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Curriculum Vitae

Tomás Méndez Echenagucia Ph.D.
Assistant Professor
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I Career Summary

I.A Education

2011 - 2014   **Doctor of Philosophy**
Politecnico di Torino - Italy
Architecture and Building Design (March 2014)
Dissertation: "Computational Search in Architectural Design"
Advisors: Prof. Mario Sassone, Prof. Arianna Astolfi and Prof. Pierre-Alain Croset
Awarded the title of "Excellence" by examining board

2004 - 2007   **Master's degree** (Dual degree)
Politecnico di Torino - Italy
Architecture and Construction
Thesis: "Architectural, Acoustic and Structural Form"
Advisors: Arch. Maarten Jansen, Prof. Mario Sassone and Prof. Arianna Astolfi

2000 - 2007   **Architecture Degree** (Dual degree)
Universidad Central de Venezuela - Venezuela
Architecture
Thesis: "Forma acustica, architettonica e strutturale"
Advisors: Arch. Maarten Jansen, Prof. Mario Sassone and Prof. Arianna Astolfi

2000   **Summer design studio**
Columbia University, United States of America
Introduction to Architecture summer course in New York City
Design of a fine arts museum in the meat packing district
Advisor: Prof. Mojdeh Baratloo

I.B Academic and Professional Experience

2019 - present   **Assistant Professor**
University of Washington
Department of Architecture
College of Built Environments

2014 - 2019   **Post-doctoral researcher**
ETH Zürich
Institute of Technology in Architecture
Block Research Group

2011 - 2014   **PhD Student / Teaching Assistant**
Politecnico di Torino
Department of Architecture and Design

2008 - 2014	**Co-Founder / Lead Architect** TMS Arquitectura Caracas - Venezuela & Turin - Italy
2007 - 2008	**Architect / Project manager** Arquitectura Multimedia Caracas - Venezuela
2005 - 2007	**Architectural Intern** Frlan+Jansen Architetti Turin - Italy

I.C   Awards and Recognitions

2022	**AIA Seattle Honors** Award of Merit With Vidhya Rajendran (UW) and Ryan Mullenix (NBBJ) In the category "Research & Innovation"
2022	**ARC Award 2022** - Swiss Architecture Award Block Research Group - ETH Zürich Awarded to the HiLo Research Unit in the category "Digitalization."
2021	**Fast Company's Most Creative People** Selected for work on acoustic meta-materials with NBBJ and Vidhya Rajendran
2017	**The Structural Awards 2017** - **Shortlist** The Institution of Structural Engineers - UK Block Research Group - ETH Zürich The Armadillo Vault was shortlisted in the categories of structural artistry and small projects, receiving a commendation for the latter.
2016	**DETAIL Prize 2016** *DETAIL* magazine - DE Block Research Group - ETH Zürich Readers' Prize and acknowledgment in the category "Structures"
2008	**Hangai Prize** - **IASS** Awarded by the International Association for Spatial and Shell Structures (IASS) to young researchers for innovative papers Awarded paper: **Méndez Echenagucia, T.** et al. (2008)

I.D Professional Licensure and Certification

2011 - 2019   **Ordine degli Architetti di Torino**
                   Turin - Italy

2007 - present   **Colegio de Ingenieros de Venezuela***
                   Caracas - Venezuela
                   licensed as an Architect

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*Venezuelan architecture certification is awarded by the guild of engineers (Colegio de Ingenieros) to those who have obtained a five year degree in architecture from a certified architecture school without examination.

II Research

II.A Research topics

2020 - ongoing	**Trade-offs in the embodied and operational emissions of mass-timber buildings** University of Washington Studying the relationship between embodied and operational emissions in the early stages of design for mass-timber buildings.
2020 - ongoing	**Vibro-acoustic design of mass timber-floor systems** University of Washington Design of mass-timber floor systems reducing noise transmission between units
2019 - ongoing	**Acoustic meta-materials for the built environment** University of Washington Embedding resonant absorbers and ventilated sound barriers into building components Sample publication: Rajendran et al. (2020)
2019 - ongoing	**Acoustic design of open offices** University of Washington Use of parametric models and acoustic simulation in the design of open office spaces
2016 - 2020	**Sound scattering design tools** ETH Zürich, Politecnico di Torino, University of Washington Modeling methods for sound scattering surfaces in the early phase of design Sample publication: Shtrepi et al. (2020)
2016 - 2019	**Cable-net and fabric formwork system** ETH Zürich Lightweight and reusable formworks for concrete shells Sample publication: **Méndez Echenagucia, T.** et al. (2018)
2016 - 2019	**Acoustic insulation through structural stiffness** ETH Zürich, KU Leuven Vibro-acoustic optimization of vaulted concrete floor slabs Sample publication: Roozen et al. (2018)
2015 - 2019	**Funicular floor system** ETH Zürich Lightweight and unreinforced floor system with minimal environmental impact Sample publication: Block et al. (2017)
2014 - 2015	**Acoustic design of funicular shell structures** ETH Zürich Form-finding and acoustic optimization of compression only shells for concert auditoria Sample publication: **Méndez Echenagucia, T.** and Block (2015)

2011 - 2014	**Multidisciplinary optimization in the early phase of Architectural Design**
	Politecnico di Torino
	Use of search algorithms for the early phase of architectural design
	Sample publication: **Méndez Echenagucia, T.** et al. (2014)

2013 - 2015	**Building performance optimization**
	Politecnico di Torino
	Heating, Cooling and Lighting energy minimization for the early design phase
	Sample publication: **Méndez Echenagucia, T.** et al. (2015)

2011 - 2014	**Concert Hall Acoustics**
	Politecnico di Torino
	Concert Hall design and optimization
	Sample publication: **Méndez Echenagucia, T.** et al. (2014)

2009	**Waste timber for construction**
	Instituto de Desarrollo experimental de la Construcción - FAU / UCV
	Using waste timber materials for the production of structural and shading components
	Sample publication: **Méndez Echenagucia, T.** (2010a)

2006 - 2007	**Acoustic and structural optimization of shells**
	Politecnico di Torino
	Folded plate concrete structures for concert auditoria
	Sample publication: **Méndez Echenagucia, T.** et al. (2008)

II.B Publications

Peer-reviewed journals

Méndez Echenagucia, T., Astolfi, A., Jansen, M., and Sassone, M. (2008). "Architectural acoustic and structural form." *Journal of the International Association for Shell and Spatial Structures*, 49(159):181–186. ISSN 1028365X.

