

Sigrid Adriaenssens

Form Finding Lab
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Sigrid Adriaenssens's research interests lie in the mechanics of large-span structural surfaces under extreme loading and more recently under construction. She has been working on a comprehensive framework with advanced analytical formulations, numerical form finding and optimization approaches, fluid/structure interaction, and machine learning models and algorithms to open new avenues for accelerated discoveries and automated optimal designs. In terms of applications, she has used this framework to successfully innovate structural and architectural systems ranging from macroscale adaptive shading shell devices to large-scale storm surge membrane barriers. This year, she holds the Francqui Chair (Ghent University, Belgium, 2024). She was the Myron Goldsmith Visiting Chair at the College of Architecture at Illinois Institute of Technology (2023), named Fellow of the Structural Engineering Institute of the American Society of Civil Engineers (ASCE), elected vice-president of the International Association of Shell and Spatial Structures (IASS), and received the DigitalFUTURES Matthias Rippmann Award (Tongji University, China) and the Pioneers's Award (Spatial Structures Research Centre of the University of Surrey, UK) (2021). In 2018 she received the ASCE George Winter Award. She is the IASS Technical Activities coordinator and co-chairs the IASS Continuous Shells Working Group. She is the co-editor of the International Journal of Space Structures and directs the Form Finding Lab at Princeton University, where she teaches courses on (non-)linear mechanics of solids and slender structures, structural design, and the integration of engineering and the arts.

Education	1997-2000	Doctor of Philosophy Center for Lightweight Structures, University of Bath	Bath, UK
	1996-1997	Master of Philosophy Center for Lightweight Structures, University of Bath	Bath, UK
	1991-1995	B.Eng. (Hons.) Civil/Structural Engineering Department of Architecture and Civil Engineering, University of Bath	Bath, UK
Work Experience	07/2022- present	Department of Civil and Environmental Engineering Princeton University (PU) Professor	Princeton, USA
	06/2016- 06/2022	Department of Civil and Environmental Engineering Princeton University (PU) Associate Professor	Princeton, USA
	02/2009- 06/2016	Department of Civil and Environmental Engineering PU Assistant Professor (tenure track)	Princeton, USA
	10/2006- 02/2009	Department of Mechanics of Materials and Constructions, Vrije Universiteit Brussel (VUB) Docent	Brussels, Belgium
	10/2004- 12/2008	St-Lucas School of Architecture Lecturer (part-time 10%)	Brussels, Belgium
	10/2003- 9/2006	Ney and Partners, Engineering Consultants Senior Project Engineer	Brussels, Belgium
	9/2002- 9/2003	Jane Wernick Associates, Engineering Consultants Project Engineer	London, UK
	9/2000- 8/2002	Civil Engineering Department, University of Mauritius Visiting Fellow	Moka, Mauritius
	3/1994- 8/1994	Structwel Designers, Engineering Consultants Structural Engineering Intern	Mumbai, India

3/1993-8/1993 **Architektenwerkgroep, bOb Van Reeth** Antwerp, Belgium
 Architectural Engineering Intern

Awards and Honors

2024 Francqui Chair, Francqui Foundation, University of Ghent, Belgium (BE)
 2024 Visiting Research Professor, Faculty of Engineering and Architecture University of Ghent, (BE)
 2023 University Innovation Award for Angelus Novus, European Cultural Center, Venice Biennale, Italy (IT)
 2023 Myron Goldsmith Fellow, Illinois Institute of Technology, USA
 2021 Fellow of ASCE Structural Engineering Institute (SEI)
 2021 Vice-President, International Association for Shell and Spatial Structures (IASS)
 2021 Pioneer’s Award, Spatial Structures Research Centre, University of Surrey, UK
 2021 Matthias Rippmann Award, DIGITALFutures, Tongji University, China (CN)
 2021 Research + Design Award for LightVault, Architect Magazine, Journal of American Institute of Architects
 2021 Special Structure Award for LightVault, Structural Engineers Association of Illinois
 2020 Top 10 Most Downloaded Paper in Engineering Structures, March 2020-present
 2019 American Institute of Architects Northwest and Pacific Region Merit Design Award
 2019 Barry Onouye Endowed Visiting Chair, University of Washington
 2018 ASCE George Winter Award
 2017 Visiting Professor, University of Ghent, (BE)
 2017 Distinguished Landsdowne Visitor, University of Victoria, Canada (CAN)
 2016 Visiting Professor, Università degli Studi di Roma, Italy IT
 2016 Rockefeller Foundation Bellagio Resident, IT
 2015 Alfred Rheinstein Faculty Award for Excellence in Teaching and Scholarship, PU
 2015 Tsuboi Award for most outstanding paper in Proceedings 2014 IASS Symposium
 2015 Faculty Fellow McGraw Center for Teaching and Learning, PU
 2015 Selected Participant in National Academy of Engineering’s 2015 US Frontiers of Engineering Symposium
 2015 Top 25 Most Downloaded Paper ScienceDirect in Engineering in Computer-Aided Design, January-March 2015
 2006 Fortis Starters Award for Female Entrepreneurs DigiShape, BE
 1996-1999 Full PhD Scholarship, University of Bath, UK

Teaching

Courses
 2018-present Geometry and Elasticity: Shells and Plates, PU CEE519 (not offered in 2020, 2022, 2024)
 2016-present Transformations: Engineering and the Arts, PU STC/EGR/MUS209 (not offered in 2020, 2024)
 2015-present Extraordinary Processes, PU CEE418/VIS418 (not offered in 2017, 2024)
 2011-present Form Finding of Structural Surfaces, PU CEE546 (not offered in 2013,2018,2019,2021,2023)
 2010-present Research Seminar, PU CEE510
 2009-present Directed Research, PU, CEE509
 2009-present Senior Thesis, PU CEE478 (not offered in 2017, 2020, 2023)
 2009-present Mechanics of Solids, PU CEE205 (not offered in 2017, 2023)
 2020 Atelier: The Understorey: Suspension, Movement and Dance, PU ATL495/MTD495
 2019 Global Seminar: Two Millenia of Structural Architecture, PU PIIRS CEE463
 2019 Global Seminar: Two Millenia of Structural Architecture, PU PIIRS CEE263
 2011-2016 Independent Study, PU CEE376 (not offered in 2012)
 2014-2016 Structural Analysis for Architecture, PU ARC510 (not offered in 2015)
 2010-2012 A Social and Multi-Dimensional Exploration of Structures, PU CEE463 (not offered in 2011)

2006-2009	Structural Analysis I, VUB 5 ECTS credits
2006-2009	Structural Analysis II, VUB 5 ECTS credits
2006-2009	Structural Design Project, VUB 5 ECTS credits
2006-2009	Spatial Structures: Design and Analysis, VUB 4 ECTS credits
2004-2008	Special Structures, St-Lucas School of Architecture
2000-2002	Structural Analysis II, University of Mauritius
2000-2002	Structural Analysis IV, University of Mauritius

Advising Ph.D. Students

Axel Larsson '2026, Isabel M. De Oliveira '2025, Edvard Bruun '2024, Rafael Pastrana '2025, Tianju Xue '2022, Alexander Niewiarowski '2021, Victor Charpentier '2019, Tim Michiels '2018, Edward Matthew Segal '2015, Allison Beth Halpern '2014, James Richardson '2012 (VUB), Ashley Thrall '2011, Tine Tysmans '2010 (VUB)

Serving on Ph.D. Committees

Paul Marker, '2024 Cotbus University, Gloria Rita Argento, '2023 Roma Tre University, Parfait Masungi '2024, Mauricio Pereira '2024, Anti J. Volkonen '2023, Xingyuan Sun '2022, Chiang Yu-Chou, TU Delft, '2022, Shengzhe (Jackson) Wang '2022, Alex Upjohn Beatson '2021, Vivek Kumar '2021, Peter Wang '2021, Max Coar '2021, Pierre Cuvilliers, Massachusetts Institute of Technology '2020, Juan Gabriel Bessini Munoz, Universitat Politècnica de València '2020, Omar Aloui, University of Miami '2020, Isabel Morris '2020, Rebecca Napolitano '2020, Eva Laura Slabbinck, Stuttgart University '2019, Giulia Tomasello, University Roma Tre '2019, Kaitlyn Kliewer '2019, Hiba Abdel-Jaber '2019, Jack Reilly '2018, Fabio Bazzucchi, Politecnico di Torino '2017, Frederic Tayeb '2015, Ecole nationale des ponts et chaussées, Dorotea Sigurdottir '2015, Jonathan Glassmann '2015, Negar Elhami Khorasani '2015, Yao Yao '2015, Seyed Sina Nabei, Ecole Polytechnique Fédérale de Lausanne '2014, Caitlin Mueller Massachusetts Institute of Technology '2014, Benoit Deschamps Université Libre de Bruxelles '2013

Advising Associate Research Scholars

Tian Xue (2022-2023)

Advising Postdoctoral Research Assistants

Salma Mozaffari (2024-2025), Robin Oval (2022-2023), Derosh George (2021-2022), Lucia Stein-Montalvo (2021-2024), Tian Xue (2020-2022), Victor Charpentier (2019-2020), Landolf Rhode-Barbarigos (2013-2015)

