







Registration, Venue, Fees

**Topic.** The current world of Textile Architecture. The planning, design, and increasingly frequent inclusion of high-tech membrane structures within the modern architecture. Likewise, the rising importance and popularity of this global industry.

**Audience.** Students, architects, engineers, landscape architects, urban planners, entrepreneurs and professionals, students, and/or others interested in the dynamics and the development of the Textile Architecture.

Symposium Dates. 17<sup>th</sup> to 19<sup>th</sup> May 2018  
Symposium Venue. School of Architecture, University of Miami  
Symposium Language. English

**Registration.** usa@ims-institute.org

**Fees.**  
Individuals: \$400,- <sup>1</sup>  
Non-UM Students/ IMS Alumni: \$200,- <sup>1</sup>  
UM Students/ UM Faculty/ IMS Students: free/registration <sup>2</sup>

**Contact,** further information and all package information.  
usa@ims-institute.org

Program subject to changes.  
Policy:

<sup>1</sup> Fee includes access to all sessions, coffee breaks and Welcome Reception. Non-UM Students must provide valid student ID upon registration.

<sup>2</sup> Access to all sessions and coffee breaks upon registration and available seats. Cancellations received in writing three weeks prior to the Seminar will be subject to a deduction of 15% of the applicable fees. For later cancellations or no-shows, there will be no refunds from 15th March. A limited number of "walk-in" seats might be available upon registration at the event.



The IMS (Institute for Membrane and Shell Technologies) was created in Bobingen in 1999, with the purpose of research and learning in the field of Membrane Structures.

Ever since, the IMS has been imparting knowledge to its students so that they are capable of designing, calculating, manufacturing and installing the different types of Membrane Structures.


Since the year 2006, the IMS has hosted the first Master's Degree in Textile Architecture and Membrane Structures Engineering of the world. The IMS has also hosted a series of Symposia and Seminars in different countries with the objective of sharing knowledge and promoting Textile Architecture around the world, thus furthering growth of the market and other big projects.



Glasgow Lecture Hall and The Irvin Korach Architecture Gallery School of Architecture, University of Miami  
1215 Theo Dickinson Dr, Coral Gables, FL 33146, USA 

IMS Master- and Archineer® program in Membrane Structures

IMS e. V.   
Institute for Membrane and Shell Technologies, Building and Real Estate, Institute at Anhalt University of Applied Sciences

Symposium Homepage:   
www.membrane-symposium.org/symposium-miami-2018.html

morning/afternoon session ○○ keynote speaker ♀ email ☎ www 🌐

Thursday, 17<sup>th</sup> May

## Welcome, the IMS, Principles of Membrane Structures and Soft.Spaces

Chair: Robert Off

**Registration & accreditations** 08.15  
@ Entrance Auditorium Hall

**Opening** 09.00  
Robert Off, Head of IMS  
Rodolphe el-Khoury, Dean of the School of Architecture, University of Miami

**The IMS Institute** 09.15  
Robert Off and Heike Kleine  
IMS - activities and scope  
Master, Archineer and Intense Program overview

 **Form follows Forces : Principles of Membrane Structures** 09.45  
Robert Off

Coffee Break 10.30

 **SOFT.SPACES : Textile and Textile Inspired Architecture** 11.00  
Günther H. Filz

Lunch Break 12.00

Thursday, 17<sup>th</sup> May

## Engineering, Architecture, Material Machinery, Software

Chair: Günther H. Filz



13.00

**Membrane Structures in the US : An Engineer's perspective**   
David Campbell

14.00

**Architecture dedicated PES-PVC Fabrics**  
Brian Coughlin

14.30

**Software for the Industry**  
Timothy Akes  
*(free MPanel software - keys for limited time will be given to interested audience during coffee break or upon email-request)*