Palma, M., Sarotto, M., **Méndez Echenagucia, T.**, Sassone, M., and Astolfi, A. (2014). "Sound strength driven parametric design of an acoustic shell in a free field environment." *Building Acoustics*, 21(1):31–42. ISSN 1351010X.

Méndez Echenagucia, T., Sassone, M., Astolfi, A., Shtrepi, L., and Van der Harten, A. (2014). "EDT , C 80 and G driven auditorium design." *Building Acoustics*, 21(1):43–54.

Méndez Echenagucia, T., Capozzoli, A., Cascone, Y., and Sassone, M. (2015). "The early design stage of a building envelope: Multi-objective search through heating, cooling and lighting energy performance analysis." *Applied Energy*, 154:577–591. ISSN 03062619.

Block, P., Schlueter, A., Veenendaal, D., Bakker, J., Begle, M., Hischier, I., Hofer, J., Jayathissa, P., Maxwell, I., **Méndez Echenagucia, T.** and Nagy, Z., Pigram, D., Svetozarevic, B., Torsing, R., Verbeek, J., Willmann, A., and Lydon, G. (2017). "NEST HiLo: Investigating lightweight construction and adaptive energy systems." *Journal of Building Engineering*, 12:332–341.

Roozen, N., Leclère, Q., Urbán, D., **Méndez Echenagucia, T.**, Block, P., Rychtárikovà, M., and Glorieux, C. (2018). "Assessment of the airborne sound insulation from mobility vibration measurements; a hybrid experimental numerical approach." *Journal of Sound and Vibration*, 432:680–698.

Méndez Echenagucia, T., Pigram, D., Liew, A., Mele, T.V., and Block, P. (2019). "A cable-net and fabric formwork system for the construction of concrete shells: Design, fabrication and construction of a full scale prototype." *Structures*, 18:72 – 82. ISSN 2352-0124. Advanced Manufacturing and Materials for Innovative Structural Design.

Shtrepi, L., **Méndez Echenagucia, T.**, Badino, E., and Astolfi, A. (2020). "A performance-based optimization approach for diffusive surface topology design." *Building Acoustics*.

López López, D., Roca, P., Liew, A., **Méndez Echenagucia, T.**, Van Mele, T., and Block, P. (2021). "A three-dimensional approach to the extended limit analysis of reinforced masonry." *Structures*. ISSN 2352-0124.

Rajendran, V., Piacsek, A., and **Méndez Echenagucia, T.** (2022). "Design of broadband helmholtz resonator arrays using the radiation impedance method." *The Journal of the Acoustical Society of America*, 151(1):457–466.

Méndez Echenagucia, T., Moroseos, T., and Meek, C. (2023). "On the tradeoffs between embodied and operational carbon in building envelope design: The impact of local climates and energy grids." *Energy and Buildings*, 278:112589. ISSN 0378-7788.

Peer-reviewed conferences with proceedings

Sassone, M., **Méndez Echenagucia, T.**, and Pugnale, A. (2008). "On the interaction between architecture and engineering: the acoustic optimization of a reinforced concrete shell." In J. Abel and R. Cooke, editors, *Proceedings of the 6th International Conference on Computation of Shell and Spatial Structures IASS-IACM 2008: "Spanning Nano to Mega"*.

Méndez Echenagucia, T., Astolfi, A., Jansen, M., and Sassone, M. (2008). "Architectural, acoustic and structural form." In *The IASS-SLTE 2008 Symposium "Shell and Spatial Structures: New Materials and Technologies, New Designs and Innovations – A Sustainable Approach to Architectural and Structural Design"*.

Méndez Echenagucia, T., Astolfi, A., Sassone, M., Shtrepi, L., and Van der Harten, A.

(2012a). "Esplorazione Multi obiettivo nella progettazione acustica architettonica." In *Convegno nazionale AIA 2012*, pages 1–6. Rome.

Méndez Echenagucia, T., Pugnale, A., and Sassone, M. (2012b). "Multi-Objective Optimization of Concrete Shells." In P. Cruz, editor, *Structures and Architecture. Concepts, Application and Challenges*, pages 217–218. CRC Press/Balkema, Leiden.

Méndez Echenagucia, T. and Sassone, M. (2012). "Multi-Objective Oriented Design of Shell Structures." In *IASS-APCS Symposium 2012: From Spatial Structures to Space Structures*, pages 1–7.

Méndez Echenagucia, T., Sassone, M., Astolfi, A., and Croset, P.a. (2012c). "Multi-Objective Search in the Early Phase of Architectural Design." In P. Cruz, editor, *Structures and Architecture. Concepts, Application and Challenges*, pages 341–342. CRC Press/Balkema, Leiden.

Palma, M., Sarotto, M., **Méndez Echenagucia, T.**, Sassone, M., and Astolfi, A. (2013). "Sound strength driven parametric design of an acoustic shell in a free field environment." In *International Symposium on Room Acoustics 2013*, pages 1–10. ISSN 1351010X.

Méndez Echenagucia, T., Astolfi, A., Sassone, M., Shtrepi, L., and Harten, A.V.D. (2013a). "NURBS and Mesh geometry in Room Acoustic Ray-tracing Simulation." In *AIA-DAGA 2013 Conference on Acoustics*, pages 1–4. Merano.

Méndez Echenagucia, T., Sassone, M., Astolfi, A., Shtrepi, L., and Van der Harten, A. (2013b). "Interactive Design Methods for Complex Curved Reflectors in Concert Halls." In *International Symposium on Room Acoustics 2013*, pages 1–10.

Méndez Echenagucia, T., Sassone, M., Astolfi, A., Shtrepi, L., and Van der Harten, A. (2013c). "EDT , C 80 and G driven auditorium design." In *International Symposium on Room Acoustics 2013*, pages 1–10.

Rajabzadeh, S., Sassone, M., **Méndez Echenagucia, T.**, Rosada, A., and Rian, I. (2014). "The BRICKSHELL Meditation Centre : A Collaborative Masonry Project." In *Proceedings of the IASS-SLTE 2014 Symposium "Shells, Membranes and Spatial Structures: Footprints"*, pages 1–10.

Méndez Echenagucia, T., Sassone, M., Astolfi, A., Shtrepi, L., and Van der Harten, A. (2014). "Multi-Objective Acoustic and Structural design of shell structures for concert halls." In *Proceedings of the IASS-SLTE 2014 Symposium "Shells, Membranes and Spatial Structures: Footprints"*, pages 1–12.

