic Building, National Institute of Architecture in Catania, Italy (2019)
19. Cyber-physical Architecture, Centre for Information Technology and Architecture, Copenhagen, Denmark (2019)
20. Opening Ceremony of Xuanwu 1 km2 International Design Camp of SEU Campus Surroundings, South-East University Nanjing, China (2019)
21. Architecture + Environment 2 Symposium, University of Vienna, Austria (2019)
22. Living Architecture Systems Symposium, University of Waterloo, Toronto, Canada (2019)
23. Robo(uw)tics Symposium, TU Delft, Netherlands (2019)
24. Robotic Building @AE Colloquium, TU Delft, Netherlands (2019)
25. Next Architecture Symposium, South-East University Nanjing, China (2018)
26. Design-to-Robotic-Production-Assembly and -Operation, Chinese University of Hong Kong, China (2018)
27. Robotic Building, Digital Practices Symposium, University of Edinburgh, UK (2018)
28. Robotics in Architecture, Tectonics and Materials Lecture Series, University of Antwerp, Belgium (2018)
29. Design-to-Robotic-Operation, Hiperorganicos 8 - Ancestor Futurism, Rio de Janeiro, Brazil (2018)
30. Robotic Building as Design-to-Robotic-Production-Assembly and -Operation, Robotic Building Symposium with invited guests from UCL, TU Delft, Netherlands (2017)
31. Additive Design-to-Robotic-Production, Imprimer le Monde, Centre Pompidou, Paris, France (2017)
32. Architecture and Robotics, Dessau Institute of Architecture, Dessau, Germany (2017)
33. Architectural Robotics and Robotic Building, Border Sessions, den Haag, Netherlands (2017)
34. Design-to-Robotic-Production and Operation, SAWSA Lecture Series, Cardiff, UK (2017)
35. Robotic Building, Facility for Future, 's Hertogenbosch, Netherlands (2017)
36. Robotic Building, Game Set Match 3 symposium, TU Delft, Netherlands (2016)
37. Architecture and/or Robotics, vâcole National Superieure d'Architecture Paris- Malaquais, France (2016)
38. Robotic Building as Design-to-Robotic-Production and Operation, Universita degli Studi Roma Tre, Rome, Italy (2016)
39. Robotic Building, Bouwacademie Rotterdam, Netherlands (2016)

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[1] Link to announcement: http://www.roboticbuilding.eu/2021/06/26/eab_5/
[2] Link to announcement: http://www.roboticbuilding.eu/2020/02/10/26-27-february-henriette-bier-lectures-at-ddes-2020-harvard-and-attends-research-meeting-at-mit/

40. Robotic Environments, ShellMech symposium, TU Delft, Netherlands (2016)
41. Robotic Building, The Future, TEDx Delft Salon, Delft, Netherlands (2015)
42. D2RP, V2_Institute of Unstable Media, Rotterdam, Netherlands (2015)
43. Re:Craft, InDeSem 15, TU Delft, Netherlands (2015)
44. Non-standard and Interactive Architecture, Border Sessions, The Hague, Netherlands (2014)
45. Architectural Ecologies: Code, Culture and Technology at the Convergence, Vienna, Austria (2014)
46. What's the Matter - ENSHA, Barcelona, Spain (2014)
47. Building Realization and Robotics, TU Munich, Germany (2013)
48. Experimental Architecture, TU Innsbruck, Austria (2013)
49. Robotics in Architecture, CAD & Geo-informatics, EiABC, Addis Ababa, Ethiopia (2013)
50. Crossovers in Architecture, Twente, Netherlands (2013)
51. Neighbourhood Technologies - Mathematics and Media of Dynamic Networks, Blankensee Colloquium, Berlin, Germany (2012)
52. Losing Ground, InDeSem 11, TU Delft, Netherlands (2011)
53. Rethinking the Human in Technology-driven Architecture - ENHSA, Crete, Greece (2011)
54. X-Agendas, Experimentation in (Architectural) Design, TU Delft, Netherlands (2011)
55. Archibots - UBICOMP 09, Orlando, United States of America (2009)
56. Design and Computation, Massachusetts Institute of Technology, Cambridge, United States of America (2007)
57. Digital Tectonics, Institute of Advanced Architecture Catalonia, Barcelona, Spain (2006)
58. Digital Design and Fabrication, TU Delft and Berlage Institute Postgraduate Laboratory for Architecture, Rotterdam, Netherlands (2006)
59. Building Design and Construction, TU Karlsruhe, Germany (2005)
60. ADSL, Henry van de Velde Academy of Architecture and Interior Design, Antwerp, Belgium (2004)
61. Advancements in Building Design and Construction, University of Rome 3, Italy (2004)
62. Computation in Architecture, Fontis Academy of Architecture and Urban Design, Tilburg, Netherlands (2004)
63. Computational Approaches in Architecture, Architectural Association, London, United Kingdom (2003)

