

Sandra Manninger **Curriculum Vitae**

Sandra Manninger is a registered architect, teacher, and researcher. She is principal of SPAN del Campo Manninger Architects, a company she founded together with Matias del Campo in 2003. The focus of the practice lies on the integration of advanced design and building techniques that folds nature, culture, and technology into a design ecology.

SPAN del Campo Manninger, the architects of the Austrian Pavilion at the Shanghai World Expo 2010, is constructing an epistemological framework from practice and procedures that are based on the newly acquired knowledge that we increasingly dominate through science and technology. The result does not come from a formal effort, but rather as a consequence of a union of evolutionary attempts based on very rigid design procedures. These involve a software approach that goes beyond the tool itself, leaving space for a true ecology of digital thinking: an achievement that dispels techno-enthusiasm and opens the door to something that might really become a certainty in the future.

What we can expect is an environment where affection, obsession, opulence and romanticism are the outputs of an advanced system that puts together biological behavior, environmental pressures and rigid procedures of computational design.

SPAN del Campo Manninger's research highlights how to go beyond beautiful data to discover something that could be defined voluptuous data. This coagulation of numbers, algorithms, procedures and programs uses the forces of thriving nature and, passing through the calculation of a multi-core processor, knits them with human desire.

Sabina Barucci, digimag 64

Sandra Manninger has twenty years of experience in the field ranging from urban scale to housing projects to small scale rooftop remodelling and renovation. She started her training at the Federal Higher Technical Institute for Educating and Experimenting in Building and Construction, Graz, AT where she graduated as an engineer at the age of nineteen. She then moved on to join the Technical University in Vienna from which she graduated as an architect under the auspices of Bart Lootsma.

Sandra Manninger has received numerous grants and prizes. She received a Research Fellowship, awarded from the University for Applied Arts Vienna and the Schindler Scholarship, awarded from the Federal Ministry for Education and Art and the Museum for Applied Art Vienna. She was awarded at the *Ephemeral Structures* Competition, Athens from the Far Eastern Memorial Foundation for her thesis project as well as for her design for the *Media Center University for Music and Performative Art Vienna* and the *Individuality and Series: Architecture and Digital Fabrication* competition. She was finalist at the Feidad (Far Eastern International Digital Architecture Design) Award, and the Designboom *Crystal Vision Swarovski* Competition. She won the first prizes for *Experimental Tendencies in Architecture*, awarded from Federal Chancellery of the Republic of Austria, the *Brancusi Museum*, Paris, for the *Public Gallery*, Design for a Mobile Gallery, and the *Austrian Pavilion* at the Shanghai Expo.

Her work is part of the permanent collection of the FRAC Centre Orleans, the Luciano Benetton Collection, the MAK Museum of Applied Arts, the Albertina in Vienna, and the Pinakothek Munich and has been published in numerous magazines and books. She has written and presented papers at numerous conferences and she is lucky to travel the world to counsel and lecture at various institutions.

She has taught architectural design at the School of Architecture ESARQ-UIC in Barcelona, the Urban Strategies program at the University for Applied Arts in Vienna, the Technical University in Vienna, the DIA Dessau Institute of Architecture, Germany, at Tsinghua University in Beijing, as well as Tongji University in Shanghai and most recently at the University of Pennsylvania's School of Design. She is currently an Assistant Professor of Practice at Taubman College of Architecture and Urban Planning at the University of Michigan.

Education

Federal Higher Technical Institute for Educating and Experimenting in Building and Construction, Graz AT
Graduate as architect from the Technical University Vienna, AT under the auspices of Bart Lootsma

Current Position

since 2003 Principal SPAN del Campo Manninger Architects Vienna · Shanghai
Assistant Professor of Practice, Taubman College of Architecture and Urban Planning, University of Michigan

Awards, grants, expertise, excerpts

Accelerate@CERN Austria, extended research stay at CERN - awarded from Federal Chancellery of the Republic of Austria, AT 2015

Award, Media Center University for Music and Performative Art Vienna, EU 2012

First Price, Public Gallery, Design for a Mobile Gallery, AT 2011

Strategic Partner for HP Hewlett Packard as part of the Experts & Mentors program, INT 2010