Advising Master Students

Jessica Flores '2021, Joe Goodglass '2020, Andrew Rock '2018, Hannah Bands '2015, Matthew Horner '2014, Luca Nagy '2014, Matt Streeter '2014, Alex Jordan '2013, Daniel Reynolds '2013, Meghan Krupka '2012, Serguei Bagrianski '2012

Advising Visiting Student Research Collaborators

Raphael Trezarieu, Ecole nationale des ponts et chaussées (2023), Martina Russo, Sapienza University of Rome (2018), Giulia Tomasello, Roma Tre University (2018), Vittorio Paris, University of Bergamo (2018), Lionel Peloux, Ecole nationale des ponts et chaussées (2017), Marcio Sartorelli (2017) São Paulo University USP, Yousef Anastas, Ecole nationale des ponts et chaussées (2014), Victor Charpentier, Ecole nationale des ponts et chaussées (2013-2014), James Richardson, VUB (2012-2013), Hao Liu, Tsinghua University (2012), Tine Tysmans, VUB, (2009)

Collaborating with Visiting Research Collaborators

Professor Francesco Marmo, University of Naples Federico II (2022), Dr. Vittorio Paris, University of Bergamo (2023), Dr. Carlo Olivieri, University of Salerno (2023), Professor S. Gabriele, Roma Tre University (2019), Professor E. Moeller, Hochschule Karlsruhe (2019), Prof. K. Addi, University of Reunion (2018), Professor R. Pauletti, São Paulo University USP (2016), Professor Dr. Ing. I. Lochner-

Aldinger, Hochschule Biberach (2014-2015), Professor R. Coelho, Université Libre de Belgique (2013), Professor R. Motro, Université Montpellier II (2011)

Collaborating with Visiting Fellows

Professor K. Gaspar, Budapest University of Technology and Economics (2022-2023)

Advising Senior Thesis Advisees

Yousef Ebied '23, Rosemary Paulson '23, George Dickinson '23, Emily Colborne '22, Krystal Delnoce '22, Ange M. Ndayishimiye '22, Mark Skeptas '22, Moshifar '20, Zoe Zeitler '20, Daniel Tjondro '20, Nyema Wesley '19, Amber Lin '19, Angel Fan '19, Demi Fang '18, Michael Cox '18, James Gale '18, Kim Perez '18, Aaron Katz '16, Dennis Smith '16, Lu Lu '16, Russell Archer '16, Cristina Laura Anastase '15, Denisa Buzatu '15, Michael Manhard '15, Irmak Erman Eruz '14, Bar Shabtai '14, Mariam Nadjia Laura Wahed '14, Victoria Richardson '13, Katelyn Scanlan '13, Sabrina Siu '13, Peter Szerzo '13, Nathan Brown '12, Daniel Fletcher '12, Sarah Lux '12, Daniel Weiss '12, Tina Yuting '12, Daneeka Abellard '11, Scott Huang '11, Megan Prier '11, Maryanne Wachter '11, Lauren Clark '10, Gregor Horstmeyer '10, Ben Sitler '10

Advising Independent Study Advisees

Sophia Solganik '24, Claire Wong '20, Aaron Katz '16, Julia Wilcots '16, Bar Shabtai '14, Peter Szerzo '13

Advising Summer Research Interns

Beatriz Oliva '22, Zoey Zhang '22, Tiffany Agyarjo '22, Katharine Schassler '21, Chase Lovegren '21, Aaron Lichtbau '21, James McDonagh '21, Joe Collins '20, Nyema Wesley '19, Amber Lin '19, Katie Kennedy '19, Pedro Raposo '18, Demi Fang '18, Denisa Buzatu '15, Mariam Nadjia Laura Wahed '14, Daneeka Abellard '11, Lauren Clark '10, Charles Evans '10

Funding

External Grants

2022-2025	National Science Foundation (NSF): Water Free Robotic Construction of Spatial Discrete Element Structures, PI, [CMMI-ECI-2122271]
2021-2026	NSF: HDR Institute for Data-Driven Dynamical Design, co-PI
2021-2024	NSF: A numerical framework to study and design the mechanical response of configurable elastic rod networks, PI, [CMMI-MOMS-2122269]
2015-2020	NSF: Adaptive Building Skin to Enhance Building's Interior, PI, [CMMI-SAE-1538330]
2018	NSF: Planning Grant: Engineering Research Center for Naturally Inspired Resilient, Sustainable and Adaptable Infrastructure, co-PI
2010-2013	NSF RAPID: Wind Energy and Rainwater Harvesting Solutions for Sustainable Recovery of Haiti, co-PI [CBET-1036415]

Internal Grants

2023-2024	School of Engineering and Applied Science – Innovation Fund: Kirigami tailors airflow and shade in public, outdoor spaces, PI
2019-2023	Princeton Catalysis Initiative: Designing intelligent systems that learn & adapt, PI
2020-2022	Dean for Research Innovation Fund for Research Collaborations: NODES – Net Topology and Dance Exploration Systems, PI
2020-2022	Princeton Catalysis Initiative: Fabrication-Informed Design: Building Efficient Structures with Cooperative Robotic Fabrication Methods, PI
2018-2022	High Meadows Environmental Institute (HMEI) Urban Grand Challenge: Noise Pollution, Barriers, Health, Equity, and the city, PI
2019-2022	School of Engineering and Applied Science (SEAS): Project X Innovation Fund: Harnessing large deformations in interlaced elastic networks, PI
2019-2020	Princeton Intellectual Property Accelerator Fund: bio-inspired adaptive shading device, PI

2020	SEAS Metropolis Initiative: Robotic construction of self-supporting assemblies, co-PI
2018-2019	Andlinger Center for Energy and Environment (ACEE): Innovative Research in Energy and the Environment: Analysis of fluid dynamic impacts on buildings and infrastructure with Full Similarity Unsteady Flow Tunnel, co-PI
2018-2019	Council for Science and Technology: Engineering Designs that Improve People's Perception of Esthetics, PI
2016-2019	HMEI: Princeton University Resilient City Lab, co-PI
2016-2019	HMEI: Novel deployable Storm Surge barriers for Coastal Cities, PI
2016-2017	Campus as a Lab: Princeton Earth Zero Carbon Structures, PI
2015-2016	Wilke Family Fund, Daylight Harvesting Through Geometric Built Form, PI
2014-2016	ACEE: Beyond Shading: New materials, Technologies, and Forms for Cool Spaces, co-PI
2013-2016	ACEE: Elastic Structures for Energy-Efficient Architecture, PI
2012-2015	SEAS Helen Shipley Hunt Fund: Economic custom tailored Sunshades for the prevention of skin cancer, PI
2010-2012	Princeton University High Meadows: An Environmental and Economic Model for Assessing Structural Systems, PI

Large International Collaborative Research Initiatives

2020-2025	Council for International Teaching and Research: Global Collaborative Network: Harnessing non-linear mechanics and robotics for structural innovation in architecture, ROBELARCH, PI
2019-2022	Council for International Teaching and Research: Innovation of efficient structural forms inspired by Art and Nature, Princeton-Tokyo University, PI
2018-2019	Council for International Teaching and Research: Exploiting the potential of shells and domes in seismic areas, Princeton-Roma Tre University, PI
2015-2019	Princeton-São Paulo Strategic Partnership: Sustainable Affordable Infrastructure for Emerging Megacities, PI
2014-2015	Princeton-Todai Strategic Partnership: Sensing Skins: from Molecules to Smart Cities, co-PI

International Grants

2023-2026	IE University Segovia: Structural Crafts, PIIRS, PI
2017-2018	Bartlett American University of Cairo: Soft Adaptive Building Skins for Energy-Efficient Architecture, PI
2017-2018	University of Kyoto, SPIRIT program: Shells and earthquakes, co-PI
2014-2015	Styrelsen for Forskning og Innovation: Spatial Adaptable Rapidly Erectable Building Systems, co-PI,
2014-2015	Princeton-São Paulo Strategic Partnership: Computational Design of Sustainable Urban Infrastructure, PI

Internal Teaching Grants

2021	Council for Science and Technology: Haptic Learning in STEM: Mechanics of Solids, Sculpture I, and Extraordinary Processes, PI
2020	250 th Anniversary Fund: STEM educational outcomes and the transition to online education under COVID-19, PI
2020	250 th Anniversary Fund: Innovation in Undergraduate Education: Online CEE205 Mechanics of Solids, PI
2015	Council for Science and Technology: CEE418/VIS418 Extraordinary Processes, PI
2014-2015	Office of the Dean of the College: A student-centered online design and learning space for CEE205-course enhancement, PI