Coordination/ Organisation
1. Initiator and co-organizer of hybrid symposium Human-Robot Interaction for Post-carbon Architecture, LU Hannover, Germany (2022)
2. Initiator and co-organizer of hybrid symposium Adaptive Environments, PoliMi, Italy (2021)
3. Initiator and organizer of online symposium Architecture Design and Machinic Intelligence (2020)
4. Initiator and co-organizer of online review Off-Earth Construction with invited guests from TU Vienna and ESA (2020)
5. Initiator and organizer of symposium Robotic Building at Architectural Engineering with invited guests from academia and practice, TU Delft, Netherlands (2019)
6. Initiator and organiser of symposium Translational Innovation in Architecture with invited guests from academia and practice, TU Delft, Netherlands (2018)
7. Chairwoman/ Coordinator PhD admissions committee of the Department Architectural Engineering and Technology (AET), Faculty of Architecture and the Built Environment (ABE), TU Delft, Netherlands (2017-20)
8. Organizer of symposium on Robotic Building with invited guests from UCL, TU Delft, Netherlands (2017)
9. Initiator and organizer of symposium on Design-to-Robotic-Production and -Operation (D2RP&O) with invited guests from ENSAPM, TU Delft, Netherlands (2016)
10. Initiator, co-founder, and member of the international network Adaptive Environments (since 2016)
11. Co-organizer of exhibit D2RP at V2, Rotterdam, Netherlands (2015)
12. Founder and leader of Robotic Building (RB) lab, ABE, TU Delft, Netherlands (since 2014)
13. Research and education coordinator of RB lab education and research, ABE, TU Delft, Netherlands (since 2014)

14. Initiator and coordinator of the RB lab lecture and workshop series with invited guests from UCL Bartlett, ENSAPM, PoliMi, UniFri, Cornell, etc. (since 2014)
15. Co-organizer of conferences eCAADe 2013 at TU Delft, Netherlands (2013)
16. Research and education coordinator of Non-standard and Interactive Architecture (NS&IA) education and research program, ABE, TU Delft, Netherlands (2007-13)
17. Co-founder and member of Delft Robotics Institute (DRI), TU Delft, Netherlands (since 2010) and member of steering board (2010-15)
18. Co-initiator and co-organizer of symposium and exhibit Game Set Match 2 at TU Delft, Netherlands (2010)
19. Initiator, coordinator/ leader of 15 funded projects covering more than 1.5M in total (since 2007)
20. Coordinator of the lecture and workshop series on Digital Design and Fabrication with invited guests from MIT and ETHZ organized by Delft School of Design, TU Delft, Netherlands (2005-06)

Tutoring/ Supervision
1. Supervisor, coordinator, and co-/tutor of BSc and MSc courses offered to more than 300 MSc students in Computational Design and Robotics in Architecture[3] (since 2008)
2. Supervisor, coordinator, and co-tutor of more than 130 MSc theses[4] (since 2008)
3. Supervisor of 4-6 tutors, researchers, student- and technical-assistants[5] (since 2014)
4. Co-/promoter of 6 PhD students, from which 3 successfully defended and initiated start-ups[6]:
    4.1 Sina Mostafavi: Hybrid Intelligence in Architectural Robotic Materialization (defended 2021)
    4.2 Christian Friedrich: Immediate Systems in Architecture (defended 2021)
    4.3 Jelle Feringa: Architectural Robotics: Bridging the divide between academic research and industry (defended 2022)
    4.4 Arwin Hidding: Scaling-up Capability of Human-Robot Interaction Supported Approaches for Robotically 3D-printing Extra-terrestrial Habitats (in progress)
    4.5 Giuseppe Calabrese: Habitability for Human Exploration of Moon and Mars (in progress)
    4.6 Atousa Aslaminezhad: Developing New Pop-Up Habitats by Means of Computational Design and Robotic Production (in progress)
5. Member of 8 PhD theses committees including 5 external (since 2012)
    5.1 Gwyllim JAHN (RMIT): Mixed Reality Fabrication (defence 2022)
    5.2 Joshua Lye (RMIT): High-Resolution Combinatorics of Space (1st review 2022)
    5.3 Jakub Tyc (TU Vienna): Application of photogrammetry and composite voxel models for spatial knowledge encoding in the context of data-driven design (1st review 2022)
    5.4 Nadja Gaudillière-Jami (ENSPM): Automatiser l'Architecture (defence 2022)
    5.5 Milica Pavlovic (PoliMi): Designing for Ambient UX (defence 2020)