First Price, Austrian Pavilion, Expo Shanghai, EU 2008 - awarded from the Austrian Economic Chamber

Curator (with Matias del Campo) of the Latin American section of the Architecture Biennale Beijing, CN 2008 and 2010

First Price, Brancusi Museum Paris, INT 2008

Finalist Designboom Crystal Vision Swarovski Competition, INT 2008

Finalist Feidad Award (Far Eastern International Digital Architecture Design Award) INT 2006

Schindler Scholarship INT 2006 - awarded from the Federal Ministry for Education and Art (BMUKK) and the Museum for Applied Art Vienna

First Price, Experimental Tendencies in Architektur AT 2004 - awarded from Federal Chancellery of the Republic of Austria

Research Fellowship AT 2005 - awarded from the University for Applied Arts Vienna

Award, Ephemeral Structures Competition, Olympic Games, Athens INT 2004 - awarded from the Far Eastern Memorial Foundation

Award, Individuality and Series: Architecture and Digital Fabrication EU 2001

Lectures, excerpts

SPAN Sensible Bodies. The University of Akron, Ohio, USA, March 03, 2017

SPAN Atlas of Sensations. Keynote at AASA, RMIT, Melbourne, AU, Jul 03, 2015

SPAN Moody Objects. Computational Design Culture, Universität Lüneburg, GE, Jan 16, 2015

SPAN Urban Formations. AA Shanghai Symposium, HKU Shanghai, CN, Jul 23, 2014

SPAN A China Gradient. Architectural Ceramics Conference, MIT, Cambridge MA, USA Mar 23, 2014

SPAN Sensible Bodies. University of Pennsylvania School Of Design, Philadelphia, USA, Oct 10, 2013

SPAN Autonomous Tectonics. DADA conference at Tsinghua University, Beijing, CN, Sep 29, 2013

SPAN Sensible Bodies. Sunhoo Industrial Design Forum, Hangzhou CN, Sep 22, 2012

SPAN Sensible Bodies. Bauhaus Lectures 2012, Dessau GE, May 24, 2012

SPAN Sensible Bodies. Technical University Innsbruck, AT, May 2012

Keynote 120th anniversary ROCAD 2012. University of Architecture and Urbanism Ion Mincu of Bucharest RO, May 20, 2012

Keynote ICAR (re)writing history. Romanian School of Architecture, Bucharest RO, May 17, 2012

SPAN Sensible Bodies. Beijing University, Beijing CN, Apr 27, 2012

SPAN Sensible Bodies. Shanghai Institute of Visual Art SIVA, Shanghai CN, Apr 25, 2012

SPAN Architectures of Desire. UCLA, Los Angeles USA, Nov 4, 2011

SPAN Sensible Bodies. Bartlett Faculty of the Built Environment, London GB, Nov 2, 2011

SPAN Architectures of Desire. Autodesk BIM Conference 2011, Munich GE, Sep 13, 2011

SPAN Sensibilities. Digital Week Conference at DIA, Dessau GE 2011

SPAN Sensible Bodies. The Austrian Research Institute for Artificial Intelligence OFAI, Vienna AT, Jun 07, 2011

SPAN Architectures of Desire. Changing Architecture Lecture Series, MAK Vienna AT, May 3, 2011

SPAN ICD Expert lecture. Institute for Computational Design, University Stuttgart GE, Jan 27, 2011

SPAN Work in Progress. Academy of Fine Arts and Design, Bratislava SK, Dec 8, 2010

SPAN Work in Progress. Sede de Vigo del Colegio Oficial de Arquitectos de Galicia, Vigo ES, Dec 2, 2010

SPAN Architectures of Desire. Hong Kong University, Shanghai CN, Jan 21, 2010

SPAN Architectures of Desire. University of Kentucky, 117 Pence Hall, Lexington KY, USA, Oct 20, 2010

SPAN Architectures of Desire. University of Michigan, Taubman College, MI, USA, Sep 14, 2010

SPAN 100 Minutes of Architecture. YO.V.A.3 KUNSTHALLE Wien public space, Vienna AT, Sep 7, 2010

SPAN The Austrian Pavilion. University of Applied Arts, Vienna AT, Nov 2, 2009

SPAN Sense and Advanced Sensibility. Università di Bologna, lecture series, IT, Oct 29, 2009