Méndez Echenagucia, T. and Block, P. (2015). "Acoustic optimization of funicular shells." In *IASS 2015 Amsterdam Symposium: Future Visions*, pages 1–13.

Rippmann, M., Van Mele, T., Popescu, M., Augustynowicz, E., **Méndez Echenagucia, T.**, Calvo Barentin, C., Frick, U., and Block, P. (2016). "The Armadillo Vault: Computational design and digital fabrication of a freeform stone shell." In *Advances in Architectural Geometry 2016*, pages 344–363.

Méndez Echenagucia, T. and Roozen, B. and Block, P. (2016). "Minimization of sound radiation in doubly curved shell structures by means of stiffness." In *Proceedings of the International Association for Shell and Spatial Structures (IASS) Symposium 2016*. Tokyo, Japan.

Van Mele, T., Mehrotra, A., **Méndez Echenagucia, T.**, Frick, U., Augustynowicz, E., Ochsendorf, J., DeJong, M., and Block, P. (2016). "Form finding and structural analysis of a freeform stone vault." In T.T. K. Kawaguchi M. Ohsaki, editor, *Proceedings of the International Association for Shell and Spatial Structures (IASS) Symposium 2016*. Tokyo, Japan.

Méndez Echenagucia, T., Pigram, D., Liew, A., Van Mele, T., and Block, P. (2018). "Full-scale prototype of a cable-net and fabric formed concrete thin-shell roof." In *Proceedings of the IASS Symposium 2018*. Boston.

Shtrepi, L., **Méndez Echenagucia, T.**, Badino, E., and Astolfi, A. (2019). "Optimizing diffusive surface topology through a performance-based design approach." In *Proceedings of the International Symposium on Room Acoustics*. Amsterdam.

Méndez Echenagucia, T., Shtrepi, L., Badino, E., and Astolfi, A. (2019). "Investigating the importance of geometrical accuracy in acoustic simulations: A comparison of NURBS and mesh-based approaches." In *Proceedings of the International Symposium on Room Acoustics*. Amsterdam.

Bouvet, G., Shtrepi, L., Bo, E., **Méndez Echenagucia, T.**, and Astolfi, A. (2020). "Computational Design: Acoustic shells for Ancient Theatres." In *Forum Acusticum*. Lyon.

Book chapters

Filomeno Coelho, R., **Méndez Echenagucia, T.**, Pugnale, A., and Richardson, J.N. (2014). "Genetic algorithms for structural design." In S. Adriaenssens, P. Block, D. Veenendaal, and C. Williams, editors, *Shell Structures for Architecture - Form finding and optimization*, chapter Apendix C, pages 290–294. Routledge, London.

Pugnale, A., **Méndez Echenagucia, T.**, and Sassone, M. (2014). "Computational Morphogenesis - Design of a free-form concrete shell." In S. Adrianssens, P. Block, D. Veenendaal, and C. Williams, editors, *Shell Structures for Architecture - Form finding and optimization*, chapter 18, pages 224–236. Routledge, London.

Hebel, D., Block, P., Heisel, F., and **Méndez Echenagucia, T.** (2017). "Beyond mining

- urban growth: The architectural innovation of cultivated resources through appropriate engineering." In A.Z.P. Hyungmin Pai, editor, *Imminent Commons: The Expanded City*. Actar Publishers. Seoul Biennale of Architecture and Urbanism 2017.

Van Mele, T., **Méndez Echenagucia, T.**, Pigram, D., Liew, A., and Block, P. (2021). "Ultralight formwork system for thin, textile-reinforced concrete shells." In J. Schoof, editor, *Robust Resilient Resistant: Reinforced Concrete Structures*, pages 20–28. Edition DETAIL, Munich.

Peer-reviewed conferences without proceedings

Méndez Echenagucia, T. (2010a). "Herramientas informáticas para la investigación y proyectos en el campo de la arquitectura y construcción: Caso de estudio, sistema de parasoles en madera de teca para fachadas de edificios de mediana altura." In *XXVII Jornadas de Investigación del IDEC*.

Méndez Echenagucia, T. (2010b). "Sistema de parasoles en madera de teca para fachadas de edificios de mediana altura: Caso de estudio, edificios de oficina en caracas." In *XXVII Jornadas de Investigación del IDEC*.

Shtrepi, L., Menichelli, J., Astolfi, A., **Mendez Echenagucia, T.**, and Masoero, M.C. (2017). "Improving scattering surface design with rapid feedback by integrating parametric models and acoustic simulation." *The Journal of the Acoustical Society of America*, 142(4):2499–2499.

Rajendran, V., **Méndez Echenagucia, T.**, and Piacsek, A. (2020). "Design of efficient low-frequency sound absorbers using an array of helmholtz resonators." In *Acoustic Society of America 2020 Annual Meeting*. Virtual conference.

Brown, N. and **Méndez Echenagucia, T.** (2021). "Minimizing radiated sound power through geometric stiffness in mass timber floor systems." In *Acoustic Society of America 2021 Annual Meeting*. Seattle - Washington.

Rajendran, V., Piacsek, A., and **Méndez Echenagucia, T.** (2021). "Design of broadband helmholtz resonator arrays using the radiation impedance method." In *Acoustic Society of America 2021 Annual Meeting*. Seattle - Washington.

Magazine articles

Van Mele, T., **Méndez Echenagucia, T.**, Pigram, D., Liew, A., and Block, P. (2018). "A prototype of a thin, textile-reinforced concrete shell built using a novel, ultra-lightweight, flexible formwork system." DETAIL.

Academic studio books

Méndez Echenagucia, T. and Meek, C. (2021). *Designing for low emissions.* Self published.

II.C   Research projects and prototypes

This section contains research projects that include the construction buildings or fabrication
of building components of different scales and with different purposes.