(Selected) Grants/ Rewards/ Patents
1. Co-/ Principal Investigator (PI)
    1.1 Rhizome 2.0: Scaling-up Capability of Human-Robot Interaction Supported Approaches for Robotically 3D-printing Extra-terrestrial Habitats (300K) co-funded by ESA, Vertico, and various industry partners (2023-27)
    1.2 Rietveld Reinvented (15K) co-funded by TU Delft Library and Intric (2023)
    1.3 Cyber-physical Urban Furniture (35.000 EUR) funded by inter al. PoliMi and UniFri (2020-23)
    1.4 Development of an Autarkic Design-to-Robotic-Production and -Operation System for

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[3] Link to Study Guides:
https://studiegids.tudelft.nl/a101_searchCtrl.do?course_code=&surname=bier&item_value=&onlyElectives=Y&deleteTag_id=&operation=searchOnInstructor
[4] Link to repository: https://repository.tudelft.nl/islandora/search/bier?collection=education
[5] Link to RB website: http://www.roboticbuilding.eu/about/who/
[6] Links to start-ups: https://citylab010.nl/initiatieven/earth-noise-barrier-built-by-robots and https://blog.aectual.com/team

Building Off-Earth Habitats (100.000 EUR) funded by ESA and Vertico (2021-22)[7]

1.5 Design-to-Robotic-Production (D2RP) for Bio-Cyber-Physical Planetoid (50.000 EUR) funded by NWO (2020-21)

1.6 D2RP for Circular Wood (300.000 EUR) funded by NWO (2020-22)[8]

1.7 Variable Stiffness for Adaptive Joints (50.000 EUR) funded by 4TU Bouw (2016-17) and selected as one of 10 most innovative TUD projects featured on Post NL stamp (2021)[9]

1.8 Scalable Porosity (10.000 EUR) funded by Centre Pompidou and ABB (2016-17)[10]

1.9 Robotically-driven Construction of Buildings (50.000 EUR) funded by 4TU (2014- 15)

1.10   Non-Standard and Interactive Architecture (NS&IA) for E-ArchiDoct (300.000 EUR) funded by EU 134516-LLP-1-2007-GR-ERAMUS-EVC, (2007-09)

1.11   NS&IA for F2F Continuum (300.000 EUR) funded by EU 134540-LLP-1-GR- ERASMUS-ECUE (2007-09)

2. Awards

2.1 An Extended Ambient IntelligenceImplementation for Enhanced Human-Space Interaction, ISARC best poster award (2016)

2.2 Statically Balanced Compliant Sound Barriers Patent NL 2015722 (2017)[11]

2.3 Recording and Projecting Architecture 1st prize Archiprix International (2017) and 1st prize Archiprix National(2016)

2.4 Morphosis (50.000 UD) CCA Competition for the Design of Cities (1999-01)

2.5 Morphosis (12.000 EUR) BMW Competition for Event and Delivery Centre Munich, Germany (1999-01)

(Co-/Edited) Books

1. Adaptive on- and off-Earth Environments, Adaptive Environments Springer Vol. 6 (publication expected in 2023)

2. Disruptive Technologies in Architecture[12], Adaptive Environments Springer Vol. 5 (2023)

3. Robotic Building[13], Adaptive Environments Springer Vol. 1 (2018)

4. Robotics in Architecture, Interactive Architecture Vol. 5, Jap Sam Books (2013)

5. Hyperbody - First Decade of Interactive Architecture, Jap Sam Books, (2012)

(Co-/Authored) Book chapters

1. Real-world Applications of Artificial Intelligence in Architecture, Proceedings of 2023 Intelligent Systems Conference (IntelliSys), Springer's book series Lecture Notes in Networks and Systems (2023)