15.00

Coffee Break

15.30

**High Frequency Machines**  
Mikael Wallin

16.00

**Membrane Structures in the US : An Architect's perspective**   
Nicholas Goldsmith

17.00

Question & Answers

19.30

 **IMS Welcome Reception**

Friday, 18<sup>th</sup> May

Details, Material, Teaching, Learning,  
Digital Tools

Chair: Gustavo Ramirez Lares

<b>Materials for Membrane Architecture</b> Paolo Giugliano	09.00
<b>Membrane Structures : The Importance of the Detail</b> Robert Off	09.30
<b>Durability of Composite Materials</b> Francoise Fournier	10.00
Coffee Break	10.30
<b>Membranes : Teaching and Learning in the US</b> Romualdo Rivera	11.00
<b>ETFE Film - Properties and Features Creating Beauty Through Innovation</b> Bill Fiedler	11.30
Lunch Break	12.00

Friday, 18<sup>th</sup> May

Management, Design Guides,  
Testing & Certification

Chair: Paolo Giugliano



13.00	<b>How to develop Membrane Projects</b> Gustavo Ramirez Lares
13.30	<b>BIM method in large scale projects</b> Gregor Grunwald
14.00	<b>American Technical Design Guide</b> Wayne Rendely
14.45	Coffee Break
15.15	<b>European Technical Design Guide</b> Heidrun Bögner-Balz
15.45	<b>Material properties, testing &amp; certification</b> Heidrun Bögner-Balz
16.15	<b>Digital Tools in Membrane Architecture</b> Gerry D`Anza 
17.00	<b>Limitless Possibilities in Lightweight Architecture</b> Roberto Muñoz
19.30	<b>DÜNN - Cocktail</b> <small>with kind support by</small>

Saturday, 19<sup>th</sup> May

## Case Studies

Chair: Robert Off

### Case Studies

<b>tba</b> Nicholas Goldsmith	09.00
<b>Membrane Structures in Latin America</b> Roberto Santomauro	09.30
<b>ETFE Projects by Lonas Lorenzo</b> Cesar Eloy Pérez	10.00
Coffee Break	10.30
<b>Miami Stadium suspended Roof</b> David Ward	11.00
<b>ETFE cladding : the Dinosaur Park Bautzen, Germany</b> Werner Fröhlich	11.30
Lunch Break	12.00

Saturday, 19<sup>th</sup> May

## Software Demo, Panel Discussion Closing Ceremony



Chair: Denis H. Hector

13.00	<b>Facade Projects - Wicked games with fabrics capilarity's</b> Maxime Durka
13.30	<b>Software Demo : IX-Cube</b> (free software - keys for 3 months will be given to interested audience during coffee break or upon email-request)
14.15	<b>The Role of Project Management in Pre-Construction and Project Execution</b> Garry Becker
14.45	Coffee Break
15.00	<b>Textile Architecture : Quo Vadis?</b> Panel Discussion with Nicholas Goldsmith, David Campbell, Günther H. Filz, Robert Off, Paolo Giugliano, Gerry D`Anza, Roberto Santomauro, Gregor Grunwald, and others  chaired by Denis H. Hector
	<b>Open Discussion</b> discussion with the audience moderated by Denis H. Hector
15.30	<b>Closing Ceremony</b> Gustavo Ramirez Lares Robert Off, Head of IMS Rodolphe el-Khoury, Dean of the School of Architecture, University of Miami

# TEXTILE ARCHI TECTURE

## List of Speakers\*

- 15 Timothy **Akes**
- 15 Garry **Becker**
- 16 Heidrun **Bögner-Balz**
- 17 David M. **Campbell** ♀
- 18 Brian **Coughlin**
- 18 Maxime **Durka**
- 19 Gerry **D'Anza** ♀
- 20 Rodolphe **el-Khoury**
- 20 Bill **Fiedler**
- 21 Günther H. **Filz** ♀
- 22 Francois **Fournier**
- 22 Werner **Fröhlich**
- 24 Paolo **Giugliano**
- 25 Nicholas **Goldsmith** ♀
- 26 Gregor **Grunwald**
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- 27 Robert **Off** ♀
- 28 Cesar Eloy **Pérez**
- 28 Gustavo **Ramirez Lares**
- 29 Roberto **Muñoz**
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- 30 Romualdo **Rivera Torres**
- 30 Roberto **Santomauro**
- 31 Mikael **Wallin**
- 31 David **Ward**