SPAN Obsessions. institut für experimentelle architektur. hochbau, Innsbruck, AT, 2008

SPAN Obsessions. NoDe Parametric Workshop, Tsinghua University, Beijing CN, Oct 22, 2008

SPAN Speculations on Tissue Engineering and Architecture. ACADIA 2008: SILICON + SKIN, Austin, USA, Oct 1, 2008

SPAN Sensibilities. Liquid Sky Congress, Conference Hall, Zaragossa ES, Sep 8, 2008

SPAN Liquid Codes. Hyperbody Studio TU Delft, NL, May 10, 2008

SPAN Moments of Transition. IASS 2012 International Association of Shells and Spatial Structures, Venice IT, Dec 8, 2007

SPAN Moments of Transition. DigitalCities Conference, Bauhaus Dessau GE, Jun 9, 2007

SPAN Work in Progress. Design Research II lecture series, Institute of Structural Engineering, University Kassel, GE, Apr 24, 2007

SPAN Continuous Difference. Architecture Theory lecture series of Neil Leach, SCI_Arc, Los Angeles USA, Mar 21, 2007

SPAN Work in Progress. Advanced Design Studio, Woodbury University, Los Angeles USA, Mar 10, 2007

SPAN Work in Progress Lunch Talks lecture series, SCI_Arc, Los Angeles USA, Dec 29, 2006

Exhibitions, excerpts

- Sublime Bodies - Architectural Problems in the Postdigital Age**, Solo Exhibition, FabUnion Space, Shanghai, CN, March 22 - May 10, 2017
- Ore**, AAVS (Architectural Association Visiting School) Shanghai Ten Exhibition July 19, 2016
- Particle Hut**, Digital Future Shanghai, Exhibition, Tongji University Exhibition Hall, July 02, 2016
- Experimental Architecture Biennale 2015** Galerie Jaroslava Fragnera, Prague CZ, Sep 04 - Oct 18, 2015
- Vienna for Art's sake! 2015** Winterpalais of the Belvedere, Vienna AT, Feb 27 - May 22, 2015
- ABS 2015** Architecture Biennale Shanghai, January - Feb, 2015
- Process 2014** SOHO Shanghai CN, November 1 - Nov 16, 2014
- Digital Craft 2014** University for Applied Arts, Vienna AT, Ap - May 2014
- Tracing the City 2013** Shanghai Design Exhibition, Power Station of Art (Shanghai Contemporary Art Museum), CN, Nov 2013 - Mar 2014
- ArchiLab 2013** FRAC Centre Orléans FR, Sep 2013 - Fe 2014
- Austrian Design** Maribor SI, September - Oct 2012, Kosice Jun 2013
- Ai2112** La Biennale di Venezia, Venice IT, Aug - Nov 2012
- Digital Futures** CAUP Exhibition Space, Shanghai CN, Aug 2011
- Formations** SPAN Solo Show – Museum for Applied Arts, Vienna AT, Mar - Sep 2011
- YO.V.A** Young Viennese Architects – travelling exhibition 2010/2011
- ABB 2010** Architecture Biennale Beijing: machinic processes, 798 Space Beijing CN, Oct 2010
- Rouse[d]** Advanced Architecture Exhibition, 555 Gallery, Detroit USA, Sep 2009
- AAST///**Advanced Architecture Setimo Tokyo, CASARTARC, Turin IT, Jun 2009
- ABB 2008** Architecture Biennale Beijing: (im)material processes, 798 Space, Beijing CN, Nov 2008
- Float** Gallery Zeitkunst, Kitzbühel AT, Jan 2010
- Exquisite Corpse II** IMNO Gallery, Downtown LA, Los Angeles USA, Mar 2007
- Exquisite Corpse** Schindler House, Los Angeles USA, Mar 2007
- AustriArchitecture** Seven Austrian Debuts Zumtobel Staff Vienna AT, Nov - Dec 2005
- AustriArchitecture** Seven Austrian Debuts, AEDES East, Berlin DE, Jul - Sep 2005
- Fluctuated Images** Installation Ichbinnichtda, FLUC, Vienna AT, Aug - Sep 2004
- Niemandsland** Experimente für den öffentlichen Raum, Künstlerhaus Vienna AT, Apr - Jun 2004
- Ephemeral Disruptions** RIBA, London GB, April - May 2003
- Results of Ephemeral Structures Competition** Byzantine Museum Athens GR, Feb 2003
- Individualität und Serie** Red Dot Design Museum Essen DE, 2003
- Individualität und Serie** Deutsches Architekturmuseum, Frankfurt DE, May - Jun 2002