2. Robotics and AI in Architecture, Adaptive Environments Springer Vol. 5 (2023)

3. Design-to-Robotic-Production and -Operation for Activating Bio-Cyber-Physical Environments, Adaptive Environments Springer Vol. 5 (2023)

4. Developing Interactive Architecture Prototypes by Means of Design-to-Robotic-Operation, Blurring Boundaries, Franco Angeli (2021)

5. Aspects of Ambient UX Design within Design-to-Robotic-Production and -Operation Processes, Springer (2020)

6. Robotic Building as Integration of Design to Robotic Production and Operation, Vol. 1 Adaptive Environments, Springer (2018)

7. Man-Machine Technologies: Design-to-Robotic-Production & Operation, Anhalt University Press (2018)

[7] Link to project webpage: http://www.roboticbuilding.eu/project/rhizome-development-of-an-autarkic-design-to-robotic-production-and-operation-system-for-building-off-earth-habitats/

[8] Link to project webpage: http://www.roboticbuilding.eu/project/wood-reuse/

[9] Link to project webpage and TUD announcement: http://www.roboticbuilding.eu/project/variable-stiffness/ and https://www.tudelft.nl/en/innovation-impact/home-of-innovation/innovation-stamps/variable-stiffness

[10] Link to project webpage: http://www.roboticbuilding.eu/project/scalable-porosity/

[11] Link to RVO website: https://mijnoctrooi.rvo.nl/fo-eregister-view/search/details/2015722_NP/0/0/1/10/2/0/0/null_asc/KGlkOjIwMTU3MjJfTlApcGF0ZW50UmVjb3JkU2VhcmOjE=

[12] Link to Springer website: https://link.springer.com/book/9783031141591

[13] Link to Springer website: https://link.springer.com/book/10.1007/978-3-319-70866-9

8. Scalable Porosity, Imprimer le Monde, HYX, Centre Pompidou (2017)
9. Robotic Building as Physically Built Robotic Environments and Robotically Supported Building Processes, Architecture and Interaction Springer (2016)
10. Neighbourhood Technologies - Media and Mathematics of Dynamic Networks, Diaphanes (2015)
11. Experimentation in (Architectural) Design, X Agendas, Artifice Books on Architecture (2015)
12. Formations and Embodiments, Architecture - A Timely Matter, Studioplex, Vol. 1 (2012) System-embedded Intelligence in Architecture, Hyperbody – First Decade of Interactive Architecture, Jap Sam Books, (2012)
13. Non-standard and Interactive Architecture in Education, Hyperbody – First Decade of Interactive Architecture, Jap Sam Books, (2012)
14. Multi-Agent Design, Interactive Architecture Vol. 3, Jap Sam Books (2010)
15. Agbar Tower, Colour in Architecture, SUN (2009)
16. F2F and Real-time Behaviour in ONL-Architecture Interactive Architecture Vol. 1, Episode (2007)
17. Digital Design and Fabrication – DSD Lecture and Workshops series with invited guests from MIT and ETHZ, Architectural Annual 2005-06, 010-Publishers (2007)
18. Building Relations, Architectural Annual 2005-06, 010-Publishers (2007)
19. Space-Customizer: Interactive, Digital Architecture and Construction, WIT-Press (2006)
20. The Body in Digital Architecture – From Representation to Re-Invention, De-/signing the Urban: Techno-genesis and the Urban Image, 010-Publishers, (2006)
21. SC: Prototypes for Interactive Architecture, Interactive Technologies & Socio-technical Systems Vol. 4270, Springer (2006)
22. New Media Revisited, Architectural Annual 2004-05, 010-Publishers (2006)
23. ONL – generic, ONL Hyperbody Logic, AADCU publishers (2006)
24. Space-Customizer: Scripting-based Methods in Architectural Design, The Architecture Co-Laboratory, GSM 2, Episode, (2006)
25. Real-time Behaviour in Protospace, Architectural Annual 2003-04, 010-Publishers (2005)
26. Other Geometries, Objects and Spaces, Crossing Design Boundaries, EPDE, Taylor & Francis (2005)