## Timothy Akes



Representative for MPanel software in the Americas  
MPanel Software Solutions, LLC

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Timothy Akes is the representative in the Americas for MPanel Software Solutions, LLC which specializes in fabric design and engineering software and services primarily for industrial fabrics industry clients. More than 25 years of experience with CADsoftware and hardware has gained him a vast amount of knowledge on the subject. He currently provides sales, technical support and training services to more than 180 fabric-related companies in various market segments such as tensile structures, tent & awning, marine and textile exhibits. As a certified trainer he has taught more than 500 students during instructor led training events on the correct use of CAD software systems and production techniques.

## Garry Becker

Pfeifer FabriTec

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*fabritecstructures.com* 

A graduate of the University of Buffalo with a Degree in Civil Engineering, involved in lightweight structures since 1979 in elite companies as Birdair Inc. and FabriTec Structures. Garry has been involved in many aspects along the life of a tensile membrane structure including proposal writing, project management, purchasing, design, engineering and construction. Some projects include: The Millennium Dome or O2, King Fahd International Stadium, Denver International Airport. Garry joined FabriTec in 2005, becoming President beginning of 2014. He is a past member of the IFAI and Tech Textile and was a past member of the BoD for both Graboplan USA and Birdair.





## Heidrun Bögner-Balz

DEKRA



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*dekra.de*

The former Blum laboratory has belonged to DEKRA Industrial International GmbH Division Construction Management as the Stuttgart field office for a year now. The team has earned a worldwide reputation as experts in the field of textile construction.

All areas of technical textiles in membrane structures (and related areas) are covered from research and development to material and detailed testing to the construction physics of light roofing structures, quality assurance in construction work and damage assessment.



**David M. Campbell**  
Principal & President  
Geiger Engineers, Suffern, NY

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*geigerengineers.com* 

In 1979 David Campbell began working with Geiger Berger Associates, renowned pioneers of large tension membrane structures, and became an Associate and head of the Vancouver, BC office in 1982.

He is one of the founding principals of Geiger Engineers and has managed the firm since its inception. In his thirty-five years of engineering practice, he has had a significant role in over 30 large spectator sports facilities.

David has been involved in engineering tension membrane structures throughout his entire career. In addition, he has provided construction engineering consulting to contractors for a number of major sports buildings. He has extensive experience in entertainment rigging and has consulted to many productions including Opening Ceremonies of the 1996 Olympic Games, half time shows for the NFL Superbowl, MTV Video Awards, the Academy Awards and the Grammys.

He is a member of IASS, the ASCE Special Structures Committee, as well as IAAM and the Entertainment Services and Technology Association. David has authored numerous technical papers on long-span, tensile membrane, and sports facility structures.

## Brian Coughlin

Market Manager Tensile Architecture North America  
Low & Bonar Coated Technical Textiles

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Brian earned a B.A. in Hospitality Business Management from Washington State University, and is currently enrolled at the Institute for Membrane and Shell Technologies. Brian Coughlin started his career with membranes in 2011 and joined the Coated Technical Textiles team at Low&Bonar in 2014.

Low & Bonar, a global leader in high performance textiles selling in more than 60 countries. We design and manufacture components which add value to, and improve the performance of, our customers' products. Low & Bonar coated technical textiles are customizable for stadium roofs, industrial covers, building facade solar protection and tents. Low & Bonar is the combination of traditional heritage and reliable expertise for coated technical textiles.