2022 - 2023	**Mass timber floor system prototypes and measurements**
	University of Washington
	with Bert Roozen (KU Leuven) and Andy Piacsek (CWU)
	Design, fabrication and assembly of two CLT floor prototypes on a glulam frame for acoustic vibration testing
	Seatte - WA, USA
2021 - 2022	**Rippmann Floor System acoustic analysis**
	University of Washington
	with ETH Zürich, KU Leuven
	Vibroacoustic design and analysis of concrete funicular floors for mix-use high-rise building
	Brussels, Belgium
2020	**Helmholtz resonator array prototypes**
	University of Washington
	with Vidhya Rajendran, NBBJ and Arup acoustics
	Design, fabrication and on-site testing of resonant acoustic absorption panels in Cross Laminated Timber
	Seattle - WA, USA
	Published in: Fast Company, Input
2020	**Arena design competition**
	University of Washington
	with Zaha Hadid Architects, Blumer Lehmann AG, Arup
	Competition consultant in structural design and acoustics for a long span roof
	Vienna, Austria
2015 - 2019	**NEST HiLo**
	ETH Zürich
	Design and construction of a flexible workspace unit for the NEST building
	Structural design, system design and fabrication for a concrete sandwich shell roof built with a cable-net and formwork system
	Dübendorf, Switzerland
	Published in: Designboom

2017	**Acoustic testing of funicular floor system**
	ETH Zürich
	with KU Leuven
	Large scale prototype of funicular floor system for vibroacoustic lab testing
	Structural design and digital fabrication of floor sample

2017	**Cable-net and fabric formwork prototype**
	ETH Zürich
	Large scale prototype for the Cable-net and fabric formwork for the HiLo roof
	Structural design and digital fabrication of 1:1 sample
	On-site supervision of fabricators and general contractor
	Published in (selected): Archdaily, BBC News, Architect Magazine

2017	**Mycotree**
	ETH Zürich
	Design of a compression only branching structure in mycelium for the Seoul Biennale
	Seoul, South Korea
	Published in (selected): Dezeen, Detail, Word-Architects

2015 - 2016	**Beyond Bending**
	ETH Zürich
	with John Ochsendorf, ODB Engineering and Escobedo construction
	Exhibition at the Venice Biennale 2016
	Structural design and construction of a 15m span compression only vault in sandstone
	Structural design and fabrication of a funicular floor system
	Venice, Italy
	Published in (selected): Wired, Forbes, Domus

2015 - 2016	**Droneport Prototype**
	ETH Zürich
	with The Norman Foster Foundation, EPFL Lausanne, ODB Engineering and
	Universidad Politécnica de Madrid
	Exhibition at the Venice Biennale 2016, Italy
	Structural Design and construction of a thin tile vault pavilion
	Published in (selected): L'Architecture d'Aujourd'hui , Dezeen, Architects Journal

2015	**ETH Pavillion**
	ETH Zürich
	Ideas City Festival New York City, USA
	Design and construction of a vaulted pavilion in recycled materials for the Ideas City Festival
	New York City, USA
	Published in (selected): Dezeen, Azure

2014 - 2015	**Fábrica de Cultura**
	ETH Zürich
	with Universidad de Norte Barranquilla
	Structural design and acoustic analysis of a vaulted auditorium for a public arts school
	Barranquilla, Colombia

2012	**Summer studio pavilions**
	Politecnico di Torino
	Design and construction of three digitally fabricated pavilions built with students during a summer studio
	Turin, Italy

2012	**Brickshell**
	Politecnico di Torino
	Design and construction of a tile vaulted pavilion built with students during a summer studio
	Turin, Italy

2011	**Monalisa pavillion**
	Politecnico di Torino
	Design and construction of a timber pavilion for the MADE exhibition
	Milan, Italy

II.D Open-source software development

2022 - present	**COMPAS Energy+**
	University of Washington
	Python library for room building energy performance simulation based using Energy+
	Lead developer
	GitHub repository

2022 - present	**UpStream**
	University of Washington
	with Chuou Zhang (UW), Marty Brennan, Jacob Dunn (ZGF Architects) and Indroneil Ganguly (UW CINTRAFOR)
	UpStream Forestry Carbon and LCA Tool
	Published in: Metropolis
	GitHub repository

2020 - present	**COMPAS Room Acoustics**
	University of Washington
	Python library for room acoustics simulation based on the COMPAS framework
	Lead developer
	GitHub repository

2019 - present	**COMPAS Helmholtz** University of Washington Python library for the design of acoustic resonant absorption panels Lead developer GitHub repository
2018 - present	**COMPAS Vibro** University of Washington / ETH Zürich Python library for vibro-acoustic simulation based on the Rayleigh integral Lead developer GitHub repository
2016 - present	**COMPAS FEA** University of Washington / ETH Zürich / University of Sheffield Python library for finite element analysis of building structures Co-developer GitHub repository
2015 - 2019	**COMPAS** ETH Zürich Computational framework for Architecture and Structures Co-developer GitHub repository

II.E   Grants, fellowships and third-party funding

2022	**ARPA-e - University of Washington** Parametric Open Data for Life Cycle Assessment (POD — LCA) Co-Investigator Awarded funds: $ 3,744,303
2020	**Royalty Research Fund - University of Washington** UW Office of Research internal grant to faculty seeking to establish new research Awarded funds: $ 39.500
2020	**Arup Acoustics in-kind contribution** Expert advice and on-site measurements of the acoustic performance of a Helmholtz resonator array In kind contribution: $ 16.500
2020	**NBBJ Design** Funding of a research assistant for summer position Funded time: 2 months, 20 hours per week

2015 - 2018	**HiLo Industry funding** ETH Zürich Secured funding of the HiLo project from Holcim Switzerland, BASF, Autodesk and Doka
2017	**European Research Council Synergy grant** (Unsuccessful) ETH Zürich with Vrije Universiteit Brussel and University of Patras Application for research on reducing the carbon emissions of floor slabs Requested funds: € 9.664.773
2016	**Beyond Bending Industry funding** ETH Zürich Securing project sponsoring from the Escobedo Group, Artemide and Pro Helvetia
2015 - 2016	**ETH Foundation** Post-doctoral research grant. Research on sound insulation in the low frequencies by means of structural stiffness Awarded funds: CHF 100.000
2011 - 2013	**Italian Ministry of Higher Education and Research (MIUR)** PhD scholarship at the Politecnico di Torino Awarded stipend and tuition fees for 3 years

II.F   Invited lectures and Panels

2022	**University of Melbourne** (remote) Panel discussion after a presentation from Prof. Trevor Cox ABP Symposium 2022 - Melbourne Australia
2022	**Kent State University** (remote) As part of a workshop on Pachyderm acoustics taught by Arthur Van der Harten "Computational methods for room acoustic design"
2021	**Committee of 33** (remote) Non-profit organization in Seattle - WA "Designing for low emisions"
2021	**Associazione Italiana di Acustica** (remote) "Aspettando Matera" live streamed presentation series "Progettare con/le onde: Performance based design per la progettazione acustica in architettura"
2021	**University College London** (remote) Bartlett Faculty of the Built Environment "Computational geometry for sustainable construction"