(Co-/Edited) Journal issues
1. Interdisciplinary Data-integrated Approaches, Cyber-physical Architecture Iss. 5 (2022), DOI: https://doi.org/10.47982/spool.2022.1.00
2. Advancements in Designing, Producing, and Operating Off-Earth Infrastructure, Cyber-physical Architecture Iss. 4 (2021), DOI: https://doi.org/10.7480/spool.2021.2.6056
3. Actuated and Performative Architecture: Emerging Forms of Human-Machine Interaction, Cyber-physical Architecture Iss. 3 (2020), DOI: https://doi.org/10.7480/spool.2020.3
4. Apparatisation of/in Architecture, Cyber-physical Architecture Iss. 2 (2019), DOI: https://doi.org/10.7480/spool.2019.1
5. Robotic Building, Cyber-physical Architecture Iss. 1 (2017), https://doi.org/10.7480/spool.2017.1
6. Dynamics of Data-driven Design, FOOTPRINT Iss. 15 (2014), DOI: https://doi.org/10.7480/footprint.8.2
7. Digitally-driven Architecture, FOOTPRINT Iss. 6 (2010), DOI: https://doi.org/10.7480/footprint.4.1

(Co-/Authored) Journal papers
1. Interdisciplinary Data-integrated Approaches, Cyber-physical Architecture Iss. 5 (2022)
2. Bio-Cyber-Physical 'Planetoids' for Repopulating Residual Spaces, Cyber-physical Architecture Iss. 5 (2022)
3. Computer Vision and Human–Robot Collaboration Supported Design-to-Robotic-Assembly, Construction Robotics (2022), DOI: https://doi.org/10.1007/s41693-022-00084-1
4. Design-to-Robotic-Production and -Operation of Underground Habitats on Mars, Cyber-physical Architecture Iss. 4 (2021), DOI: https://doi.org/10.7480/spool.2021.2.6075
5. Dialogs on Architecture 4, Cyber-physical Architecture Iss. 4 (2021)
6. Ambient UX for Cyber-Physical Spaces, Spool Cyber- physical Architecture Iss. 3 (2020), DOI:

https://doi.org/10.7480/spool.2020.3.5490

7. Towards an Architecture Operating as a Bio-Cyber-Physical System, Spool Cyber- physical Architecture Iss. 3 (2020), DOI: https://doi.org/10.7480/spool.2020.3.5492
8. Dialog on Architecture 3, Spool Cyber- physical Architecture Iss. 3 (2020)
9. Aspects of Ambient UX Design within Design-to-Robotic-Production and -Operation Processes in Springer's LNCS (2020), DOI: https://doi.org/10.1007/978-3-030-50344-4_8
10. Structural Adaptation through Stiffness Tuning, Spool Cyber-physical Architecture Iss. 2 (2019)
11. Dialog on Architecture 2, Spool Cyber-physical Architecture Iss. 2 (2019)
12. Applications of Design-to-Robotic-Production & Operation in Architecture, Frontiers in Digital Humanities (2018)
13. Design to Robotic Assembly: An Exploration in Stacking, Frontiers in Digital Humanities (2018)
14. Robotic Building as Integration of Design-to-Robotic-Production & Operation, Spool Cyber-physical Architecture Iss. 1 (2017)
15. Robotically-driven Construction of Buildings: Exploring On-demand Building Components Production, SPOOL Vol. 1, Nr. 2 (2016)
16. Data-Driven Architectural Design to Production and Operation, Connecting Matter, Life, Culture and Technology, Systema (2015)
17. Structural Optimization for Materially Informed Design to Robotic Production Processes, American Journal of Engineering and Applied Sciences - Vol. 8, Iss. 4 (2015)
18. Data-Driven Design to Production and Operation, FOOTPRINT Iss. 15, (2014)
19. Robotically-driven Architectural Production, Archidoct Iss. 3 (2014)
20. Interactive Building, Advances in Internet of Things (2012)
21. Internet-supported Multi-user Virtual and Physical Prototypes for Architectural Aca- demic Education and Research, International Perspectives of Distance Learning (Eds. Moore and Benson), InTech (2012)
22. Digitally-driven Architecture, FOOTPRINT Vol. 6 (2010)
23. Prototypes for Automated Architectural 3D-Layout, Lecture Notes in Computer Science, Springer (2008)
24. SC: Prototypes for Interactive Architecture, Lecture Notes in Computer Science, Springer (2006)