**Invited
Presentations**

2010-2012	Princeton University Center for International Teaching and Research: Resilient Structures Showcase, co-PI
2010-2014	250th Anniversary Fund for Education Innovation: CEE463 A Social and Multi-Dimensional Exploration of Structures, co-PI
2024	Francqui Chair Speaker : 'Force and Form', UGent, February
2024	Plenary Speaker : 'Wear your weave', IE Segovia Workshop, January.
2023	Speaker : 'Robots, Augmented Reality, Artificial Intelligence and Green Self-Balancing Innovation in Construction', Cofindustria, Red Mile, Bergamo, November
2023	Speaker : 'Building the Future : Angelus Novus, European Cultural Center, November
2023	Plenary Speaker , AAG Conference, University of Stuttgart, September
2023	Plenary Speaker : 'How shell we build?', IWSS II, University of Torin, June
2023	Speaker" 'Shells and future-oriented construction', Cambridge University, May
2023	Plenary Speaker : 'Form and Force in the Urban Environment', USC Spring Lecture Series, Los Angeles, March
2023	Plenary Speaker : 'How can we leverage automatic differentiation in form-finding approaches to help address climate change?', AiDA 2023 Conference, La Sapienza, Rome, IT, February
2023	Burns Endowed Lecture Speaker: 'Geometry, Mechanics and Building Forms', NC State School of Architecture/AIA Triangle chapter joint series, Raleigh, January
2022	Speaker:'Structural Forms in Architecture', South China University of Technology, Guangzhou, CN, May
2022	Speaker: 'Form and Structure', Structures Seminar, University of Cambridge, UK, May
2022	Speaker: 'Structural Forms for a resilient and sustainable urban environment ',Civil and Environmental seminar series, University of Miami, April
2022	Plenary Speaker: 'Structural architecture for climate adaptation', Princeton Club of South Florida, April
2022	Speaker: ' Extraordinary Mechanics & Structural Innovation in Architecture', University of Arizona, School of Architecture, April
2022	Speaker: 'Harnessing geometry and elasticity in structures for sustainable climate adaptation', Civil and Environmental Seminar Series, University of Michigan, January
2022	Panelist: 'President's Circle : Roundtable on Service', Princeton University, January
2021	Plenary Speaker: 'Building Forms that adapt to their environment and climate', High Meadows Environmental Institute Faculty Seminar Series, Princeton University, December
2021	Plenary Speaker: 'Let's talk about Finding Forms', Engineering and Architectural Design Program, University College London, November.
2021	Panelist: 'Let's talk : Form Finding', Barkow-Leibinger Studio, Cornell University, November.
2021	Plenary Speaker : Edward and Mary Allen Lecture in Structural Design, 'Harnessing Extraordinary Mechanics in Structural Design', MIT, October
2021	Plenary Speaker: 'Extreme Structures: Geometry and Elasticity', IASS Symposium: Inspiring the next generation, University of Surrey, UK, August
2021	Hearst Lecture Series Speaker, 'Adaptive Structures in Architecture', Cal Poly, San Luis Obispo, April (online due to pandemic)
2021	Panelist: 'Shell Structures', DigitalFUTURES, Tongji University, CN, January (online due to pandemic)

- 2020 Panelist: 'Rethinking the liquid stone', Rethinking Concrete: Material Conventions in the Anthropocene, School of Architecture, PU, October (online due to pandemic)
- 2020 Speaker: 'Shells: Architectural Form Makers', MARG Institute of Design and Architecture Swarnabhoomi, Velur, IN, August (online due to pandemic)
- 2020 Plenary Speaker: 'A different perspective on shells', 1st Italian Workshop on Shell and Spatial Structures, University of Turin, IT, May (online due to pandemic)
- 2020 Panelist: 'Geometric and transformational matters in Ann Tyng's work', 2020 Women in Design and Architecture Conference, School of Architecture, PU, March
- 2020 Ronald E. Hatcher Speaker: 'Form follows force – extreme structures for a resilient urban environment', Science on Saturday Series, Princeton Plasma Physics Lab, Princeton, USA, February
- 2020 Speaker: Graduate Seminar 'Lightweight Structures for a resilient urban environment', University of Illinois Urbana-Champaign, USA, February
- 2020 Speaker: 'Extreme Structures', Princeton Plasma Physics Lab, Princeton, USA, February
- 2019 Speaker: Applied Mechanics Colloquium, 'Geometry and Elasticity at the Civil Scale: Extreme Structures', Harvard University, USA, December
- 2019 Speaker: Masonry Summer Workshop, 'Extreme Shells', University of Bergamo, IT, July
- 2019 Barry Onouye Endowed Lecturer: 'Structural and Visual Performance of Tensile Structures', University of Washington, USA, March
- 2019 Speaker: Civil and Environmental Engineering Seminar 'Form Finding of Shells for Extreme Loading and Environmental Stress', Rutgers University, USA, February
- 2019 Plenary Speaker: 'Structural Forms and their response to disturbance', Università degli Studi di Roma, January
- 2018 Plenary Speaker: IABSE Henderson Colloquium 2018, 'Tailoring elastic deformation response in adaptive structures', Christ College, University of Cambridge, UK, July
- 2018 Panelist: 'Form beyond Function, Intersection: Engineering and Art Symposium' PU, USA, April
- 2018 Panelist: Federal High Way Administration and NSF Smart and Connected Communities Workshop, Kansas City, USA, April
- 2018 Panelist: Woodrow Wilson School of Public and International Affairs Conference on Smart Cities and Innovations in Urban Government, PU, USA, March
- 2017 Plenary Speaker: 'Form Finding of Shells under Earthquake Loading', University of Kyoto, JP, November
- 2017 Speaker: 'Shell Structures under natural hazards', Tokyo Tech, JP, November
- 2017 Speaker: 'In pursuit of better urban forms', University of Ghent, BE, September
- 2017 Speaker: 'Hygroscopic Structures', American University of Cairo, EG, July
- 2017 Plenary Speaker: 'Future of Design 2017', IABSE US group, Many Cantor Center NYC, USA, April
- 2017 Speaker: 'Shell Zeitgeist: Andre Paduart and Marcel Broodthaers', Hauser & Wirth Bookshop and Roth Bar NYC, USA, March
- 2017 Distinguished Landsdowne Speaker: 'Resilient and Sustainable Structural Forms', University of Victoria, CAN, February
- 2016 Plenary Speaker: 'Form Matters', TedX talk, George School, USA, December
- 2016 Plenary Speaker: 'Form, Materials and Shell', Sheffield University, UK, November
- 2016 Speaker: 'How form matters', College of Architecture, Kent State University, USA, October
- 2016 Speaker: 'Structural Delights: Computation, Matter and Imagination', São Paulo University, BR, June
- 2016 Speaker: 'Sustainable Structural Form', Rockefeller Foundation, Bellagio, IT, May
- 2015 Plenary Speaker: 'Structural form finding and optimization', Concrete Light SPP1542 Annual Meeting, Ruhr-University, DE, October
- 2015 Keynote Speaker: 'Compression and tension structures', Institution of Structural Engineers International Conference 2015, SG, September

2015	Speaker: 'The beauty of lightweight structures', São Paolo University, BR, May
2015	Speaker: 'Force-modeled structures for a future-oriented urban environment', ENAC Structures and Materials seminar series, Ecole Polytechnique Fédérale de Lausanne, CH, April
2015	Speaker: 'Revisiting the force-modeled shells of Sergio Muscemi', LaMS – Modeling and Simulation Lab scientific seminar, Roma Tre University, IT, April
2014	Speaker: 'Form Finding', IBois research seminar, Ecole Polytechnique Fédérale de Lausanne, CH, October
2014	Plenary Speaker: 'Dialectic Form Finding', Utzon(X) Symposium, Aalborg University, DK, August
2014	Speaker: 'Form and elasticity', Department of Civil and Environmental Engineering research seminar, Rensselaer Polytechnic Institute, USA, April
2014	Speaker: 'Elastic structural shapes', Department of Civil and Environmental Engineering research seminar, University of California-Berkeley, USA, March
2013	Plenary Speaker: 'Active bending', 4 th Design Modelling Symposium Berlin, University of the Arts, DE, October
2013	Keynote Speaker: 'Active bending', VI International Conference on Textile Composites and Inflatable Structures – Structural Membranes 2013, DE, October
2013	Keynote Speaker: 'Computation in shells', WG13 IASS Symposium, PL, September
2013	Speaker: 'Finding better forms for structures', Department of Engineering research seminar, University of Cambridge, UK, March
2013	Speaker: 'Better urban shells', Block Research Group, Swiss Federal Institute of Technology Zurich, CH, March
2013	Speaker: 'Bending active forms', Labo Navier, Ecole nationale des ponts et chaussées, FR, March
2013	Speaker: 'Shaping civil structures', research seminar, TU Delft, NL, March
2013	Speaker: 'What I did next: structure and form', Department of Architecture and Civil Engineering research seminar, University of Bath, UK, March
2013	Speaker: 'Structural forms and forces', School of Architecture seminar series, Hochschule Biberach, DE, March
2013	Speaker: 'Shells: efficiency through form', research seminar, VUB, BE, March
2012	Speaker: 'Form finding and optimisation in civil structures', Department of Civil Engineering Research Seminar, Johns Hopkins University, USA, November
2010	Speaker: 'Finding sustainable forms: exercises in structural design', M. Eng. research seminar, Department of Civil and Environmental Engineering, Massachusetts Institute of Technology, USA, September
2009	Speaker: 'A grand challenge: creative structural design', M. Eng. research seminar, Department of Civil and Environmental Engineering, Massachusetts Institute of Technology, USA, November