2019	**Politecnico di Torino** - Turin, Italy
	Dipartimento di Architettura e Design
	"Computational geometry for sustainable construction"

2019   **Politecnico di Torino** - Turin, Italy
Dipartimento di Architettura e Design
"Computational geometry for sustainable construction"

2019   **University of Toronto** - Toronto, Canada
Daniels Faculty of Architecture, Landscape, and Design
"Computational geometry for sustainable construction"

2019   **Université de Montréal** - Montreal, Canada
Faculté de l'Aménagement
"Computational geometry for sustainable construction"

2019   **Université Catholique de Louvain** - Louvain la neuve, Belgium
Faculté d'ingénierie architecturale
"Computational geometry for sustainable construction"

2019   **University of Washington** - Seattle, United States of America
Department of Architecture
"Computational geometry for sustainable construction"

2018   **Universidad de Granada** - Granada, Spain
E.T.S. de Arquitectura
"Geometría de estructuras sostenibles"

2018   **Architekturzentrum Wien** - Vienna, Austria
PechaKucha for Concrete supplier consortium
"Funicular floor systems"

2017   **EMPA Nest** - Zurich, Switzerland
Lafarge Holcim Sustainable construction
"The HiLo research unit"

2017   **KU Leuven** - Leuven, Belgium
Division Acoustics and Thermal Physics
"Acoustic insulation through structural stiffness"

2017   **Hochschule Ostwestfalen-Lippe** - Detmold, Germany
Master of Engineering in Integrated Design
"Computational search in architectural design"

2016   **Università IUAV di Venezia** - Venice, Italy
with Prof. Philippe Block
"Strength through geometry"

2016   **Heatherwick Studio** - London, England
Architecture firm

with Prof. Philippe Block
"Strength through geometry"

2015   **Massachusetts Institute of Technology** - Boston, United States of America
Building Technology Group
"Computational search in architectural design"

2015   **University College London** - London, England
The Bartlett School of Architecture
"Search algorithms for acoustic design"

2009   **Universidad Simón Bolívar** - Caracas, Venezuela
Departamento de Diseño, Arquitectura y Artes Plásticas
"Forma acústica arquitectónica y esctructural"

II.G   Peer reviewing

- Natural Sciences and Engineering Research Council of Canada (NSERC)

- International Association for Shells and Spatial Structures (IASS)

- Symposium on Simulation for Architecture and Urban Design (SimAUD)

- University of Washington Royalty Research Fund (RRF)

- Applied Acoustics

II.H   Conference session chairing

2015   **IASS Amsterdam**
Performance Aided Design
Co-chair with Prof. Dario Parigi

2018   **IASS Boston**
Shell structures
Co-chair with Tim Michiels

2022   **Symposium on Computational Fabrication - Seattle**
Architecture section
Session chair

III   Architectural Practice

III.A   Projects

2014   **Piazza Bernini** (Unbuilt)
                  Turin, Italy
                  Residential development in the city center
                  with Frlan + Jansen Architetti
                  Architectural Design

2013   **Reale Mutua** (Unbuilt)
                  Turin, Italy
                  Invited competition for an Office building in the city center
                  with Frlan + Jansen Architetti
                  Architectural Design

2013   **Teatro Colón** (Unbuilt)
                  Bogotá, Colombia
                  Competition for an addition to a historical Theater
                  with ADJKM Arquitectos and Marco Palma
                  Concert Hall Design, Parametric Modeling and Geometry consultancy

2013   **Lacacao** (Unbuilt)
                  Boa Vista island, Capo Verde
                  Preliminary design for a beach resort and residence
                  with Frlan + Jansen Architetti
                  Architectural Design

2012 - 2013   **Via Nizza**
                  Turin, Italy
                  Refurbishment an historical building for residential development
                  with Frlan + Jansen Architetti
                  Architectural Design

2011 - 2013   **CASMSB** (Unbuilt)
                  Caracas, Venezuela
                  Music conservatory and concert hall, Venezuela
                  Concert Hall Design
                  Parametric Modelling / computational geometry consultancy

2012   **Holcom Headquarters**
                  Beirut - Lebanon
                  Corporate office
                  Building envelope & shading consultancy
                  Parametric Modelling

2011	**Lavazza Headquarters** (Unbuilt) Turin - Italy Invited competition for Corporate offices Architectural Design Parametric Modelling
2011	**Strada Andezeno** Chieri, Italy Mixed housing/commercial building with Frlan + Jansen Architetti Architectural Design
2011	**Kleinste Soep Fabriek** (Unbuilt) Groningen, the Neatherlands Entrance Pavilion and Foyer for a soup Factory with Frlan + Jansen Architetti Architectural Design
2011	**Sestriere** Sestriere, Italy Ski residence with Frlan + Jansen Architetti Geometry and Material Optimization consultancy
2011	**Santa Clara** Chieri, Italy Residential development in an ex-consecrated church with Frlan + Jansen Architetti Architectural Design
2011	**Venice city Visions** Venice, Italy Ideas competition on the future of Venice with Claudio Sframelli, Jacopo Bracco and Alberto Lessan Architectural Design
2011	**Venice city Visions** Turin, Italy Private Loft Photography studio and exhibition space with Frlan + Jansen Architetti Architectural Design
2010	**CASMSB competition** Caracas, Venezuela Music Education complex competition TMS Arquitectura Architectural Design

2010	**EIM** (Unbuilt) La Guaira, Venezuela Shopping center TMS Arquitectura Solar shading and design consultancy
2010	**Stonehill Masterplan** Bangalore, India Mixed urban development, housing, office space, and cultural center with Frlan + Jansen Architetti Architectural Design
2010	**Residency Road** Bangalore, India Private Office Building with Frlan + Jansen Architetti Architectural Design
2010	**Oficina La Lagunita** Caracas, Venezuela Private offices interiors for an investment group TMS Arquitectura Architectural Design
2010	**Centro Simon Díaz competition** (Unbuilt) Caracas, Venezuela Cultural Center in an informal settlement in Caracas TMS Arquitectura Architectural Design
2010	**Hangar** (Unbuilt) Ocumare, Venezuela Private hangar in a Civil Airport TMS Arquitectura Architectural Design
2009	**Bima** (Unbuilt) Caracas, Venezuela Invited competition for a retail Store for a Furniture and design brand TMS Arquitectura Architectural Design
2009	**Campo Plaza** Caracas, Venezuela Private Apartment Refurbishment TMS Arquitectura Architectural Design