## Maxime Durka

R&D SIOEN Coating

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Maxime Durka holds a PhD in organic chemistry. He has been developing its expertise in chemistry and material sciences for now more than 15 years. He built his expertise around the elaboration of advanced materials from concept to market. Previously, he has been very active in the development of self-healing materials such as concrete, foams and coatings for international players and successfully developed new chemical technologies for the grafting and controlled release of high performance additives on textile and flexible surfaces. Since 2015 Maxime has been appointed to support & lead the development of existing and new technical membranes with focus on tensile architecture field.



## Gerry D'Anza

Architect, IX-CUBE, IMS - Italy

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Since PhD thesis on tensile form-finding methods and applications, starts a research on membranes and tensile structures, implementing both software and working as a designer at Baku Group DT Architects where he was a cofounder.

From 2000 he has designed and engineering many lightweight structures like GMG Motors in Bari (Italy) a 2500 sqm roof hanging over a cable pre-tensioned beam, a 5000 sqm Membrane roof for the food court of Sambil Barquisimeto and a spiral form 2500 sqm membrane as a festival tent in Saudi Arabia.

From 2006 he is the Italian representative of IMS Institute for Shells and Membrane Technologies, where he teaches use of specialized software for design of membrane structures at the Biennial Master Course. Has kept lessons on the design of lightweight structures at the University of Naples Federico II, University of Innsbruck and for TensoRED the association for membrane structures of Latin America.

He has developed as team manager with Prof. Bletzinger and J.Linhard, Rhino-Membrane a form-finding plugin of Rhinoceros, Forten platform and from 2014 ixCube 4-10 a platform for design, structural analysis and production of cable-membrane systems.



## Rodolphe el-Khoury

Dean, School of Architecture, University of Miami

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Rodolphe el-Khoury is Dean of the University of Miami School of Architecture. Before coming to UMSoA in July, 2014, he was Canada Research Chair and Director of Urban Design at the University of Toronto, Head of Architecture at California College of the Arts, and Associate Professor at Harvard Graduate School of Design. He has taught at Columbia University, Rhode Island School of Design, and Princeton University and has had Visiting Professor appointments at MIT, University of Hong Kong, and Rice University (Cullinen Visiting Chair). After earning a Bachelor of Architecture and Bachelor of Fine Arts from Rhode Island School of Design, el-Khoury obtained a Master of Science in Architecture from MIT and his Ph.D. from Princeton University.

## Bill Fiedler

Senior Manager, Fluoropolymer Resin, Film and Membrane  
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In 2010, Bill joined AGC Chemicals Americas as Business Manager for the AGC Fluon ETFE Film products and is currently responsible for business planning and development for all of AGC Fluon fluoropolymer resins and film offered in the North American market. Bill has been involved in both commercial and technical project development activities for a wide variety of tensile membrane structures including sports, entertainment, transportation, agriculture and general commercial projects. AGC Chemicals Americas is a group company owned by Asahi Glass Co., Ltd. (AGC) located in Tokyo, Japan. AGC is the world's largest manufacturer of ETFE copolymer resins that are used to produce a broad array of AGC Fluon ETFE Film grades.



## Günther H. Filz

Prof. Dipl.Ing. Dr.techn. M.Eng.

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Günther H. Filz is an architect, engineer and appointed Professor in Structures and Architecture at Aalto University, Helsinki, Finland.

He received his Diploma degree (2000) in Architecture with distinction from the University of Innsbruck and worked amongst others for Eisenman Architects, NYC, NY, USA. Günther H. Filz completed his PhD in Architecture with distinction from the University of Innsbruck and has been promoted Assistant Professor in 2010. He also holds a Master degree (M.Eng. 2015) with distinction from Anhalt University of Applied Sciences, Germany. Since 2015, he has also been member of the Bundesingenieurkammer Deutschland. From 2013 to 2017 he has been Vice-Dean and Dean of Studies at the Faculty of Architecture, University of Innsbruck. In 2015 he completed his tenure track period and was promoted Associate Professor at the unit koge. Structure & Design, University of Innsbruck, Austria in January 2016. In September 2017, Günther H. Filz has been appointed Professor of Structures and Architecture at Aalto University, Helsinki, Finland.