Service

Professional Leadership

2022-present	Technical Activities Coordinator : International Association of Shell and Spatial Structures
2020-present	Editorial Board Member: Journal of International Association of Shell and Spatial Structures
2015-present	Editor: International Journal of Space Structures, with dr. A. Behnejad (University of Surrey, UK)
2014-present	Chair: Working Group 5 Concrete Roof Shells, IASS, with Prof. P. Block (Swiss Federal Institute of Technology in Zurich, CH) and Prof. Stefano Gabriele (Roma Tre University)
2021-2024	Working Buro Officer : IASS
2021-2024	Vice President: IASS
2019-2023	Chair: Esthetics in Design Committee, ASCE
2017 -2019	Vice-Chair: Esthetics in Design Committee, ASCE

- 2018 Organizer: IASS Symposium 2018, with Prof. J. Ochsendorf and Prof. C. Mueller (MIT), Prof. J. Abel (Cornell University) and B. Baker (SOM), USA, August
- 2018 Editor: Proceedings IASS Symposium 2018 with Prof. C. Mueller (MIT)
- 2016 Chair: Structures, Advances in Architectural Geometry, CH, September
- 2016 Editor: Proceedings Advances in Architectural Geometry with Prof. A. Menges (Stuttgart University, DE) and Prof. M. Pauly (Ecole Polytechnique Fédérale de Lausanne, CH)
- 2016 Guest Editor: Special Issue 'New directions for shell structures' in IASS Journal with Prof. P. Block (Swiss Federal Institute of Technology in Zurich, CH)
- 2015 Review Editor: Structural Sensing

Workshops and Sessions

- 2024 Session Organizer: 'Adaptive Reuse of 20th Century Historic Concrete Shells' (joint session with WG17), and 'Continuous Shells: New perspectives in research and construction',- IASS Symposium, Zurich, Switzerland with Prof. Stefano Gabriele (Roma Tre University) and Prof. Philippe Block (ETHZ), Switzerland, August
- 2024 Member Scientific Committee, IASS, ETHZ, Switzerland, August
- 2024 Workshop Organizer : 'Weaving and Bending Active Structures -IE University, Segovia, Spain, January
- 2023 Session Organizer: 'Methods and construction technologies for sustainable shells', Integration of Design and Fabrication'– IASS Annual Symposium, Melbourne Australia with Prof. V. Paris (University of Bergamo) and Prof. C. Olivieri (University of Salerno)
- 2023 Session Organizer: 'Reducing formwork – techniques old and new, Integration of Design and Fabrication – IASS Annual Symposium, Melbourne Australia with Prof. O. Gaspar (DBM) and dr. R. Orval
- 2023 Member Scientific Committee, IASS Symposium, Melbourne University, Australia, September
- 2022 Member: Advisory Board, SEMC 2022: The Eighth International Conference on Structural Engineering, Mechanics and Computation, SA, September
- 2022 Member Scientific Committee, IASS/APCS, Beijing University of Technology, CN, September
- 2022 Session organizer 'Sustainable Heritage: Challenges and strategies in the preservation and conservation of 20th Century historic concrete shells', IASS/APCS, Beijing University of Technology, CN, with Prof. P. Block (ETHZ), Prof. J. Chilton (Nottingham University), Prof. R. Tarczewski (Wroclaw University of Science and Technology), Prof. M. Mendoza (Nottingham University), September
- 2022 Session organizer 'Future challenges in the design and construction of shell structures for Low or Zero Carbon', IASS/APCS, Beijing University of Technology, CN, with Prof. S. Gabriele (Roma Tre University, IT) and dr. C. Olivieri (University of Salerno, IT) September.
- 2022 Session Organizer: 'Computational structural design for architecture and civil engineering', World Congress of Computational Mechanics, 2022, JP, with Prof. M. Ohsaki (Kyoto University, JP), Prof. R. Pauletti (University of São Paulo, BR), Prof. Yokosuka (Kagoshima University, JP), August
- 2022 Member: International Scientific Committee, 5th International Conference on Structures & Architecture, DK, July
- 2021 Member: Scientific Committee, International fib Symposium on Conceptual Design of Structures 2021, CH, September
- 2021 Member: Isler Prize Committee, IASS, with Prof. E. Ramm (Stuttgart University, DE), August
- 2021 Session Organizer: '21st century Fabrication and Construction of Shells', IASS Symposium, UK, with Prof. S. Gabriele (Roma Tre University), August
- 2021 Member: Jury WG21 Pavilion Competition, IASS Symposium, UK, August
- 2021 Session Organizer: 'Evolution of Stadium Design', ASCE SEI Congress, Seattle, USA, with C. Horiuchi (SOM) (cancelled due to pandemic)

2020 Member: Papers Committee, Advanced Architectural Geometry, FR, September

2020 Member: Editorial Board, CIVIL-COMP 2020, Palma, ES, September (cancelled due to pandemic)

2020 Session Organizer: '21st century Fabrication and Construction of Shells', IASS Symposium, UK with Prof. S. Gabriele (Roma Tre University), August (postponed due to pandemic)

2020 Session Organizer: 'Origami and kirigami mechanics', Engineering Mechanics Institute NYC, USA, with Prof. E. Filipov (University of Michigan, USA), November (postponed due to pandemic)

2020 Session Organizer: 'Evolution of Stadium Design', ASCE SEI Congress, St. Louis, USA, with Chris Horiuchi (SOM), May (cancelled due to pandemic)

2019 Session Organizer: 'Bio-inspiration for structural forms', IASS 60th Anniversary Symposium, ES, with Prof. O. Baverel (Ecole nationale des ponts et chaussées, FR), October

2019 Session Organizer: 'Actual structural behavior of form found and analytical thin shells', IASS 60th Anniversary Symposium, ES with Prof. S. Gabriele (Roma Tre University), October

2019 Session Organizer: 'David Billington Memorial Session', IASS 60th Anniversary Symposium, ES with Prof. M. Garlock (PU) and Prof. J. Abel (Cornell University), October

2019 Session Organizer: 'Pressurized Membrane Structures: Analysis and Application', IASS 60th Anniversary Symposium, ES, with Prof. R. Pauletti (University of São Paulo), October

2019 Member: Scientific Committee, 7th Structural Engineering World Congress, TU, September

2019 Member: Scientific Committee, 7th Design Modelling Symposium, DE, September

2019 Member: Editorial Board, CIVIL-COMP 2019, IT, September

2019 Member: Scientific Committee, International fib Symposium on Conceptual Design of Structures, ES, September

2019 Member: Selection Committee, Barcelona Expo 6 Prize, IASS, ES, September

2018 Member: Editorial Board, Thirteenth International Conference on Computational Structures Technology, ES, September

2018 Member: International Advisory Board, Seventh International Conference on Structural Engineering, Mechanics and Computation, SA, September

2018 Member: Paper Committee, ROB|ARC 2018, National Centre of Competence in Research Digital Fabrication, ETH Zurich, CH, September

2018 Member: Scientific Committee, 1st International Conference on New Horizons in Green Civil Engineering, CA, April

2018 Member: Papers Committee, Advances in Architectural Geometry, SE, September

2017 Session Organizer: 'Disasters and extreme events', IASS2017 Annual International Symposium, DE, with Prof. R. Pauletti (University of São Paulo), September

2017 Member: Steering Committee, Advances in Architectural Geometry, SE, September

2017 Member: Scientific Committee, Structural Membranes, DE, September

2017 Member: Scientific Committee, IASS2017 Annual International Symposium, DE, August

2016 Member: Scientific Committee, IASS2016 Annual International Symposium, JP, September

2015 Session Organizer: 'Advances in Dynamic Relaxation Method', Structural Membranes, SE with Prof. R. Pauletti (University of São Paulo), October

2015 Workshop Organizer: 'Form Finding of Concrete Structures', Ruhr-University Bochum, DE, October

2015 Member: Scientific Committee, Design Modelling Symposium, DK, September

2015 Member: Scientific Committee, IASS2015 Annual International Symposium: Future Visions, NL, August

- 2015 Session Organizer: WG 5 'New directions for shell structures' IASS2015 Annual International Symposium: Future Visions, NL with Prof. P. Block (Swiss Federal Institute of Technology in Zurich, CH), August
- 2015 Member: Scientific Committee, Third International Conference on Flexible Formwork ICFF2015, NL, August
- 2015 Workshop Organizer: 'Form Finding and Sustainable Infrastructure', University of São Paulo, BR, May
- 2015 Workshop Organizer: 'Form, Structure and Material', Roma Tre University, IT, April
- 2014 Member: Scientific Committee, International Conference on Innovation in Architectural Design and Fabrication ICIADF2014, CA, July
- 2014 Member: Scientific Committee, Twelfth International Conference on Computational Structures Technology CST2014, IT, August
- 2014 Member: Scientific Committee, IASS-LSTE 2014 Shells, Membranes and Spatial Structures: Footprints, BR, September
- 2013 Member: Scientific Committee, Design Modelling Symposium, DE, September
- 2013 Member: Scientific Committee, CC2013 Fourteenth International Conference on Civil, Structural and Environmental Engineering Computing, IT, September
- 2013 Member: Scientific Committee, IASS2013 Beyond the Limits of Man, PL, September
- 2013 Workshop Organizer: 'Form Finding of Shell Structures', Hochschule Biberach, DE, March
- 2012 Member: Scientific Committee, ICFF2012 Second International Conference on Flexible Formwork, UK, June
- 2012 Member: Scientific Committee, CST2012 The Eleventh International Conference on Computational Structures Technology, HR, August

