



Xavier is Head of Design Technology and Innovation at international design practice, Hassell, where he leads design technology across all disciplines and regions. For the last decade, Xavier has been an industry leader in the field of parametric design, digital fabrication and additive manufacturing. Prior to joining Hassell, he was Co-head of Foster+Partner's internal research and development team where he worked on the Apple Headquarters, Kuwait and Beijing Airports, Yachtplus and the NBK Headquarters.

At Hassell, Xavier is developing the practice's global digital design strategy for computational design, building information modelling, visualisation and virtual reality. Alongside this he is developing technology for cross-studio design review processes.

In recent years, Xavier has built up a portfolio of space related architecture for clients such as NASA, ESA and Virgin Galactic. He is currently designing a 3D printed Mars Habitat concept for NASA.

Xavier is also a Director of Smartgeometry, a non-profit educational organisation for computational design and digital fabrication. This organisation has grown to become an independent worldwide network for computational and digital design specialists.

Xavier has held academic positions at Syracuse University (London), University of Ghent (Belgium) and The Bartlett (London). He is also a member of the RIBA's Research and Innovation Group.

Qualifications

- MSc Urban Design, The Bartlett, University College London
- MSc Architecture - Engineering, University of Ghent, Belgium

Experience

- Head of Design Technology and Innovation, Hassell
- Head of Specialist Modelling Group, Foster + Partners

XAVIER DE KESTELIER

Principal, Head of Design Technology and Innovation



Professional affiliations

- Member, Royal Institute of British Architects
- Member, RIBA Research and Innovation Committee
- Registered Architect, Architect's Registration Board
- Registered Architect, Flemish Architecture Registration Board

Project experience

- Mars Habitat Design Competition
- Beijing Airport, Beijing, China*
- Spaceport, Nevada, US*
- Kuwait Airport, Kuwait*
- Tocumen Airport, Panama*
- Queen Alia Airport, Amman, Jordan*

- London City Racecourse, London, UK*
- West Kowloon Airport, Hong Kong*
- Kai Tak Cruise Terminal, Hong Kong*
- Jeddah Transport, Jeddah, Saudi Arabia*
- Apple Flagship Stores, Worldwide*
- Bloomberg HQ, London, UK*
- Astana Library, Kazakhstan*
- Maggie's Centre, Manchester, UK*
- Safra Institute, Jerusalem, Israel*
- Nine Elms Bridge, London, UK*
- First Mission Tower, San Francisco, US*
- Citic Bank HQ, Hangzhou, China*
- BoatFleet Yachtplus, Naples, Italy*
- MIST, Masdar, Abu Dhabi, United Arab Emirates*
- The Bow, Calgary, Canada*

- NBK, Kuwait*
- Elephant House, Copenhagen, Denmark*
- Apple HQ, Cupertino, United States*
- Smithsonian Museum, Washington, US*
- Molteni Table, Milan, Italy*
- Asprey, London, UK*
- Museum of Fine Art, Boston, US*
- UN Competition, New York, US*
- Silken Hotel, London, UK*
- Urban Splash, Manchester, UK*
- LMDC Competition, New York, US*
- Eurogate, Vienna, Australia*
- QuarterMile, Edinburgh, UK*
- Centrica, Edinburgh, UK*
- More London Development, London, UK*