2009   **Campo Norte**
               Caracas, Venezuela
               4 Private Apartment Refurbishments in Caracas
               TMS Arquitectura
               Architectural Design

2009   **Centro Empresarial Boleita** (Unbuilt)
               Caracas, Venezuela
               Mixed Office/Commercial building
               TMS Arquitectura
               Architectural Design

2008   **Chieri Services Center** (Unbuilt)
               Chieri, Italy
               Mixed use commercial/Hotel and public building
               with Frlan + Jansen Architetti
               Architectural Design

2008   **Zona Rental** (Unbuilt)
               Caracas, Venezuela
               Mixed Use commercial / cultural complex competition
               TMS Arquitectura + Miguel Acosta and Alfonso Paolini
               Architectural Design

2008   **Las Perezas** (Unbuilt)
               Caracas, Venezuela
               Private Residence
               TMS Arquitectura
               Architectural Design

2008   **Superagencia**
               Caracas, Venezuela
               Refurbishment of private offices for a Design firm
               TMS Arquitectura
               Architectural Design

2008   **Polar La Yaguara**
               Caracas, Venezuela
               Medical station for a Manufacturing Plant
               TMS Arquitectura
               Architectural Design

2008   **Polar La Guaira**
               La Guaira, Venezuela
               Office expansion and Medical station for a Distribution center
               TMS Arquitectura
               Architectural Design

2008   **Polar Ocumare**
            Ocumare, Venezuela
            Storage Building for a distribution center
            TMS Arquitectura
            Architectural Design

2007   **Clínica Plaza** (Unbuilt)
            Caracas, Venezuela
            Refurbishment and extension of a private Health Care facility
            TMS Arquitectura
            Architectural Design

2007   **Saltarrana**
            Caracas, Venezuela
            Private Residence
            with AM: Arquitectura Multimedia
            Architectural Design

2007   **Perugia** (Unbuilt)
            Perugia, Italy
            Student Housing competition
            with Frlan + Jansen Architetti
            Architectural Design

2007   **Casa Facta**
            Perinera, Italy
            Private sky residence in the Italian Alps
            with Frlan + Jansen Architetti
            Architectural Design

2006   **Falconara Market** (Unbuilt)
            Falconara Maritima,Italy
            Open air market
            Competition (1st Prize)
            with Frlan + Jansen Architetti
            Architectural Design

2004   **Casa Wenzelmann** (Unbuilt)
            Caracas, Venezuela
            Private residence
            Architectural Design

IV Teaching

IV.A University of Washington courses

Autumn 2022	Arch 598 A	**Computation and design technology seminar** Seminar on the use of computational methods for architectural design technology	3 credits
Autumn 2022	Arch 600	**Independent study - Nathan Brown** Finite Element Analysis of Timber joinery	3 credits
Spring 2022	Arch 592 A	**Research methods** an overview of the role and practice of research methods in architecture Co-taught with Prof. Brian McLaren	3 credits
Spring 2022	598 C	**Computational design** Applied computational design course based on the Python programming language	3 credits
Winter 2022	Arch 598C	**Computation and design technology seminar** Seminar on the use of computational methods for architectural design technology Newly developed	3 credits
Autumn 2021	Arch 600	**Independent study - Nathan Brown** Documentation and presentation of vibro-acoustic studies for mass timer floors	3 credits
Autumn 2021	Arch 523	**Design Technology IV** Integration of structure, environmental systems, spatial organization and architectural form Co-taught with Prof. Rob Peña	3 credits
Spring 2021	Arch 508 B	**Research Studio II** Studio on the trade-offs between operational and embodied emissions of mass-timber buildings Co-taught with Prof. Chris Meek	6 credits
Spring 2021	Arch 594 B	**Research Studio II Seminar** Seminar on computational methods for the estimation carbon emissions	3 credits

Winter 2021	Arch 587 A	**Theory of design computing** Seminar on the theory and practice of contemporary computational methods Re-developed Previously taught by Prof. Brian Johnson	3 credits
Autumn 2020	Arch 523	**Design Technology IV** Integration of structure, environmental systems, spatial organization and architectural form Co-taught with Prof. Rob Peña	3 credits
Spring 2020	Arch 592 A	**Research methods** an overview of the role and practice of research methods in architecture Co-taught with Prof. Brian McLaren	3 credits
Spring 2020	Arch 498 / 598 C	**Computational design** Applied computational design course based on the Python programming language Newly developed	3 credits
Winter 2020	Arch 587 A	**Theory of design computing** Seminar on the theory and practice of contemporary computational methods Re-developed Previously taught by Prof. Brian Johnson	3 credits
Autumn 2019	Arch 523	**Design Technology IV** Integration of structure, environmental systems, spatial organization and architectural form Re-developed Co-taught with Prof. Rob Peña	3 credits

IV.B   ETH Zürich courses

Courses taught at ETH Zürich while working as a post-doctoral researcher. The courses were
officially offered by Professors Philippe Block and Joseph Schwartz.

Spring 2019		**Structural Design VI** State-of-the-art computational structural design Taught with Dr. Matthias Rippmann	3 credits
Spring 2018		**Structural Design VI** State-of-the-art computational structural design Taught with Dr. Matthias Rippmann	3 credits

Spring 2016	**Structural Design (MAS)**	3 credits
	Introduction to computational structural design	
	for MAS in digital fabrication	
	Taught with Dr. Matthias Rippmann	

IV.C Politecnico di Torino courses

Summer courses taught as a PhD student with Prof. Mario Sassone.

Summer 2014	**Computational Design**
	Computational design summer workshop:
	Three pavilions, concrete, timber and masonry
	Taught with Prof. Mario Sassone

Summer 2013	**Computational Design**
	Computational design summer workshop: Tile
	vaulted pavilion
	Taught with Prof. Mario Sassone

Summer 2012	**Computational Design**
	Computational design summer workshop:
	Monalisa pavilion
	Taught with Prof. Mario Sassone
	Newly developed

IV.D Student teaching evaluation scores

Quarter	Course	Respond / Enrolled	Median	Adj. Median	COVID
Spring 2022	Arch 598 C	11 / 16	4.7	4.7	Hybrid
Spring 2022	Arch 592 A	19 / 43	4.2	4.2	Hybrid
Winter 2022	Arch 598 C	10 / 14	4.9	4.6	Hybrid
Autumn 2021	Arch 523	27 / 53	4.4	4.7	Hybrid
Spring 2021	Arch 594 B	7 / 16	4.6	4.3	Remote
Spring 2021	Arch 508 B	6 / 16	4.9	4.5	Remote
Winter 2021	Arch 587	10 / 14	4.8	4.7	Remote