(Co-/Authored) Proceeding papers
1. Real-world Applications of Artificial Intelligence in Architecture, IntelSys (2023)
2. Multi-species and Multi-scalar (Urban) Topologies, CAAD Futures Conference (2023)
3. Advancing Robotics in Architecture, Human-Robot Interaction for Post-carbon Architecture Symposium (2022)
4. Developing New Pop-up Architecture by Means of Computational Design and Robotic Production, International Symposium Automation and Robotics (2021)
5. Towards Circular Economy in Architecture by Means of Data-driven Design-to- Robotic-Production, International Symposium Automation and Robotics in Construction (2020)
6. Design-to-Robotic-Production and -Assembly for Architectural Hybrid Structures, International Symposium Automation and Robotics in Construction (2020)
7. Developing Responsive Environments based on Design-to-Robotic-Production and - Operation Principles, International Symposium Automation and Robotics in Construction (2019)
8. Integration of a Wearable Interface in a Design-to-Robotic-Production and -Operation Development, International Symposium Automation and Robotics in Construction (2018)
9. Extension of a High-Resolution Intelligence Implementation via Design-to-Robotic- Production and -Operation strategies, International Symposium Automation and Robotics in Construction (2018)
10. A High-Resolution Intelligence Implementation based on Design-to-Robotic-Production and - Operation strategies, International Symposium Automation and Robotics in Construction (2017)
11. Kite-Powered Design-to-Robotic-Production for Affordable Building on Demand, International Symposium Automation and Robotics in Construction (2017)

12. Deep Learning Object-Recognition in a Design-to-Robotic-Production and -Operation Implementation, 2nd IEEE Ecuador Technical Chapter Meeting (2017)
13. The use of Adaptive Joints for Load Path and Shape Control of Adaptive Structures, IAAS (2017)
14. An Extended Ambient Intelligence Implementation for Enhanced Human-Space Inter- action, International Symposium Automation and Robotics in Construction (2016)
15. Adaptive Building-Skin Components as Context-Aware Nodes, Extended Cyber-Physical Network, IEEE World Forum on Internet of Things (2016)
16. Robotic 3D Printing, ACADIA (2015)
17. Informed Design to Robotic Production Systems: Developing Robotic 3D Printing System for Informed Material Deposition, eCAADe (2015)
18. Data-driven architectural production and operation, 22nd European Meetings on Cybernetics and Systems Research (2014)
19. Robotic Environments, International Symposium Automation and Robotics in Construction (2011)
20. Robotic Architecture, International Conference on Adaptive Architecture (2011)
21. Prototypes for Distance Learning in Academic Education, Proceeding of 2nd International Conference on Information and Multimedia Technology (2010)
22. Software and Hardware Prototypes for Virtual Graduate Programs, Proceedings of International Conference on Distance Learning and Education (2010)
23. BR: An Interactive Software Prototype for 3D Layout, American Society of Engineering Education (2007)
24. Esperimenti di Automazione Digitale, Il Giornale dell'Architettura (2005)
25. File to Factory and Real-Time Behaviour in Architecture, Fabrication – ACADIA, UWSA Press (2004)
26. Architecture in Real-Time, Proceedings of International Conference on Virtual Systems and Multimedia, IOS-Press (2004)
27. Digital Design Strategies, Proceedings of International Conference on De- sign 04, (2004)

Exhibits
1. Rietveld Reinvented, Redesign Rietveld, TU Delft Library (2023)[14], Delft, Netherlands
2. SHE Robots, Cyber-physical Planetoid, Tin Shed Gallery (2022),[15] Sydney, Australia
3. Variable Stiffness and the Post NL Innovation Stamps, Het Nieuwe Institute (2021)[16], Rotterdam, Netherlands
4. Variable Stiffness and Cyber-physical Planetoid, Experimental Architecture Biennial (2021), Prague, Czech Republic
5. Design-to-Robotic-Operation, Media Architecture Biennale (2020-21)[17], online
6. Cyber-physical Planetoid and Hybrid Componentiality, Dutch Design Week, (2020)[18], online
7. Variable Stiffness, Material District, (2019), Rotterdam, Netherlands
8. Variable Stiffness, Dutch Design Week, (2018), Eindhoven, Netherlands
9. Scalable Porosity, Imprimer le Monde, Centre Pompidou (2017)[19], Paris, France
10. Robotic Building, Game Set Match 3, TU Delft (2016), Delft, Netherlands
11. Design-to-Robotic-Production, V2 Institute for Unstable Media, (2015), Rotterdam, Netherlands
12. Digitally-driven Construction of Buildings, Construction Week, (2015), Utrecht, Netherlands
13. Digital Factory, CAUP Gallery as part of the DADA (2015), Tongji University, Shanghai, China
14. International Architecture Biennale Rotterdam, Parallel Cases - Border Conditions (2010),