Other Professional Activities

- 2019-present Member: Editorial Board, International Association for Shell and Spatial Structures Journal
- 2019-present Member: Steering Committee, Heinz Isler Prize, IASS
- 2018-present Member: Editorial Board, Civil Engineering Design
- 2012-present Member: Tsuboi Award Committee, IASS
- 2009-present Member: ASCE, Structural Engineering Institute
- 2009-present Journal Reviewer: Nature, PNAS, Engineering Structures, ASCE Journal of Architectural Engineering, ASCE Journal of Bridge Engineering, ASCE Journal of Structural Engineering, Computers and Structures, Automation in Construction, International Journal of Shell and Spatial Structures, International Journal of Spatial Structures
- 2023-2025 Member: Executive Council, IASS
- 2017-2023 Member: Bio-Inspired Structures Committee, ASCE
- 2013-2019 Member: Esthetics in Design Committee, ASCE
- 2024 Grant Reviewer: Fonds Wetenschappelijk Onderzoek, BE
- 2023 Grant Reviewer: NSF, USA
- 2023 Grant Reviewer: Fonds Wetenschappelijk Onderzoek, BE
- 2022 Grant Reviewer: Fonds Wetenschappelijk Onderzoek, BE
- 2022 Technical Activities Coordinator, IASS
- 2020 Grant Reviewer: Independent Research Fund Denmark
- 2019 Grant Reviewer: Natural Sciences and Engineering Research Council of Canada
- 2019 Member: Steering Committee, Heinz Isler Prize, IASS
- 2019 Member: Editorial Board, Civil Engineering Design
- 2018 Grant Reviewer: TU Wien University
- 2018 Grant Reviewer: Deutsche Forschungsgemeinschaft, German Research Foundation
- 2017 Grant Reviewer: Deutsche Forschungsgemeinschaft, German Research Foundation
- 2016 Grant Reviewer: Natural Sciences and Engineering Research Council of Canada

2016 Grant Reviewer: Italian Agency for Research and University Evaluation
 2015-2016 Grant Reviewer: National Science Foundation
 2015 Grant Reviewer: Japan Society for the Promotion of Science
 2013-2016 Member: Working Group 17, Historical Spatial Structures, IASS
 2013-2016 Member: Working Group 15 Structural Morphology, IASS
 2009-2016 Member: International Association for Bridge and Structural Engineering
 2009-2015 Grant Reviewer: FNRS Belgian National Fund for Scientific Research Belgium | SEN3 and Foresight

Princeton University Service

2022-present Affiliated Faculty : Princeton Institute for Machine Learning and Statistics
 2019-present Affiliated Faculty Princeton Institute for International and Regional Studies
 2018-present Affiliated Faculty High Meadows Environmental Institute
 2018-present Affiliated Faculty Brazil Lab
 2018-present Faculty Mentor: Service Focus Program, PACE Center for Civic Engagement
 2016-present Affiliated Faculty Andlinger Center for Energy and the Environment
 2014-present Affiliated Faculty Princeton Materials Institute
 2014-present Affiliated Faculty School of Architecture
 2011-present Faculty Fellow: Mathey College
 2011-present Member: Architecture and Engineering Certificate Program Committee
 2011-present Member: Robotics and Intelligent Systems Certificate Program Committee
 2011-present Member: Program in Urban Studies committee
 2020-2023t Faculty Advisor: Engineers Without Borders, Princeton University Chapter
 2021-2023 Member: Committee on Conference and Faculty Appeal
 2020-2023 Faculty Board Member: Princeton Energy and Climate Scholars
 2019-2020 Chair: Council on Teaching and Learning
 2017-2020 Member: President's Advisory Committee on Architecture
 2016-2020 Member: University Research Board
 2023 Présenter : AI and engineering design, Board of Trustees
 2023 Member : Faculty Search Committee, School of Architecture
 2020 Member: Planning Committee on Online Education Excellence
 2019 Panel Moderator: HMEI Summer Internship Symposium - urban session
 2018-2019 Member: Council on Teaching and Learning
 2018-2019 Member: Council for International Teaching and Research
 2018 Member: Fellowship Committee of the Graduate School
 2018 Invited Expert: Review Preliminary Design Carnegie Lake Bridge, Office of Capital Projects
 2017 Member: Faculty Advisory Committee on Policy
 2017 Member: Council Princeton University Community Committee
 2016 Member: Andlinger Energy Efficiency/Buildings Group
 2016 Member: SEAS Freshman Year Study Committee
 2015 Member: Task Force on Diversity, Equity and Inclusion: Academics and Awareness
 2014-2017 Faculty Fellow: McGraw Center for Teaching and Learning
 2013-2016 Member: Faculty Advisory Committee on Policy
 2013-2016 Member: Council of the Princeton Community
 2013 Member: School of Architecture/ACEE faculty search committee
 2013 Presenter: The Princeton-Fung Global Forum: the Future of the City
 2011 Member: Panel Ivy + Sustainability, Office of Sustainability
 2011 Member: Panel Colloquium, Women in Math, Science and Engineering
 2010 Member: Orientation Panel, Women in Math, Science and Engineering
 2009 Keynote Speaker: Graduate Women in Science and Engineering, Opening Ceremony

Princeton University School of Engineering and Applied Science Service

2022	Officer : Diversity Robotics Search
2019	Member: Panel PPIA Diversity workshop
2018	Member: Interview Committee - Diversity and Inclusion Coordinator
2018	Member: Interview Committee Director, Administration, Finance and Planning
2018	Member: Committee on Civil and Environmental Engineering (CEE) Programming ES/SEAS Project
2017	Member: Committee ES/SEAS Programming
2017	Member: Maker Space Working Group
2014-2015	Member: SEAS Self-Study Committee: BSE Undergraduate Program
2014	Session Organizer: Urban resilience, SEAS 1 st Strategic Planning Workshop
2011-2016	Academic Advisor: Freshman Class

Princeton University Department of Civil and Environmental Engineering Service

2018-present	Program Director: Mechanics, Materials and Structures (MMS)
2018-present	Member: Visiting Student Research Collaborator Committee
2020-present	Officer: Diversity Search
2023-present	Member : CEE Architecture Building Committee
2020	Chair: MMS Senior Faculty Hire Committee
2020	Chair: MMS Junior Faculty Hire Committee
2019	Chair: MMS Senior Faculty Hire Committee
2019	Chair: MMS Junior Faculty Hire Committee
2019	Member: Interview Committee Administrative Assistant
2018	Director of Graduate Studies
2018	Chair: Tenure Committee
2018	Chair: MMS Junior Faculty Hire Committee
2018	Member: Faculty Search Water Committee
2018	Member: Reappointment Committee
2018	Member: CEE website design development Committee
2017	Chair: MMS Junior Faculty Hire Committee
2016-2017	Track Advisor: CEE Engineering and the Liberal Arts Program
2014-2015	Research Seminar Organizer
2014	Member: Diversity Committee
2013	Member: Space Committee
2013-2015	Presenter: Princeton Preview
2012	Track Advisor: Civ/Arc Program (Fall)
2011-2014	Participant/Presenter: Freshman Open House (except in 2012)
2011,2014	Presenter: SEAS Major Fair

Media Mention

Interviews, personal profiles, media comments, passing mentions, videos, webcast lectures

Research

Archdaily: When Digital Technologies Enhance Craftsmanship: How to Build a Domed Pavilion with Augmented Reality [Online]. Available: https://www.archdaily.co/search/co/all?q=innixAR&ad_source=jv-header [Accessed: 7 – June – 2023]

Archdaily: Building for Sustainability: 3 Main Themes Explored at the Time Space Existence Exhibition in Venice [Online]. Available: <https://www.archdaily.com/1002216/building-for-sustainability-3-main-themes-explored-at-the-time-space-existence-exhibition-in-venice> [Accessed: 7 – June – 2023]

Archdaily: 10 Structural Installations by Snøhetta, MADWORKSHOP, and others at the ECC's 'Time Space Existence' Exhibition at Venice [Online]. Available: https://www.archdaily.com/1002335/10-structural-installations-by-snohetta-madworkshop-and-others-at-the-eccs-time-space-existence-exhibition-at-venice-biennale-2023?ad_medium=gallery [Accessed: 7 – June – 2023]

Monocle: 'Telling Stories: Venice – Building Bridges – European Cultural Center', vol. 164, p. 124-125, June 2023

Dezeen: SOM and Princeton University use AR to construct self-balancing arch in Venice [Online]. Available: <https://www.dezeen.com/2023/06/01/som-princeton-university-self-balancing-arch-venice-architecture-biennale/> [Accessed: 7 – June – 2023]

SOM: 'Angelus Novus Vault: Demonstrating New Possibilities for Self-Balancing Construction through a Mixed-Reality Approach' [Online]. Available: <https://www.som.com/news/angelus-novus-vault/> [Accessed: 7 – June – 2023]

SOM: 'Angelus Novus Vault – Palazzo Mora, Venice [Online]. Available: <https://www.som.com/story/angelus-novus-vault-palazzo-mora-venice/> [Accessed: 7 – June – 2023]

PU Institute for International and Regional Studies: 'Al Asali, Adriaenssens explore potential of combining traditional building crafts, engineering technology' [Online]. Available: <https://piirs.princeton.edu/news/2023/al-asali-adriaenssens-explore-potential-combining-traditional-building-crafts-engineering/> [Accessed: 7 – June – 2023]