His research and teaching centers on the intersection of architecture, structure and geometry. In special, his focus has been on the profound changes that selforganizing forms and processes instigate in the way architecture is thought, designed and built. His "fat-free-design" approach results in intelligent, innovative and sustainable lightweight structures.

In this context Günther H. Filz has been internationally invited Visiting Professor, lecturer and workshop instructor. Besides his studio work, his numerous research pavilions and other scientific/artistic achievements have been widely published, exhibited and awarded. Günther H. Filz is co/editor, author and coauthor of scientific papers, articles and books.

**Francoise Fournier**  
SERGE FERRARI SAS

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Education : MBA International Management

Professional experience at Serge Ferrari SAS

- International sales for flexible composite material in the field of  
lightweight architecture

- Marketing : Market Manager for Tensile buildings & Market  
Development Manager for sport facilities


AMA (Architectural Membranes Association) -

Member of the Board of Directors and invited lecturer  
at the IMS Master Program since 2008

**Werner Fröhlich**

VELABRAN GmbH  
membrane roofs & consulting

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Werner Fröhlich is the founder, owner and Managing Director of VELABRAN GmbH, established in 2005 by a few membrane construction experts who had worked for different companies in the same branch before. In the beginning, VELABRAN GmbH had started operating in project management and assembly coordination, and soon the company became to be one of the prime addresses for membrane constructions in Germany and Europe.

VELABRAN GmbH offers a wide range of professional knowledge and experience in the field of textile architecture and air-supported ETFE foil roofs. We will provide you with a total package including consulting, design, construction and assembly.



## Paolo Giugliano

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L&B Segment Leader Aesthetic & Design

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He is involved in the tensile architecture business since 1994 forming his skills continuously from practical experiences. Till 2008 he growth his career in leading tensile structures companies as fabrication and installation manager, project leader and area sales director. Since 2008 he joins the technical textiles manufacture industry, releasing the "Technical guideline for permanent tensile architecture", becoming member of several business dedicated organization as AMA, Tensinet or IFAI and cooperating with specialized institutions, designers, manufacturers and fabricators. During his career he has been involved in more than 600 projects worldwide, many of those considered milestones in the tensile architecture field.



## Nicholas Goldsmith

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Nic Goldsmith is a Senior Principal at FTL Design & Engineering Studio since 1978. Prior to joining the firm, he was a designer for the award winning Architect, Frei Otto in Germany. He is a member of the College of Fellows of the AIA, the IASS, and former Chairman of the Lightweight Structures Association.

Goldsmith has been responsible for many of FTL's projects, including the award winning: SkySong at ASU in Phoenix, the Rosa Parks Transit Center in Detroit and the Sun Valley Pavilion. He has designed exhibitions including an exhibition on solar energy for the Cooper-Hewitt, National Design Museum in NY and Smithsonian Institution, and a worldwide traveling interactive exhibition for the United Nations (UNFPA).

He has been featured in innumerable publications including an Architectural Monograph titled: FTL: SOFTNESS, MOVEMENT & LIGHT, published by Academy Editions and his new book, MASS to MEMBRANE, published by Artifice.

Nic Goldsmith's academic experience includes Adjunct Professor at the University of Pennsylvania, Cornell, Pratt, University of Innsbruck and a wide range of international lectures and teaching in the US, the UK, Germany, Australia and South America.

Awards include the Dupont Benedictus Award, the IDEA Bronze Award, AIA Design Awards, over 25 IFAI awards, the 28th Bard Award in NY, the Waterfront Center's Award in Cincinnati and the State of Florida's Governor's Design Award.