Books

- del Campo, M. & Manninger S. (2017). *Sublime Bodies, Architectural Problems in the Postdigital Age*. Shanghai: Tongji Press.
- del Campo, M. (Ed.). (2016). *Evoking through Design, Contemporary Moods in Architecture*. London, AD (Architectural Design), Wiley Press

Book Chapters and Articles

- o del Campo, M., Manninger S. (2015) in Menges, Achim and Roland Snooks and Philip F. Yuan (Eds.) *Robotic Futures*. Tongji University Press, 2015
- o del Campo, M., Manninger S. (2014) in Noever, Peter (Ed.) *Vienna for Art's Sake! Archive Austria - Contemporary Art*. Fabrica, 2014
- o del Campo, M. (2013). *Autonomous Tectonics II* in D. Gerber & M. Ibanez (eds.), *Paradigms in Computing – Making, Machines and Models for Design Agency in Architecture*. (298-307). Los Angeles: Evolo Press.
- o del Campo, M., Manninger S. (2013). *Ecopressures* in P. Lorenzo Eiora & A. Sprecher (eds.), *Architecture in Formation*. (296-302). London: Routledge
- o del Campo, M., Manninger S. (2013). *Nature does not Optimize, Nature changes* in B. Imhof & P. Gruber (eds.), *What is the Architect doing in the Jungle? Biomimetics*. (50-51). Vienna: Springer
- o del Campo, M., Manninger S. (2012) *Rhythm and Resolution* in E. Goldemberg (ed.), *Pulsation in Architecture*. (338-348). Plantation: J.Ross
- o del Campo, M., Manninger S. (2012) in Leach, Neil and Philip F. Yuan (Eds.) *Scripting the Future*. Tongji University Press, 2012
- o del Campo, M., Manninger S. (2011) in Burry, Mark *Scripting Cultures – Architectural design and programming*. Wiley, 2011
- o del Campo, M., Manninger S. (2011). *Artifact & Affect: Open ended Strata of Communication* in T. Kocatürk (ed.), *Distributed Intelligence in Design*. (99-105). London: Wiley
- o del Campo, M., Manninger S. (2011). *Why Architecture needs Funkiness* in Goldemberg, Eric (Ed.): *Pulsation in Architecture, Rhythm and Resolution*.
- o del Campo, M., Manninger S. (2010) *Machinic Processes* in Leach, Neil and Xu Wei-Guo (Eds.) *Machinic Processes*.
- o del Campo, M., Manninger S. (2009). *Gradient Scale* in L. Iwamoto (ed.), *Digital Fabrication – Architectural & Material Techniques*. (102). New York: Princeton Architectural Press
- o del Campo, M., Manninger S. (2009). *Housing in Vienna* in L. Iwamoto (ed.), *Digital Fabrication – Architectural & Material Techniques*. (130). New York: Princeton Architectural Press
- o del Campo, M., Manninger S. (2009). in Leach, Neil and Xu Wei-Guo (Eds.) *(Im)material Processes: New Digital Techniques for Architecture*.

- o del Campo, M., Manninger S. (2007) in **Liu, Yu-Tung** (Ed.) Distinguishing Digital Architecture: 6th Far Eastern International Digital Architectural Design Award, Birkhäuser (FEIDAD) Basel.