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[14] https://www.tudelft.nl/evenementen/2023/library/redesign-rietveld-exhibition
[15] Link to announcement: http://www.roboticbuilding.eu/she-robots/
[16] Link to announcement and venue: http://www.roboticbuilding.eu/2021/10/05/7th-of-oct-1900h-opening-variable-stiffness-at-het-nieuwe-instituuts-gallery-3-by-you/
[17] Link to announcement and venue: http://www.roboticbuilding.eu/2021/07/01/robotic-building-lab-participates-with-three-projects-at-the-mab-demos-posters-section/
[18] Link to announcement: http://www.roboticbuilding.eu/2020/10/22/two-rb-projects-involving-d2rpo-methods-are-showcased-now-at-dutch-design-week-2020/
[19] Link to announcement: http://www.roboticbuilding.eu/2017/03/18/18th-of-march-henriette-bier-and-sina-mostafavi-participate-in-international-symposium-les-formes-du-digital-at-the-centre-pompidou/

Rotterdam, Netherlands
15. Archiprix National and International (since 2009)

Reviews/ Meetings
1. MSc reviews
    1.1 Architectural Robotics, Cornell University, US (2020)
    1.2 Space Architecture, Technical University Vienna, Austria (2020)
    1.3 Interactive Architecture, Politecnico Milano, Italy (2020)
    1.4 Digital Knowledge, Ecole Nationale Superieur d'Architecture Paris Malaquais, France (2016)
    1.5 Robotics in Architecture, Bouw-Academy Rotterdam, Netherlands (2016)
    1.6 Architectural Robotics, Clemson University, US (2016)
    1.7 Digital Technologies, University Roma Tre, Rome, Italy (2016)
    1.8 Digital Design and Prototyping, University of Antwerp, Belgium (since 2013)
    1.9 Digital Tectonics, Institute of Advanced Architecture Catalonia, Barcelona, Spain (2006)
    1.10 Experimental Architecture, Faculty of Architecture, TU Eindoven, Netherlands (2006)
    1.11 Non-standard and Interactive Architecture, Fontis Academy of Architecture and Urban Design, Tilburg, Netherlands (2004)
    1.12 Experimental Design, Faculty of Architecture, University of Southern California at Centre d'Etude d'Architecture et d'Urbanisme, Saintes, France (2003-04)
    1.13 Non-standard and Interactive Architecture, Faculty of Architecture, TU Delft (since 2003)
2. PhD reviews
    2.1 Ecole Nationale Superieur d'Architecture Paris-Malaquais, France (2022)
    2.2 TU Vienna, Austria (2022)
    2.3 RMIT, Australia (2022)
    2.4 TU Delft, Netherlands (since 2021)
    2.5 Politecnico di Milano, Italy (2020)
    2.6 Oslo School of Architecture and Design, Norway (2014)
3. Competition reviews
    3.1 Sustainable Futures, Singapore University of Technology and Design, Singapore, Republic of Singapore (2021)[20]
    3.2 Futures Implied, Media Architecture Biennale, Amsterdam, Netherlands (2020-21)[21]
    3.3 Next Architecture Award, South-East University Nanjing, China (2018)[22]
4. Projects/ Proposals reviews
    4.1 EU funding proposals, Marie Skłodowska Curie (2019)
    4.2 EU funded project, Flora Robotica (2019)
    4.3 NL funding proposals (since 2016)
    4.4 EU Report identifying current and future application areas, existing industrial value chains and missing competences in the EU, in the area of additive manufacturing (2016)
5. Books/ papers reviews
    5.1 Adaptive Environments Springer book series (since 2017)
    5.2 MIT Pres (2015)
    5.3 eCAADe; CAAD Futures; Frontiers; Archidoct; Footprint; Spool (since 2012)

Memberships/ Affiliations
1. Member of the Steering Board Dream Teams, TU Delft, Netherlands (since 2022)
2. Topical Advisory Board (AB) Multimodal Technologies and Interaction, Scopus-indexed Online Journal, (since 2022)
3. Editorial Boards (EB)
   2.1 Cyber-Physical Architecture, Spool Scopus-indexed Online Journal, (since 2017)