## Gregor Grunwald


Dr.Ing.  
Head of Envelope Structures, PFEIFER Cable Structures  
AMA - Germany

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Gregor Grunwald is an architect involved in tension membrane structures throughout his entire career. He received his Diploma degree (2001) in Architecture from the Technical University Aachen. 2007 he completed his PhD in Architecture at the Technical University Berlin. In 2008 Gregor began working with Hightex GmbH, became Technical Director and authorized representative. 2015 he joined the company PFEIFER Seil- und Hebetchnik GmbH and was involved in setting up the new Membrane Structures business unit. Gregor was lecturer at several Universities has authored numerous technical papers on membrane structures and is president and co-founder of the Architectural Membrane Association (AMA).

## Denis H. Hector

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Denis Hector and Joanna Lombard Architecture and Landscape, Miami, FL, Principal, 1989-present; Denis Hector Architect, Philadelphia, PA, Principal, 1985-1988; FTL & Associates, New York, NY, Founder (1979-83), Principal, 1983-1985; BuroHappold, Bath England, 1977-79; Lockheed Corporation, Manned Space Center, Houston, Texas, 1972. Registered Architect #015892-1, New York, 1983-present. Teaching Experience includes University of Miami School of Architecture; University of Pennsylvania, 1985-1988; Paris Program, 1990-2005; Columbia University, 1986-1988; University of Bath, 1977-79; Institut fur Leichte Flaechentragwerke, University of Stuttgart, Stuttgart, Germany, Research Fellow, Supervisor: Frei Otto, (Pritzker Prize Winner, 2015) 1976-77



## Robert Off

Prof. Dr.-Ing.

Architect, Director IMS e.V. Archineer® Institute

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Professor Robert Off is the founder and director of the IMS Archineer® Institute for Membrane and Shell Technologies, Building and Real Estate in Dessau-Rosslau, Germany. The institute is established in the year 1999, Bobingen, Germany. It is an independent non-profitable institute focusing on research and teaching new construction methods in the field of membrane and net constructions.

Prof. Off holds a Degree in Architecture from the University of Augsburg, along with a Degree in Architecture and PhD from the Technical University of Berlin. He taught architectural theory and membrane structures at the Augsburg University and established an architecture consulting practice in Augsburg. Along with holding many workshops and seminars at several universities in Germany and worldwide he was also a visiting Professor at the Khulna University in Bangladesh.


From the year 2002 Prof. Off is working as professor for Real Estate and Development at Anhalt University of Applied Sciences where he became Professor in-charge for developing the International Master Program in Membranes Structures at the Faculty of Surveying located at the Bauhaus campus in Dessau-Rosslau. In 2006 Prof. Off started the first ever master program in Membrane Structures worldwide, which is successful holding its 13th batch this year in March, 2018 with students from all over the world.

Robert Off's academic and work experience includes many research projects, patents and inventions in the field of construction methods in tensile architecture and shell technologies.

## Cesar Eloy Pérez

Lonas Lorenzo

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He is Director of Business Development for BigSpan Structures / Lonas Lorenzo in Mexico and USA, with ten years of experience participating in the most important projects in Latin America. He also worked as project manager in the most important textile architecture companies in Mexico and other worldwide acting membrane companies. He has a degree in Architecture from the University of Guadalajara, Mexico and a MEng Lightweight Membrane Structures from Krems University in Austria. He has participated in projects and innovating with materials and designs in Mexico introducing for the first time the ETFE in Mexico in 2013 and developing different projects awarded by different institutions.

## Gustavo Ramírez Lares

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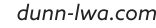
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Founder and Director at Carpatec, Spain; IMS representative in Spain & Latin America organizing Textile Architecture Symposia in Spain 2011, Panama 2016, Peru 2017 and Miami 2018; founder and director of AMA (Architecture Membrane Association); Holds a Degree in Business Administration from the Universidad Católica Andrés Bello, Caracas, Venezuela; MBA from the Universidad Politécnica de Madrid; Marketing Strategy specialist from Cornell University Ithaca, NY, and a M. Eng. "Membrane Structures" from the Anhalt University of Applied Sciences, Germany. Most outstanding projects include Casa Decor Madrid, Valencia Factory Mall, Padel Sport Club Perpignan, France, Rome Padel Cup, Italy 2018.