Autumn 2020	Arch 523	24 / 44	4.6	4.7	Remote
Spring 2020	Arch 498 - 598 C	13 / 23	4.6	4.7	Remote
Spring 2020	Arch 592	23 / 32	4.2	4.2	Partially remote
Winter 2020	Arch 587	9 / 13	4.8	4.7	No
Autumn 2019	Arch 523	33 / 46	4.2	4.3	No

IV.E   Ph.D. Supervision

2021 - ongoing   **Carolina Recart** - Committee member
University of Washington - Civil And Environmental Engineering
Title: Understanding the Hygrothermal Implications of Energy Efficiency Measures for Residential Building Envelopes

2021 - ongoing   **Hannah Twigg-Smith** - Graduate School Representative
University of Washington - Human Centered Design and Engineeringg
Title: TBD

2021 - ongoing   **Sarah Wichman** - Graduate School Representative
University of Washington - Civil And Environmental Engineering
Title: Seismic Behavior of Tall Rocking Mass Timber Walls

2020   **Blanca Perez** - Host
Visiting PhD student - Universidad Politécnica de Valencia, Spain
Topic: Parametric modeling of concert hall acoustics and materials

IV.F   Ph.D. Supervision as Post-doctoral researcher at ETH Zürich

While holding the position of Post-doctoral researcher, contributed to the supervision of the PhD candidates at the Block Research Group, Institute for Technology in Architecture ETH Zürich. Providing constant feedback on their research topics, imparting instruction in Python programming, computational design, computational geometry and structural design.

2018 — 2019   **Alessandro Dell'Endice**
Assessment methods for historical masonry structures
Expected defense in 2021

2017 — 2019   **Crstián Calvo Barentin**
Design and fabrication of funicular floor systems for low environmental impact
Expected defense in 2021

| 2015 — 2018 | **Juney Lee** |
| | "Computational Design Framework for 3D Graphic Statics" |

| 2014 — 2019 | **David López López** |
| | "Tile vaults as integrated formwork for concrete shells" |

IV.G   Thesis Supervision at the University of Washington

2021-2022	**Preston Pape**
	Master of Science of Architecture - Design Computing
	Title: TBD
	Chair: Rick Mohler

2021-2022	**Christina Bjarvin**
	School ofEnvironmental & Forest Sciences
	Title: TBD
	Chair: Indroneil Ganguly

2021	**Matt Wiggins**
	Master of Science in Construction Management
	Cost model for embodied carbon reduction: comparative study between mass timber and structural steel
	Chair: Hyun Woo Lee

2020 - 2021	**James Blanchard** (chair)
	Master of Architecture
	Acoustic spatial design methodology and its application in health environments
	Committee: Heather Burpee

2020 - 2021	**Karen Wang** (chair)
	Master of Architecture
	Study of thermal insulation strategies for Taiwanese housing units
	Committee: Rob Peña

2020 - 2021	**Chuou Zhang** (chair)
	Master of Architecture
	Design of mass-timber building components for reusability
	Committee: Kimo Griggs

2020	**Gayle Elam**(committee member)
	Master of Architecture
	"Acoustically Sensitive Large Assembly Spaces at School: An Elementary School Retrofit and Expansion"
	Chair: Rob Corser

2019 - 2020   **Vidhya Rajendran** (chair)
                 Master of Science of Architecture - Design Computing
                 "Helmholtz Resonators in Open Office Acoustics"
                 Committee: Brian Johnson

IV.H   Thesis Supervision at other Institutions

2017 - 2018   **Tomás Mena**
                 Master of Engineering in Integrated Design - Hochschule Ostwestfalen-Lippe
                 "Concept for intelligent facade configurator"
                 Committee: Hans Sachs, **Tomás Méndez Echenagucia**

2016 - 2017   **Jessica Menichelli**
                 Master of Architecture - Politecnico di Torino
                 "Optimization of the acoustic characteristics of diffusive surfaces : an objective
                 evaluation method at the preliminary design phase"
                 Committee: Arianna Astolfi, Louena Shtrepi, and **Tomás Méndez Echenagucia**

2016 - 2017   **Giovanni Bouvet**
                 Master of Architecture - Politecnico di Torino
                 "Computational design : conchiglie acustiche parametriche per l'utilizzo contemporaneo
                 dei teatri classici"
                 Committee: Arianna Astolfi, Elena Bo, and **Tomás Méndez Echenagucia**

2013 - 2014   **Denise Barbaroux**
                 Master of Architecture - Politecnico di Torino
                  "L'influenza delle balconate sulla qualità acustica delle sale da concerto"
                 Committee: Arianna Astolfi and **Tomás Méndez Echenagucia**

2012 - 2013   **Silvia Pastorino and Chiara Bertolutti**
                 Master of Architecture - Politecnico di Torino
                 "Studio acustico parametrico per la ricerca delle dimensioni ottimali di sale da concerto
                 a "Shoebox" ed esagonali"
                 Committee: Arianna Astolfi, Louena Shtrepi, and **Tomás Méndez Echenagucia**

2012 - 2013   **Sabrina Canale**
                 Master of Architecture - Politecnico di Torino
                 "Lo studio dei riflettori acustici in una sala polivalente tramite simulazione ray-tracing"
                 Committee: Arianna Astolfi, Alessia Paola Griginis and **Tomás Méndez Echenagucia**

2012 - 2013   **Marco Palma and Maddalena Sarotto**
                 Master of Architecture - Politecnico di Torino
                 "Loudness : progettazione algoritmico-evolutiva di una conchiglia acustica per un palco
                 rock"
                 Committee: Arianna Astolfi, Mario Sassone, Marco Carlo Masoero, Chiara Aghemo and
                 Tomás Méndez Echenagucia

2012   **Fabio Cerniglia**
               Master of Architecture - Politecnico di Torino
               "Una casa itinerante"
               Committee: Michele Bonino and **Tomás Méndez Echenagucia**

IV.I   Applied Research Consortium supervision

This section contains work supervised under the Applied Research Consortium at the College of Built Environments - University of Washington. The work is often related to the thesis work of the same student, however it is always done on separate track with a more applied topic and a different committee. The work is done in collaboration with a Seattle based Architecture firm.

