



Professor Romain Mesnil



Figure A.7: Roof of the Savill Building

From: R. Mesnil, “Stability of elastic grid shells”, Master’s Thesis, MIT Structural Design Laboratory, 2013

See:

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Selected Publications:

R. Mesnil, “Stability of elastic grid shells”, Master’s Thesis, MIT Structural Design Laboratory, 2013

Romain Mesnil, “Structural explorations of fabrication-aware design spaces for non-standard architecture”, Ph.D Dissertation, University Paris-East, (Not dated in the pdf file; the most recent reference in the bibliography is dated 2016. Several of the author’s relevant papers are dated 2017.)

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Romain Mesnil, John Ochsendorf and Cyril Douthe, “Stability of pseudo-funicular elastic grid shells”, International Journal of Space Structures, Vol. 30, No. 1, pp 27-37, 2015

Romain Mesnil, Yann Santerre, Cyril Douthe, Olivier Baverel and Bruno Leger, “Generating high node congruence in freeform structures with Monge’s surfaces”, Proceedings of the International Association for Shell and Spatial Structures (IASS) Symposium, Amsterdam, The Netherlands, 17-20 August 2015

Romain Mesnil, Cyril Douthe, Olivier Baverel, Bruno Leger and Jean-Francois Caron, “Isogonal moulding surfaces: A family of shapes for high node congruence in free-form structures”, Automation in Construction, November 2015, DOI: 10.1016/j.autcon.2015.07.009

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Cyril Douthe, Romain Mesnil, Hugo Orts and Olivier Baverel, “New shapes for elastic gridshells covered by planar facets”, Proceedings of the IASS Annual Symposium, “Spatial Structures in the 21st Century, Tokyo, Japan, K. Kawaguchi, M. Ohsaki and T. Takeuchi (Editors), 26-30 September, 2016

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Romain Mesnil, Cyril Douthe, Olivier Baverel and Bruno Leger, "Linear buckling of quadrangular and kagome gridshells: A comparative assessment", *Engineering Structures*, Vol. 132, pp 337-348, February 2017

Romain Mesnil, Olivier Baverel, Cyril Douthe, Jean-Francois Caron and Bruno Leger, "Structural morphology and performance of plated structures with planar quadrilateral facets", *Journal of the International Association for Shell and Spatial Structures*, Vol. 58, No. 1, pp 7-22, March 2017; Special Issue: New Directions for Shell Structures, edited by S. Adraïenssens and P. Block

Romain Mesnil, Cyril Douthe and Olivier Baverel, "Non-Standard Patterns for Gridshell Structures: Fabrication and Structural Optimization", *Journal of the International Association for Shell and Spatial Structures*, Vol. 58 (2017) No. 4 December n. 194, pp. 277-286

Romain Mesnil, Cyril Douthe, Olivier Baverel and Bruno Leger, "Marionette meshes: Modelling free-form architecture with planar facets", *International Journal of Space Structures*, September 2017, DOI:

10.1177/0266351117738379

Cyril Douthe, Romain Mesnil, Olivier Baverel, Tristan Gobin, Xavier Tellier, Nicolas Ducoulombier and Nicolas Montagne, "Design and construction of a shell-nexorade hybrid timber structure", *Proceedings of the IASS Annual Symposium*, MIT, Boston, USA, July 16-20, 2018

Romain Mesnil, Cyril Douthe, Olivier Baverel and Tristan Gobin, "Form finding of nexorades using the translations method", *Automation in Construction*, Vol. 95, pp 142-154, 2018

Romain Mesnil, "A Re-Parameterization Approach for the Construction of Domes with Planar Facets", *Journal of the International Association for Shell and Spatial Structures*, Vol. 59 (2018) No. 4 December n. 198, pp. 286-295

R. Oval, M. Rippmann, R. Mesnil, T. Van Mele, O. Baverel and P. Block, "Feature-based topology finding of patterns for shell structures", *Automation in Construction*, February 2019