Academic or Professional Conference Papers

- o del Campo, M., Manninger S. (2017). Plato´s Columns – Platonic Geometries vs. Vague Gestures in Robotic Construction. Presented in Disciplines & Disruptions – Proceedings of the 37th Annual Conference of the Association for Computer Aided Design in Architecture (ACADIA) (57-63). Boston: Association for Computer Aided Design in Architecture (ACADIA), 57-63.
- o Manninger S. , del Campo, M. (2017). Magnetically Controlled Concrete 3D Printing. Presented in Spatial Structures in the 21st Century (323-334). Tokyo: International Association of Shell and Spatial Structures (IASS), 323-334
- o del Campo, M., Fure, A., McGee W., Manninger S., Flexer A., (2013). Autonomous Tectonics – A Research into Emergent Robotic Construction Methods. Presented in Rethinking Prototyping (225-239). Berlin: Design Modeling Symposium, 225-239
- o del Campo, M., Manninger S. (2011). Performative Surfaces: Computational Form Finding Processes for the Inclusion of Detail in the Surface Condition. Presented in Computational Design Modeling (275-281). Berlin: Design Modeling Symposium, 275-281
- o del Campo, M., Manninger S. (2010) Topological Surfaces as Mode of Formation in Nature. Presented in Temporary and Permanent (327-342). Shanghai: International Association of Shell and Spatial Structures (IASS), 327-342
- o del Campo, M., Manninger S. (2009) Sense and Advanced Sensibility – About the Relationship of Sensuality, Obsessions and Advanced Design Techniques. Presented in Id&T09 (155-163). Innovative Design and Construction Technologies Symposium, 155-163
- o del Campo, M., Manninger S. (2009) Sense and Advanced Sensibility – About the Relationship of Sensuality, Obsessions and Advanced Design Techniques. Presented Computational Design Modeling (165-175). Berlin: Design Modeling Symposium, 165-175
- o del Campo, M., Manninger S. (2008). Speculations on Tissue Engineering and Architecture. Presented in Silicon + Skin (82-87). Minnesota: Association for Computer Aided Design in Architecture (ACADIA), 82-87.
- o del Campo, M., Manninger S. (2008). Machinic Ornament – On Machinic Ornamentation, Structural Implications and Architectural Affect. Presented in 3rd CNC Milling Technology in Architecture, Art and Design Conference (nn). Vienna: 3rd CNC Milling Technology in Architecture, Art and Design Conference, nn.
- o del Campo, M., Manninger S. (2007). Performative Surfaces and Economy of Form. Presented in 2nd CNC Milling Technology in Architecture, Art and Design Conference (nn). Vienna: 2nd CNC Milling Technology in Architecture, Art and Design Conference, nn
- o del Campo, M., Manninger S. (2007). Cuts, Holes, Perforations and Bifurcations (nn). Presented in nomen nescio (nn). Venice: International Association of Shell and Spatial Structures (IASS), (nn)

Teaching, excerpts

Professorship

Assistant Professor of Practice, Taubman College of Architecture and Urban Planning, University of Michigan, 2015 - recent

Visiting Professorship

Eliel Saarinen Visiting Professor, Taubman College of Architecture and Urban Planning, University of Michigan, 2014 - 2015

Visiting Professor DIA Dessau Institute of Architecture, Advanced Architecture Studio, Dessau DE, 2011 - 2013

Studio Master

Design Studio, University of Pennsylvania School Of Design, Philadelphia PE, 2013

Advanced Architecture Studio, DIA Dessau Institute of Architecture, Dessau DE, 2009-2011

Architecture Studio, Institute for Architecture Sciences, Department of Architecture Theory, Technical University Vienna AT, 2010

Urban Strategies Post Graduate program University for Applied Arts, Vienna AT 2008, 2010, 2012

Architecture Studio, Biodigital Architecture ESARQ, Universitat Internacional de Catalunya., Barcelona ES 2009, 2010, 2012

Coordinator

Summer School, Tongji University, Shanghai CN, 2014, 2015, 2016

Summer School Atlas of Sensations of the Urban Strategies Post Graduate program University for Applied Arts, Vienna AT 2008, 2010, 2012

Workshops, excerpts

at numerous International Universities and Institutions

Digital Futures - Robotic Fabrication, Summer Workshop, Tongji University, Shanghai CN, 2014

Tsinghua University, Parametric Design Studio Beijing CN, 2012

Universität Innsbruck, Institut für Experimentelle Architektur, Parameter des Entwurfs 2012, AT

Advanced Architecture Studio , Anahuac University Mexico, MX, 2010

Hyperbody Studio, TU Delft, NL a.o.