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**Selected Publications:**

**Book:**

Karam Sab and Arthur Lebé, Homogenization of Heterogeneous Thin and Thick Plates, Mechanical Engineering and Solid Mechanics Series, Wiley, 2015, 294 pages

**Journal Articles, etc.:**

Lebé, A. & Sab, K. (2010). Transverse shear stiffness of a chevron folded core used in sandwich construction. International Journal of Solids and Structures, 47, 2620 – 2629

A. Lebé. Homogénéisation de plaques périodiques épaisses, application aux panneaux sandwichs à âme pliable en chevrons. PhD thesis, Université Paris-Est, 2011.

Arthur Lebé, Karam Sab. A Bending-Gradient theory for thick laminated plates homogenization. Altenbach, Holm and Maugin, Gérard and Erofeev, Vladimir. Mechanics of Generalized Continua, Springer Berlin Heidelberg, pp.77-95, 2011

Lebé, A. and Sab, K. A bending-gradient model for thick plates. Part I: Theory. Int. J.Solids Struct. (2011) 48:2878-2888.

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Lebé, A. and Sab, K. Homogenization of thick periodic plates: application of the Bending-Gradient plate theory to a folded core sandwich panel. Int. J. Solids Struct. (2012) 49:2778-2792.

Lebé, A. and Sab, K. Homogenization of a space frame as a thick plate: application of the Bending-Gradient plate theory to a beam lattice. Comput. Struct. (2013) 127:88-101.

Arthur Lebé, Gilles Foret. Stiffness and stress efficiency of periodic reinforcing pads for FPSO’s hull. Journées Nationales sur les Composites, June 2013, France. pp.# 170, 2013.

Lebé, A, From Folds To Structure, A Review, International Journal of Space Structures, 30, 2, 2015, 55-74.

Olivier Perret, Arthur Lebée, Cyril Douthe and Karam Sab, "The Bending-Gradient theory for the linear buckling of thick plates: Application to cross laminated timber panels", *International Journal of Solids and Structures*, Vol. 87, pp 139-152, June 2016

Lorenzo Franzoni, Arthur Lebée, Florent Lyon and Gilles Foret, "Bending behavior of regularly spaced CLT panels", *World Conference on Timber Engineering (WCTE 2016)*, Vienna, Austria, August 22-25, 2016

Lorenzo Franzoni, Dhionis Dhima, Arthur Lebée, Florent Lyon and Gilles Foret, "A stiffness-based approach to analyze the fire behavior of cross laminated timber floors", *Structural Engineering International*, November 2016

H. Nassar, A. Lebée and L. Monasse, "Curvature, metric and parametrization of origami tessellations: theory and application to the eggbox pattern", *Proceedings of the Royal Society A*, Vol. 473, No. 2197, 25 January 2017

L. Franzoni, A. Lebée, F. Lyon and G. Foret, "Elastic behavior of cross laminated timber and timber panels with regular gaps: Thick-plate modeling and experimental validation", *Engineering Structures*, March 2017

Hussein Nassar, Arthur Lebée and Laurent Monasse, "Macroscopic deformation modes of origami tessellations and periodic pin-jointed trusses: The case of the eggbox", *Proceedings of the IASS Annual Symposium 2017, "Interfaces: Architecture, Engineering, Science"*, Hamburg, Germany 25-28 September, 2017

Arthur Lebée, Laurent Monasse, H. Nassar. Fitting surfaces with the Miura tessellation. *7th International Meeting on Origami in Science, Mathematics and Education (7OSME)*, Sep 2018, Oxford, United Kingdom. pp.811.

Tulio Honorio, Laurent Brochard, Matthieu Vandamme and Arthur Lebée, "Flexibility of nanolayers and stacks: Implications in the nanostructuring of clays", *Soft Matter*, August 2018

Olivier Perret, Arthur Lebée, Cyril Douthe, Karam Sab. Experimental determination of the equivalent-layer shear stiffness of CLT through four-point bending of sandwich beams. *Construction and Building Materials*, Elsevier, 2018, 186, pp.1132-1143.

Avelino, Ricardo Maia; Baverel, Olivier; Lebée, Arthur, "Design Strategies for Gridshells with Singularities", *Journal of the International Association for Shell and Spatial Structures*, Vol. 60 (2019) No. 3, 15 September pp. 189-200

Pierre Margerit, Arthur Lebée, Jean-François Caron, Kerem Ege, Xavier Boutillon, "The High-Resolution Wavevector Analysis for the characterization of the dynamic response of composite plates", *Journal of Sound and Vibration*, Vol. 458, pp 177-196, 13 October 2019

Olivier Perret, Cyril Douthe, Arthur Lebée and Karam Sab, "A shear strength criterion for the buckling analysis of CLT walls", *Engineering Structures*, Vol. 211, Article ID 110344, May 2020

Nadine Bejjani, Pierre Margerit, Karam Sab, Joanna Bodgi and Arthur Lebée, "The Bending-Gradient theory for flexural wave propagation in composite plates", *International Journal of Solids and Structures*, Vol. 191-192, pp 99-109, 15 May 2020