PU University Center for Human Values: 'Angelus Novus Project wins Innovation Award at the Venice Biennale' [Online]. Available: <https://uchv.princeton.edu/news/angelus-novus-project-wins-innovation-award-venice-biennale> [Accessed: 7 – June – 2023]

Engineering Princeton: 'Renaissance algorithm meets augmented reality at Venice Biennale', [Online]. Available: <https://engineering.princeton.edu/news/2023/06/07/renaissance-algorithm-meets-augmented-reality-venice-biennale> [Accessed: 7 – June – 2023]

weArch: 'Volta Angelus Novus' [Online]. Available: <https://www.youtube.com/watch?v=eqNH-HrKvPEe> [Accessed: 7 – June – 2023]

European Cultural Center: 'Angelus Novus: Demonstrating New Possibilities for AR and Self-balancing in Construction' [Online]. Available: <https://www.youtube.com/watch?v=TB91X7VhEGE> [Accessed: 7 – June – 2023]

DesignBoom: innixAR vaulted pavilion combines augmented reality & traditional building techniques [Online]. Available: https://www.designboom.com/architecture/innixar-vaulted-pavilion-augmented-reality-traditional-building-techniques-05-17-2023/?utm_source=designboom+daily&utm_medium=email&utm_campaign=innixAR+vaulted+pavilion+combines+augmented+reality+%26+traditional+building+techniques [Accessed: 7 – June – 2023]

IE University: innixAR: IE University and Princeton University use AI + AR to build a vaulted pavilion in Spain [Online]. Available: <https://www.youtube.com/watch?v=tVPdpZ50k3A> [Accessed: 7 – June – 2023]

Engineering Princeton: 'Technique inspired lace-making could someday weave structures space' [Online]. Available: <https://engineering.princeton.edu/news/2021/06/01/technique-inspired-lace-making-could-someday-weave-structures-space> [Accessed: 7 – June – 2023]

Materials for Today and Tomorrow: A Princeton University Materials Science Symposium : 'Panel 2 : Bridging Engineering and the Arts'[Online]. Available: https://materials.princeton.edu/events/symposium-2021/videos?fbclid=IwAR1DQrdBsVXwYCsPn_zL01j2sTyGtN3nJjDzXm59C99bh1C1wxMIpqcFdTU [Accessed: 7 – June – 2023]

Hearst Lecture Series - Sigrid Adriaenssens, Ph.D. - 'Structural Forms in Architecture' [Online]. Available: <https://calpoly.zoom.us/rec/share/6TZkk2nL67Pb1Vsa3->

f1BJqzkCIvRlwbGnxEinUfgUXWUhydqqy6PmIRk93082mVX.ENPBt0MGr2IblmMcAccess Passcode: u5^pDx7L [Accessed: 7 – June – 2023]

Miami Marine Stadium closer to \$45M makeover, but city is obscuring detailed plan [Online].Available <https://www.miamiherald.com/news/local/community/miami-dade/article246478580.html> [Accessed: 7 – June – 2023]

'Spatial Structures; Movers and Shakers' - with Sigrid Adriaenssens [Online].Available: https://www.youtube.com/watch?time_continue=1&v=6a9ffR_tfd4&feature=emb_logo [20 – January – 2023]

A different perspective on shells [Online] Available https://www.youtube.com/watch?v=uke1_Htjulo&list=PLTtyO5PWkPO5BVSipRweFvj6Y1AbdaZSn [Accessed: 20 - January - 2023]

Innovation Origins: The secret of scale construction opened up – a new world opens up [Online].Available: https://www.youtube.com/watch?time_continue=1&v=6a9ffR_tfd4&feature=emb_logo [Accessed: 20 - January - 2023]

E. Kieckens, Reformatisch Dagblad: Brunelleschi's bakstenen koepel, 6th July 2020, pp.18-19.

NaukaTV: Раскрыт секрет самонесущих куполов эпохи Возрождения [Online].Available: <https://naukatv.ru/news/27073> [Accessed: 20 - January - 2023]

Ria:Ученые раскрыли секрет куполов итальянских соборов [Online].Available: [Accessed: 20 - January - 2023]

Descopera: Cercetătorii au deslușit misterul domurilor renașcentiste italiene: dublul helix al masoneriei [Online].Available: <https://www.descopera.ro/stiinta/19349819-cercetatorii-au-deslusit-misterul-domurilor-renascentiste-italiene-dublul-helix-al-masoneriei> [Accessed: 20 - January - 2023]

Scientific American (Brazil): A dupla hélice de alvenaria: pesquisadores descobrem o segredo das cúpulas renașcentistas italiana[Online].Available: <https://sciam.uol.com.br/dupla-helice-de-alvenaria-pesquisadores-descobrem-o-segredo-das-cupulas-renascentistas-italianas/> [Accessed: 20 - January - 2023]

La Repubblica: Ecco il segreto delle cupole rinascimentali [Online].Available: https://www.repubblica.it/scienze/2020/05/21/news/ecco_il_segreto_delle_cupole_rinascimentali-257253250/ [Accessed: 20 - January - 2023]

La Nazione Firenze: Svelato il segreto della costruzione delle cupole rinascimentali <https://www.lanazione.it/firenze/cronaca/svelato-segreto-cupole-1.5156048> [Accessed: 20 - January - 2023]

TwitterSmash: Forscher entdecken das Geheimnis der italienischen Renaissancekuppeln: Doppelhelix des Mauerwerks [Online].Available: <https://twitter smash.com/technic/forscher-entdecken-das-geheimnis-der-italienischen-renaissancekuppeln-doppelhelix-des-mauerwerks/> [Accessed: 20 - January - 2023]

Smithsonian Magazine: How Renaissance Architects Designed Italy's Imposing Domes [Online].Available: <https://www.smithsonianmag.com/smart-news/how-renaissance-duomos-were-built-180974965/> [Accessed: 20 - January - 2023]

The Structural Engineer: Engineering concepts behind the stability of famous masonry domes confirmed [Online].Available: https://www.thestructuralengineer.info/news/engineering-behind-the-stability-of-masonry-domes-confirmed?utm_source=facebook&utm_medium=social&utm_campaign=page_post&fbclid=IwAR2xOXSjuytArsSd-jjhu2ZktvDVkIwgHoVAeKurCrHVlYACB2oK3F1IFjo [Accessed: 20 - January - 2023]

ArchiNect:Princeton University researchers crack secret to Italian renaissance dome construction [Online].Available: <https://archinect.com/news/article/150198989/princeton-university-researchers-crack-secret-to-italian-renaissance-dome-construction> [Accessed: 20 - January - 2023]

Art Critique: Art World Roundup: from the design behind Italian domes to penguins in a museum [Online].Available: <https://news.artnet.com/art-world/researchers-domed-churches-renaissance-possible-1867764> [Accessed: 20 - January - 2023]

Art News: A High-Tech Investigation Has Finally Figured Out the Brilliant Trick Renaissance Architects Used to Make Their Domed Churches [Online].Available: <https://news.artnet.com/art-world/researchers-domed-churches-renaissance-possible-1867764> [Accessed: 20 - January - 2023]

Princeton University. Double helix of masonry—Researchers discover the secret of Italian renaissance domes [Online]. Available: <https://www.princeton.edu/news/2020/05/21/double-helix-masonry-researchers-uncover-secret-italian-renaissance-domes> [Accessed: 20 - January - 2023]

The Times (UK): Hi-tech sleuths reveal dome truths [Online].Available: <https://www.thetimes.co.uk/article/hi-tech-sleuths-reveal-dome-truths-3h7mhcr1f> [Accessed: 20 - January - 2023]

The Times (Australia): Hi-tech sleuths reveal dome truths [Online].Available: https://www.theaustralian.com.au/subscribe/news/1/?sourceCode=TAWEB_WRE170_a&dest=https%3A%2F%2Fwww.theaustralian.com.au%2Fworld%2Fthe-times%2Fhitech-sleuths-reveal-truths-of-florence-dome%2Fnews-story%2Fccbddb13cf4b5a326eedff57a691eb7c&memtype=anonymous&mode=premium [Accessed: 20 - January - 2023]

Archeology News Network:Double helix of masonry—Researchers discover the secret of Italian renaissance domes [Online].Available: <https://archaeologynewsnetwork.blogspot.com/2020/05/double-helix-of-masonry-researchers.html> [Accessed: 20 - January - 2023]

Heritage Daily: Engineers discover the secret of Italian renaissance domes <https://www.heritagedaily.com/2020/05/engineers-discover-the-secret-of-italian-renaissance-domes/129222> [Accessed: 20 - January - 2023]

Innovations Report:Double helix of masonry—Researchers discover the secret of Italian renaissance domes [Online].Available: <https://www.innovations-report.com/html/reports/architecture-construction/double-helix-of-masonry-researchers-discover-the-secret-of-italian-renaissance-domes.html> [Accessed: 20 - January - 2023]

KXAN News: It revealed the secret of domes of Italian cathedrals [Online].Available: <http://www.kxan36news.com/it-revealed-the-secret-of-domes-of-italian-cathedrals> [Accessed: 20 - January - 2023]