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[20] Link to announcement: http://www.roboticbuilding.eu/2021/11/30/on-friday-december-17-henriette-bier-lectures-and-acts-a-jury-member-at-future-manufacturing-sutd-2021-march-exhibition-review/
[21] Link to announcement: http://www.roboticbuilding.eu/2021/02/17/henriette-bier-acts-as-jury-member-for-the-student-awards-at-the-media-architecture-biennale-2020-mab20-taking-place-online-on-june-28th-july-2nd-2021/
[22] Link to announcement and venue: http://www.roboticbuilding.eu/2018/05/18/henriette-bier-appointed-by-emgdotart-foundation-as-jury-member-of-the-next-architecture-award-2018/

2.2 Adaptive Environments (editor-in-chief), Springer Book Series, (since 2017)

2.3 ArchiDoct Scopus-indexed Online Journal for Dissemination of Doctoral Research in Architecture, ENSHA, EU (since 2017)

2.4 Footprint Scopus-indexed Online Journal, TU Delft, Netherlands (2009-15)

4.   Associations/ Networks

  4.1 LNVH aka Dutch Network of Women Professors (since 2017)

  4.2 DEWIS aka Network of Women Scientists, TU Delft (since 2016)

  4.3 International Multi-disciplinary Network Adaptive Environments (since 2016)

  4.4 TU Delft Robotics Institute (since 2011)

  4.5 International Association of Computer Science and Information Technology (since 2009)

(Selected) Media

1.   ABN AMRO report: Construction robots are gaining ground; market will triple in 2030 (2022)[23]
2.   INNOVATIECATALOGUS 2021, Stedebouw en Architectuur: Who dares to build
3.   with robots? (2021)[24]
4.   Bouw en Installatie: Sixty percent of construction work is being taken over by robots (2021)[25]
5.   PostNL innovation stamp: Variable Stiffness (2021)[26]
6.   20+ articles in various media: Rhizome – Development of an off-Earth Autarchic Habitat (2021)[27]
7.   Rabobank article: Take the lead and discover what robots can do (2020)[28]
8.   Mobel+ article: Chair of the future (2019)[29]
9.   The Voice of 3D Printing/ Additive Manufacturing: Variable Stiffness (2018)[30]
10. TU Delft TV interview: Robotic Building is transforming Architecture (2018)[31]
11. Delta article: Robotic Building exhibited in Paris (2017)[32]
12. Atlantis interview: Interview with Henriette H. Bier (2017)[33]
13. TU Delft Delta article: Making smart robotic processes improve our built environment (2016)[34]
14. TEDx talk: Robotic Building (2015)[35]

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[23] Link to report: https://www.abnamro.nl/nl/media/ABN-AMRO-rapport-bouwrobots-winnen-terrein-markt-verdriedubbelt-in-2030_tcm16-141279.pdf

[24] Link to article: http://www.roboticbuilding.eu/wp-content/uploads/2021/12/Innocat2021_LRenkel-paginas-65-6769.pdf

[25] Link to article: https://www.bouweninstallatiehub.nl/nieuws/zestig-procent-van-werk-in-bouw-wordt-overgenomen-door-robots

[26] Link to announcement: https://www.tudelft.nl/en/innovation-impact/home-of-innovation/innovation-stamps

[27] Link to announcement and articles: http://www.roboticbuilding.eu/2021/06/15/1st-review-of-the-rhizome-project/

[28] Original Dutch title: Neem het voortouw en ontdek wat robots kunnen doen

[29] Original Dutch title: Stoel van de toekomst

[30] Link to article: https://3dprint.com/226131/tu- delft-3d-printed-chaise-lounge-morphs-bed/

[31] Link to announcement and article: http://www.roboticbuilding.eu/2018/03/23/today-a-new-video-from-tu-delft-tv-on-the-topic-robotic-building-rb-in-architecture-has-been-published/

[32] Link to article: https://www.delta.tudelft.nl/article/robotic-building-paris-exposition

[33] Link to announcement and article: http://www.roboticbuilding.eu/2017/10/24/atlantis-publishes-interview-with-henriette-bier/

[34] Link to article: https://www.delta.tudelft.nl/article/hyperbody-making-smart- robotic-processes-improve-our-built-environment

[35] Link to movie: https://www.youtube.com/watch?v=QH44yYm-i3Q