* Prior to joining Hassell

Publications and conferences

- 2016 - X. De Kestelier, S. Wilkinson, J. Musil, J. Dierckx, I. Gallou, "Concept Design of an Outpost for Mars using Autonomous Additive Swarm Construction", Acta Futura, Space Architecture
- 2016 - S. Wilkinson, J. Musil, J. Dierckx, I. Gallou and X. De Kestelier, "Autonomous additive construction on Mars." ASCE Earth & Space (2016).
- 2016 - A. Felder, H. Lewis, D. Piker, A. F. Pereira and X. De Kestelier, "Mechano-adaptive space frame generation based on ellipsoid packing". IASS (2016)
- 2014 - X. De Kestelier, L. Pambaguian, V. Colla, G. Cesaretti, E. Dini, "The Design of a Lunar Outpost: 3D printing regolith as a construction technique for environmental shielding on the moon", in Fabricate: Negotiating Design and Making, edited by Fabio Gramazio, Mathias Kohler and Silke Langenberg, gta Verlag, Zurich, Switzerland
- 2012 - X. De Kestelier, S. Burger and R. Woodbury, "Multi-Disciplinary Mashups - People, Technology, and Design", Proceedings of Siggraph 2012, Vancouver, Canada
- 2012 - X. De Kestelier, S. Benvenuti and Fabio Ceccanti, "Living on the Moon: Topological Optimization of a 3D-Printed Lunar Shelter", Proceedings of Nexus Conference, Relationships Between Architecture and Mathematics, Milan, Italy
- 2011 - X. De Kestelier, "Design Potential for Large-Scale Additive Fabrication : Free-form Construction", in Fabricate, edited by Ruairi Glynn & Bob Sheil, Riverside Architectural Press, London

- 2010 - F. Ceccanti (Alta SpA, Pisa), E. Dini (Monolite Ltd., London), X. De Kestelier (Foster+Partners), V. Colla (SSSA-PERCRO, Pisa), L. Pambaguian (ESA/ESTEC), "3D Printing Technology for a Moon Outpost Exploiting Lunar Soil", in proceedings of the 61st International Astronautical Congress
- 2009 - X. De Kestelier, R.A. Buswell, "A digital design environment for large scale additive fabrication", Proceedings of Acadia2009, reForm() conference, Chicago USA, 22nd October 2009.
- 2009 - X. De Kestelier, S. Bernaerdt, K. Van Hauwaert, "Large Scale Rapid Manufacturing for Construction Industry: the Architecture of a new Design Environment", unpublished dissertation at the Department of Architecture and Urban Design, University Ghent
- 2008 - X. De Kestelier, B. Peters. Rapid Prototyping and Rapid Manufacturing at Foster+Partners. Proceedings of the ACADIA 08 Conference Minneapolis: Proceedings of the 28th Annual Conference of the Association for Computer Aided Design in Architecture
- 2008 - X. De Kestelier, B. Peters, "Rapid Prototyping and Rapid Manufacturing at Foster + Partners," 2008, in Silicon and Skin, Proceedings of the ACADIA 2008 Conference, edited by Andrew Kudless, Marc Swackhammer, Neri Oxman.
- 2006 - X. De Kestelier, B. Peters, "The Work of Foster and Partners Specialist Modeling Group," in Bridges Conference Proceedings 2006, St Albans. Tarquin Publications. 2005 - "Zoeken naar de ultieme CAD-tools", deel I, in A+193, april-mei issue

- 2005 - "CAD-tools bij Foster and Partners", deel II, in A+194, juni-july issue b

Exhibitions

- 2011 - "Fabrication Laboratory", DHUB, Barcelona, Spain
- 2011 - Innovate_Integrate, Center for Architecture, New York, United States
- 2011 - Stazione Futuro, Esperienza, Italia 150, Torino, Italy
- 2010 - "Working Prototypes. Design, Manufacture, Test!", Disseny Hub, Barcelona, Spain
- 2008 - "Beyond Measure: Conversations Across Art and Space", Cambridge, UK
- 2008 - "Design and Computation", Siggraph, San Francisco, United States
- 2008 - "(Im)material Processes: New Digital Techniques for Architecture", Architecture Biennial, Beijing, China
- 2008 - "Digital Explorers," at Metropolitan Works Gallery, London, UK
- 2008 - "Beyond Measure: Conversations Across Art and Science," at Kettle's Yard Gallery, Cambridge, UK
- 2006 - "The Building Centre 75th Anniversary Exhibition: Information and Inspiration," at The Building Centre, London, UK