News Break: Double helix of masonry—Researchers discover the secret of Italian renaissance domes [Online].Available: <https://www.newsbreak.com/news/0P52Yv6o/double-helix-of-masonryresearchers-discover-the-secret-of-italian-renaissance-domes> [Accessed: 20 - January - 2023]

Princeton University Engineering: Double helix of masonry—Researchers discover the secret of Italian renaissance domes [Online].Available: <https://engineering.princeton.edu/news/2020/05/18/double-helix-masonry-researchers-uncover-secret-italian-renaissance-domes> [Accessed: 20 - January - 2023]

ScienceDaily: Double helix of masonry—Researchers discover the secret of Italian renaissance domes [Online].Available: <https://www.sciencedaily.com/releases/2020/05/200518090024.htm> [Accessed: 20 - January - 2023]

SciTechDaily: Researchers Discover the Secret of Italian Renaissance Domes: Double Helix of Masonry <https://scitechdaily.com/researchers-discover-the-secret-of-italian-renaissance-domes-double-helix-of-masonry/> [Online].Available: [Accessed: 20 - January - 2023]

Techxplore: Double helix of masonry—Researchers discover the secret of Italian renaissance domes [Online].Available: <https://techxplore.com/news/2020-05-helix-masonryresearchers-secret-italian-renaissance.html> [Accessed: 20 - January - 2023]

The Independent: helix of bricks: How a 600-year-old dome built during the Italian renaissance could inform construction techniques today [Online]. Available: <https://www.independent.co.uk/independentpremium/world/florence-duomo-construction-dome-renaissance-how-build-drones-a9520706.html> [Accessed: 20 - January - 2023]

World News Monitor: Double helix of masonry: Researchers discover the secret of Italian renaissance domes [Online]. Available: <https://world-news-monitor.com/environment/2020/05/18/double-helix-of-masonry-researchers-discover-the-secret-of-italian-renaissance-domes/> [Accessed: 20 - January - 2023]

Radio 1 Belgium: Het geheim van de renaissancekoepel [Online]. Available: <https://radiol.be/programma/nieuwe-feiten/radioitem/het-geheim-van-de-renaissancekoepel/19520> [Accessed: 20 - January - 2023]

An interview with Sigrid Adriaenssens [Online]. Available: <https://www.surrey.ac.uk/news/interview-sigrid-adriaenssens> [Accessed: 20 - January - 2023]

Podcasts turn spotlight on the history and future of Spatial Structures [Online]. Available: <https://www.surrey.ac.uk/news/podcasts-turn-spotlight-history-and-future-spatial-structures> [Accessed: 20 - January - 2023]

Interview with Prof. Sigrid Adriaenssens [Online]. Available: <https://www.youtube.com/watch?v=3WWkEAgngWQ&feature=youtu.be> [Accessed: 20 - January - 2023]

Form Finding Lab blog [Online]. Available: <https://formfindinglab.wordpress.com/> [Accessed: 20 - January - 2023]

D. Hyatt, U.S.1 Newspaper - Princeton Profs Get Into the Innovation Business, 2019 [Online]. Available: <https://princetoninfo.com/princeton-profs-get-into-the-innovation-business/> [Accessed: 20 - January - 2023]

Princeton University Research: Solar Shades for Energy Conservation and Indoor Comfort, 2019 [Online]. Available: https://www.youtube.com/watch?time_continue=5&v=tol8OmC9RPw&feature=emb_logo [Accessed: 20 - January - 2023]

Celebrate Princeton Innovation: Sigrid Adriaenssens and Victor Charpentier: An adaptive solar shade to save energy and improve comfort in buildings, 2019 [Online]. Available: <https://innovation.princeton.edu/news/sigrid-adriaenssens-and-victor-charpentier-adaptive-solar-shade-save-energy-and-improve-comfort> [Accessed: 20 - January - 2023]

Princeton Environmental Institute: Storm Surge: Future hazard and defense, 2019 [Online]. Available: <https://www.youtube.com/watch?v=zWuDkI4feNw> [Accessed: 20 - January - 2023]

A. Herb, 'The Sustainable City', *EQuad News*, vol.31, number 1, p. 17

University of Surrey: An interview with Sigrid Adriaenssens, 2019 [Online]. Available: <https://www.surrey.ac.uk/news/interview-sigrid-adriaenssens> [Accessed: 20 - January - 2023]

Princeton Engineering: Sigrid Adriaenssens on making buildings more energy efficient, 2019 [Online]. Available: <https://www.youtube.com/watch?v=q5X-x0u8WyI> [Accessed: 20 - January - 2023]

UW Department of Architecture Lecture Series, 'Form Follows Force: Why and How Does It Matter?', 2019 [Online]. Available: <https://vimeo.com/331127794> [Accessed: 20 - January - 2023]

WPRB Princeton, These vibes are too cosmic, 'Structural Forms and Resilient Architecture', 2018 [Online]. Available: <https://tvr2c.com/2018/05/27/sigridadriaenssens/> [Accessed: 20 - January - 2023]

American Society of Civil Engineers, '2018 ASCE George Winter Awardee', 2018 [Online] <https://www.asce.org/structural-engineering/news/20180425-2018-asce-george-winter-awardee/> [Accessed: 20 - January - 2023]

Living at the Intersection 'Form Beyond Function', 2018 [Online]. Available: <https://www.youtube.com/watch?v=sbgxNhptMLg> [Accessed: 20 - January - 2023]

TedX Talk, 'Designing for strength, economy, and beauty', 2017 [Online]. Available: <https://www.youtube.com/watch?v=QhGUtJF10HM> [Accessed: 20 - January - 2023]

Kent CAED Fall Lecture Series, 'How form matters', 2016 [Online]. Available: <https://www.youtube.com/watch?v=nyggxTtW46I> [Accessed: 20 - January - 2023]

Urban Omnibus, 'Blow-up Bulwark' with Steven Strauss, 2017 [Online]. Available: <https://urbanomnibus.net/2017/11/blow-up-bulwark/> [Accessed: 20 - January - 2023]

Z. Mortice, 'Nature Does It Better: Biomimicry in Architecture and Engineering', 2016 [Online]. Available: <https://redshift.autodesk.com/biomimicry-in-architecture/?linkId=26448534> [Accessed: 20 - January - 2023]

Sustainability of Princeton, 'Rammed Earth', 2016 [Online] Available: <https://sustain.princeton.edu/content/rammed-earth> [Accessed: 20 - January - 2023]

Spiraling Dirt - a rammed earth spiral for Forbes Garden, 2016 [Online] Available: <https://vimeo.com/211509978> [Accessed: 20 - January - 2023]

Vimeo, 'UTZON(x) - Sigrid Adriaenssens', 2015. [Online]. Available: <https://vimeo.com/118111305>. [Accessed: 20 - January - 2023]

C. Zandonella, 'Shell Structures for Architecture: Form Finding and Optimization | Discovery 2014-2015', *Discovery.princeton.edu*, 2014. [Online]. Available: <https://discovery.princeton.edu/2014/11/14/shell-structures-for-architecture-form-finding-and-optimization/>[Accessed: 20 - January - 2023]

Parametricism.co.uk, 'Shell Structures for Architecture | Parametricism.co.uk', 2014. [Online]. Available: <http://www.parametricism.co.uk/blog/shell-structures-for-architecture-2/#more-5528>. [Accessed: 20 - January - 2023]

Docomomo-us.org, 'Preserving the Miami Marine Stadium (1962-64): Tropical Brutalism, Society of Leisure, and Ethnic Identity | docomomo united states', 2015. [Online]. Available: http://www.docomomo-us.org/news/preserving_miami_marine_stadium_196264_tropical_brutalism_society_leisure_and_ethnic_identity. [Accessed: 20 - January - 2023]

K. Amorim, 'Estruturas leves como membranas são tema de pesquisa da Poli-USP e Universidade de Princeton', 2015. [Online]. Available: <http://techne.pini.com.br/engenharia-civil/tecnologias-sistemas>. [Accessed: 20 - January - 2023]

J. Bernardes, 'Parceria da Poli busca aprimorar projeto de estruturas leves | USP - Universidade de São Paulo', 2014. [Online]. Available: <http://www5.usp.br/43842/parceria-da-poli-busca-aprimorar-projeto-de-estruturas-leves>. [Accessed: 20 - January - 2023]

T. Jordan 'Shell Structures for Architecture: form Finding and Optimization', *E Quad news*, vol. 26, no. 1, p.23, 2014.

Motionry, 'Princeton Professor Uses Biomimicry to Make Buildings More Efficient', 2014. [Online]. Available: <http://blog.motionry.com/blog/2014/6/5/princeton-professor-designs-biomimicry-inspired-shading-shells>. [Accessed: 20 - January - 2023]

Sciguru.org, 'Structural and electrical engineers team up to examine a method for increasing energy efficiency | Science News SciGuru.org', 2015. [Online]. Available: <http://www.sciguru.org/newsitem/17174/structural-and-electrical-engineers-team-examine-method-increasing-energy-efficiency>. [Accessed: 20 - January - 2023]

Attention.princeton.edu, 'Axel Kilian & Sigrid Adriaenssens | ATTENTION', 2015. [Online]. Available: <http://attention.princeton.edu/issues/formalisms/axel-kilian-sigrid>. [Accessed: 20 - January - 2023]