## Roberto Muñoz

Dünn Lightweight Architecture

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Roberto is heading Dünn Lightweight architecture, a company with passionate architects and engineers specialized in lightweight fabric structures. Dünn's aiming for spectacular and attractive icons using the most innovative materials, the beauty of architecture and the functionality of engineering has been awarded by IFAI for 3 consecutive years due to its design innovation, creativity and excel in lightweight architecture. Roberto has taken part in various international seminars focusing on topics such as membrane structures, sports architecture, and textile architecture. He holds a Bachelor's degree in Architecture from the Universidad de Guadalajara, Mexico, as well as a Master of Engineering "Membrane Structures" from the Anhalt University of Applied Sciences, Germany.

## Wayne Rendely

Wayne Rendely P.E.

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Wayne Rendely has over 20 years of practice as a licensed Professional Engineer.

Provided services to more than 200 clients and has made a significant contribution on more than 1000 unique special structures worldwide.

He is the Engineer of Record (EOR) for more than 350 unique structures and specializes in Tensile Membrane Structures both permanent and temporary.

## Romualdo Rivera Torres



PhD Student, M. Eng.  
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Romualdo Rivera is a PhD student developing an online interactive 3D library for Tensile Fabric Structures. Romualdo is the author of the book: Membrane Structures and author of the 3D and LISP programming courses at the Lyceum of Arts and Technology Institute. His education includes ongoing PhD studies collaborating with Dr. Robert Roithmayr in the development of the online tools for the Form Finder software. Romualdo finished his Master of Engineering in Membrane Structures from Alhalt University, Germany. He has also studied Architecture Textile at Polytechnic University of Madrid, Spain and earned a Bachelor's Degree in Computer Science from UIPR.

## Roberto Santomauro

Architect  
sobresaliente, Montevideo, Uruguay

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Founder of architecture studio - [www.arqrs.com](http://www.arqrs.com); from 1994 activities in Textile Architecture projects, together with the arq. P. Pinto. In 2008 editor of the first Latin American book for the teaching of Tensile Structures: Tensile Structures from Uruguay and contributing the Latin American chapter of the book „Architettura Atopica e Tensostrutture a Membrana“ by Aldo Capasso in 2013 and publications of several articles in specialized magazines; Participation in all latin american symposiums since 2003; 2011, president of the IV Latin American Symposium of Tensile structures held in Montevideo; 2017 guest speaker at IMS in the II Latin American Seminar, Peru 2017; Since 2005 he is a member of the steering committee and founder of the Latin American Network of Tensoestructuras.

## Mikael Wallin

VP Marketing & Sales på Forsstrom High Frequency AB  
Forsstrom High Frequency AB

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Mikael Wallin has been in different positions in the industrial fabrics industry for more than 20 years. As the VP Marketing & Sales of Forsstrom High Frequency, he has worked with numerous industrial fabrics manufacturers, and has consulted on numerous projects requiring High Frequency Welding and fabric handling around the world.

## David Ward

Regional Manager Raedelli

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Educated in the UK, my professional career has been dedicated to the structural steel cable and lifting equipment industries where I worked closely with international architects, engineers and contractors to assist and advise within the specialist field of engineered cable systems for tensile structures.

These projects have included complex cable net stadium roofs and cable supported bridges projects including the Hard Rock Stadium Miami, Wembley Stadium & Tottenham Stadium in London, several 2014 FIFA World Cup stadium in Brazil as well the London Eye giant observation wheel and the 550 feet tall High Roller wheel in Las Vegas.