2021 - ongoing   **Nathan Brown**
                 Structural design and fabrication of timber only joinery for structural reuse
                 Firm partner: Turner Construction - Josh Lohr, Sean Beatty
                 UW supervisor: **Tomás Méndez Echenagucia**

2020 - 2022   **Chuou Zhang**
                 Biogenic Carbon Accounting Method for Upstream Forest Factors: A Regional Approach
                 Firm partner: ZGF Architects - Jacob Dunn, Marty Brennan
                 UW supervisors: Indroneil Ganguli and **Tomás Méndez Echenagucia**

2019 - 2020   **Vidhya Rajendran**
                 "Heavenly Rooms: On the use of Helmholtz resonators for Open Office acoustics"
                 Firm partner: NBBJ Design - Ryan Mullenix
                 UW supervisor: **Tomás Méndez Echenagucia**

IV.J   Research Assistant supervision

2021   **Nathan Brown**
               University of Washington
               Design and vibro-acoustic analysis of mass timber floor systems

2020   **Vidhya Rajendran**[*]
               University of Washington
               Design, fabrication and on-site measurement of a resonant absorption panel in Cross Laminated Timber

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[*]A summer RA position as a continuation of the student's thesis and ARC project on acoustic absorption

2020	**Nathan Brown**
	University of Washington
	Creation of Design technology teaching resources website

2018 - 2019	**Theodora Ravanidou**
	ETH Zürich
	Flexible formwork system for the HiLo project

2017	**Pieter Bieghs**
	ETH Zürich
	Parametric study to improve the structural performance of a funicular floor system

2016 - 2017	**Alessandro Dell'Endice**
	ETH Zürich
	Parametric modeling of masonry cross-vaults for 3d printed structural models

2016 - 2017	**Ioannis Mirtsopoulos**
	ETH Zürich
	Design and fabrication of a cable-net and fabric formwork system in large prototype

IV.K Guest Lectures in other UW Courses

Fall 2022	**Arch 562** - **Contemporary Architectural Theory**
	"Mass Timber Vibro-Acoustics"
	Invited by Prof. Brian McLaren

Fall 2021	**Arch 362** - **Architecture and Theory**
	"Orders, Types and Computational Design"
	Invited by Profs. Alex Anderson and Brian McLaren

Winter 2021	**Arch 360** - **Introduction to Architectural Theory**
	"Patterns, Structures and Orders"
	Invited by Profs. Alex Anderson and Kathryn Rogers Merlino

Winter 2020	**ME 525** - **Applied acoustics**
	"Use of Helmholtz resonators for office acoustics"
	Invited by Prof. Peter Dahl

Winter 2020	**Arch 362** - **Introduction to Architectural Theory**
	"Patterns, Structures and Orders"
	Invited by Profs. Alex Anderson and Brian McLaren

Winter 2020	**Arch 524** - **Design Technology V**
	"Types, constraints and parametric models"
	Invited by Prof. Rob Peña

Winter 2020	**Arch 528** - **Digital design for fabrication and construction**
	"The COMPAS framework"
	Invited by Jack Hunter

Autumn 2019	**Arch 520** - **Design Technology I**
	"Compression only structures"
	Invited by Profs. Rob Peña and Kimo Griggs

Autumn 2019	**Arch 592** - **Research methods**
	"Computational geometry for sustainable construction"
	Invited by Profs. Kate Simonen and Ann Huppert

Autumn 2019	**Arch 562** - **Contemporary architectural theory**
	"Models"
	Invited by Profs. Alex Anderson and Brian McLaren

IV.L   Design Technology teaching resources website

Development of a teaching website for Design Technology courses at the Department of Architecture in the University of Washington.

Summer 2020	**Design Technology website**
	Overall site development, concept and structure
	designtech.be.uw.edu
	Graphic statics
	Browser based Python app development, graphic statics drawing construction
	designtech.be.uw.edu/category/structures/graphic_statics/

IV.M   Studio and Thesis reviews

2021	**Innovative Mid-rise Timber: Timber Tectonics Meets Spatial Force Flow** - final review
	Weitzman School of Design - University of Pennsylvania (remote)
	Instructor: Prof. Masoud Akbarzadeh

2021	**TOPOLOGY + timber** - final review
	Taubman College of Architecture and Urban Planning - University of Michigan
	Instructor: Prof. Tsz Yan Ng

2021	**Innovative Mid-rise Timber: Timber Tectonics Meets Spatial Force Flow** - mid review
	Weitzman School of Design - University of Pennsylvania (remote)
	Instructor: Prof. Masoud Akbarzadeh

2020	**Digital Futures 2020 workshop** - final reviews
	ETH Zürich - Department of Architecture (remote)
	Instructors: Dr. Juney Lee, Dr. Tom van Mele and Prof. Philippe Block

2016	**Structural design II** - final review
	ETH Zürich - Department of Architecture
	Instructors: Prof. Philippe Block

2015	**Design Research Laboratory** - studio review
	Architectural Association - London
	Instructor: Shajay Bhooshan

2015	**Structural design II** - final review
	ETH Zürich - Department of Architecture
	Instructors: Prof. Philippe Block

IV.N   Coding workshops

2021	**Python workflows for performance based design**
	Hochschule Ostwestfalen-Lippe (remote)
	Performance based methods for the early phase of design by means of the COMPAS framework
2018	**COMPAS_TNA workshop**
	IASS 2018 workshops - MIT
	Structural form-finding methods from compression only structures using Thrust Network Analysis
2018	**COMPAS_TNA workshop**
	ETH Zürich - Department of Architecture
	Masonry structures analysis using Thrust Network Analysis

2018	**COMPAS_FEA workshop**
	ETH Zürich - Department of Architecture
	Finite element analysis by means of the COMPAS framework

V Service

V.A Academic service positions at the University of Washington

2022 - ongoing	**Strategic planning committee** Department of Architecture	
2020 - ongoing	**Design Technology committee** Department of Architecture	
2021 - 2022	**Cohort hire committee** Department of Architecture	
2021	**FabLab director hiring committee** College of Built Environments	
2021 - 2022	**CBE Technology group** College of Built Environments	
2020	**MS Design computing admissions** (chair) Department of Architecture	
2020	**Strategic planning review team** College of Built environments	
2019 - 2020	**Strategic planning Technology Task group** College of Built environments	

V.B Leadership positions in external organizations

2019 - 2020	**Open Research in Acoustical Science and Education** (Board member) Non-profit for the support of acoustics education and research in the US Founding board member

V.C Affiliations

○ Acoustical Society of America (ASA)

○ Association for Computer Aided Design in Architecture (ACADIA)

○ International Association for Spatial and Shell Structures (IASS)