C. Zandonella, 'Site-specific shades offer sun protection | Discovery 2014-2015', *Discovery.princeton.edu*, 2013. [Online]. Available: <http://discovery.princeton.edu/2013/10/31/site-specific-shades-offer-sun-protection/>. [Accessed: 20 - January - 2023]

F. Zeist, 'Shaping better civil structures - Sigrid Adriaenssens, Princeton University (featured article Rumoer 56)', *Praktijkvereniging BouT*, 2013. [Online]. Available: <http://www.praktijkverenigingbout.nl/shaping-better-civil-structures-sigrid-adriaenssens-princeton-university-featured-article-rumoer-56>. [Accessed: 20 - January - 2023]

N. Drake, 'Art Competition Shows Off the Unexpected Beauty of Science', *WIRED*, 2015. [Online]. Available: <http://www.wired.com/2013/06/art-of-science/>. [Accessed: 20 - January - 2023]

- J. Altmann, 'Sweet Thesis: A Master's Project Made of Chocolate' *Princeton Alumni Weekly*, vol. 114, no. 1, 2013.
- LiveScience.com, 'Sweet Success: Chocolate Structure Whets Appetite for Innovation', 2015. [Online]. Available: <http://www.livescience.com/38578-chocolate-pavilion.html>. [Accessed: 20 - January - 2023]
- Princeton.edu, 'Art of Science / 2013 Gallery / Cocoa engineering', 2015. [Online]. Available: <http://www.princeton.edu/artofscience/gallery2013/one.php%3Fid=298.html>. [Accessed: 20 - January - 2023]
- Princeton.edu, 'Art of Science / 2013 Gallery / Structural connections', 2015. [Online]. Available: <http://www.princeton.edu/artofscience/gallery2013/one.php%3Fid=384.html>. [Accessed: 20 - January - 2023]
- CNN, 'Art comes from science - CNN.com', 2015. [Online]. Available: <http://www.cnn.com/2013/05/17/tech/gallery/art-of-science/index.html>. [Accessed: 20 - January - 2023]
- K. Campbell-Dollaghan, '10 of the Year's Most Beautiful Science Images', *Gizmodo*, 2015. [Online]. Available: <http://gizmodo.com/10-of-the-years-most-beautiful-science-images-508969751>. [Accessed: 20 - January - 2023]
- AAU-Princeton-VSL Adaptive Building Skin, 'Variable Stiffness Lattice Building Skin', 2014 [Online] Available: <https://vimeo.com/109607861>, [Accessed: 20 - January - 2023]
- J. Tarmy, 'Galoshes on a Botticelli', *Bloomberg.com*, 2013. [Online]. Available: <http://www.bloomberg.com/news/articles/2013-05-20/galoshes-on-a-botticelli>. [Accessed: 20 - January - 2023]
- J. Kingson, 'Celebrating the Web; an Atomic Movie and a Hurricane Over Saturn', *Nytimes.com*, 2013. [Online]. Available: <http://www.nytimes.com/2013/05/07/science/celebrating-the-web-an-atomic-movie-and-a-hurricane-over-saturn.html?ref=science>. [Accessed: 20 - January - 2023]
- B. Mikeo, 'Questions and Answers with Prof. Sigrid Adriaenssens', 2015. [Online]. Available: <http://acee.princeton.edu/news/q-a-with-professor-sigrid-adriaenssens/>. [Accessed: 20 - January - 2023]
- T. Riordan, 'Princeton Fung Global Forum contemplates the future of the city | EQN', *Eqn.princeton.edu*, 2015. [Online]. Available: <https://eqn.princeton.edu/2013/01/princeton-fung-global-forum-contemplates-the-future-of-the-city/>. [Accessed: 20 - January - 2023]
- C. Jacobson, 'Shanghai Forum Explored Cities Through Varied Lenses 2015', [Online]. Available: <http://archrecord.construction.com/news/2013/02/130206-Shanghai-Forum-Explored-Cities-...2/7/2013>. [Accessed: 20 - January - 2023]
- J. Sullivan, 'A modern mosaic – Princeton Engineering', *Princeton.edu*, 2015. [Online]. Available: <http://www.princeton.edu/engineering/news/archive/?id=9201>. [Accessed: 20 - January - 2023]
- J. Sullivan, 'Structural Art: Melding Engineering and Aesthetics', *Princeton.edu*, 2015. [Online]. Available: <http://www.princeton.edu/engineering/art/story-02/>. [Accessed: 20 - January - 2023]
- Blogs.princeton.edu, 'Engineers and architects develop disaster relief technologies for Haiti-EQuad News', 2015. [Online]. Available: <http://blogs.princeton.edu/equadnews/summer-2010/engineers-and-architects-develop-disaster-relief-technologies-for-haiti.html>. [Accessed: 20 - January - 2023]
- H. Parker, 'Researchers develop disaster relief technologies for Haiti', *Princeton University Bulletin*, vol. 99, no. 4, p.8, 2010.

Teaching

- S. Adriaenssens and J. Scanlan, 'Why civil engineering students should make things', ASCE The Source [Online] <https://source.asce.org/why-civil-engineering-students-should-make-things/> [Accessed: 23 - April - 2021]
- M. Mooney, Scientific American: Engineering, Beauty and a Longing for the Infinite: A recent excursion to Italy made it clear to students and professors alike that these things are interrelated Available: <https://blogs.scientificamerican.com/observations/engineering-beauty-and-a-longing-for-the-infinite/> [Accessed: 20 - January - 2023]
- S. Ruybalid, 'In my own words: Arrivederci, Italy!', *Princeton International int'l*, Fall 2019, pp.8-9.

Princetonenviro Instagram: Summer internship Available:

https://www.instagram.com/p/B5TU_U7h3LK/?utm_source=ig_web_copy_link [Accessed: 20 - January - 2023]

Council on Science and Technology, 'STC 209: Transformations in Engineering and the Arts' [Online]. Available: <https://cst.princeton.edu/STC209> [Accessed: 20 - January - 2023]

Office of Communications, 'Senior thesis: Sustainable building with bamboo, *Princeton.edu*, 2016. [Online]. Available:

<https://www.princeton.edu/main/news/archive/S46/49/62Q24/index.xml?section=featured> [Accessed: 20 - January - 2023]

S. Schultz, 'Extraordinary processes' course links art and engineering', *Princeton.edu*, 2016. [Online]. Available:

<https://www.princeton.edu/main/news/archive/S45/43/49E39/index.xml?section=featured> [Accessed: 20 - January - 2023]

S. Huang, 'Thesis: Self-folding building design could cut energy use', *Princeton University Bulletin*, (2015), vol 104, no.5, p1, p.6.

S. Huang, 'Thesis: Self-folding building design could cut energy use' Available: *Phys Org*, 5/01/2015, <http://phys.org/news/2015-05-self-folding-slash-energy.html>. [Accessed: 20 - January - 2023]

J. Himpele, 'Online Learning Highlights: Blended Campus Courses Fall 2014-Spring 2015', *Princeton.edu*, 2015. [Online]. Available:

<http://www.princeton.edu/mcgraw/online/highlights/>. [Accessed: 20 - January - 2023]

J. Himpele, 'Online Learning Environments - McGraw Center - Princeton University', *Princeton.edu*, 2015. [Online]. Available: <http://www.princeton.edu/mcgraw/online/online-learning-environs/>. [Accessed: 20 - January - 2023]

D. Day, 'Princeton University - Princeton expands online learning efforts to NovoEd platform', 2015. [Online]. Available:

<http://www.princeton.edu/main/news/archive/S40/66/40E89/index.xml>. [Accessed: 20 - January - 2023]

Bmcc.cuny.edu, 'Start Here, Go To Princeton', 2014. [Online]. Available:

<http://www.bmcc.cuny.edu/news/news.jsp?id=11195>. [Accessed: 20 - January - 2023]

T. Jordan, 'Class on structural art and engineering yields new exhibit' *E Quad News*, vol. 25, no. 1, p. 13

YouTube, 'Princeton class in German thin-shell structures yields new exhibit', 2015. [Online].

Available: <https://www.youtube.com/watch?v=Y0er7r7tBQI>. [Accessed: 20 - January - 2023]

M. Littman, 'Art Form Function', *E-Quad News*, vol. 24, no. 2, p.6, 2013.

J. Sullivan, 'Drawing Classes Extend the Engineering Mind', *Princeton.edu*, 2015. [Online]. Available: <http://www.princeton.edu/engineering/art/story-05/>. [Accessed: 20 - January - 2023]

A. Popescu, 'Engineering education | Engineering Library Blog', *Blogs.princeton.edu*, 2014. [Online]. Available: <http://blogs.princeton.edu/englib/category/engineering-education/>. [Accessed: 20 - January - 2023]

C. Emery, 'Princeton University - New class introduces students to the art and engineering of tall building design', 2015. [Online]. Available:

<http://www.princeton.edu/main/news/archive/S30/04/77C58/index.xml>. [Accessed: 20 - January - 2023]

D. Steinberg, 'Making Stuff at Princeton-PCCM Education Outreach', *Princeton.edu*, 2015. [Online]. Available:

<http://www.princeton.edu/pccmeducation/k12/materialsscience/making-stuff-at-princeton/>. [Accessed: 20 - January - 2023]