Professor Christophe Bouvet

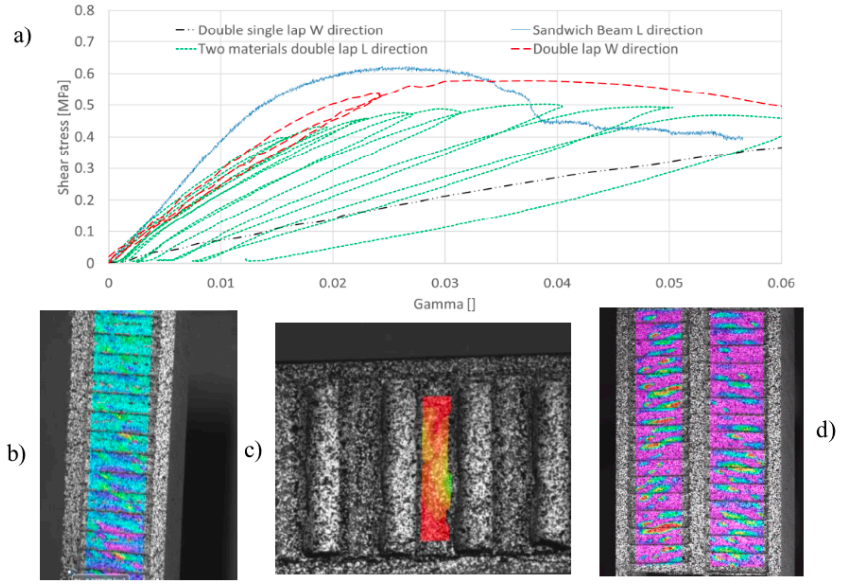

Figure 2: Test results: a) Average shear stress vs gamma curves, b) Buckling of the double single lap specimen, c) Buckling of the sandwich beam, d) Buckling o the double lap specimen

From: J. D. D. Rodríguez-Ramírez, B. Castanié, and C. Bouvet, "Analysis of nonlinear behavior on honeycomb cores", 21st International Conference on Composite Materials, Xi'an, China, 20-25 August 2017

See:
https://www.researchgate.net/profile/Christophe_Bouvet
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Selected Publications:

Castanié B, Bouvet C., Barrau J.-J. et al. Multi-level modeling of low velocity, low energy impact on metal-skinned sandwich structure. ASME 8th Biennial Conference on Engineering Systems Design and Analysis. American Society of Mechanical Engineers; 2006, p. 705–714.
B. Castanié, Y. Aminanda, C. Bouvet, and J.-J. Barrau, "Core crush criterion to determine the strength of sandwich composite structures subjected to compression after impact," Compos. Struct., vol. 86, no. 1–3, pp. 243–250, 2008.
Castanie B, Bouvet C, Aminanda Y, Barrau JJ, Thevenet P. Modelling of low-energy/low-velocity impact on Nomex honeycomb sandwich structures with metallic skins. Int J Impact Eng 2008;35:620–634
Amir Shahdin , Laurent Mezeix , Christophe Bouvet , Joseph Morlier and Yves Gourinat, Fabrication and mechanical testing of glass fiber entangled sandwich beams: A comparison with honeycomb and foam sandwich beams, Composite Structures, vol. ISSN 0263-8223, (2009), pp 404-413.
E. Abi Abdallah, C. Bouvet, S. Rivallant, B. Broll, and J.-J. Barrau, Experimental analysis of damage creation and permanent indentation on highly oriented plates, Compos. Sci. Technol., vol. 69, no. 7–8, pp. 1238–1245, 2009.
C. Bouvet, B. Castanie, M. Bizeul, and J.J. Barrau, Low velocity impact modelling in laminate composite panels with discrete interface elements, Int. J. Solids Struct. 46(14–15) (2009), pp. 2809–2821.
Bouvet, C., Rivallant, S., & Barrau, July 2010. Modelling of impact damage and permanent indentation on laminate composite plate. In: 14th European Conference on Composite Materials (ECCM-14), Budapest, Hungary.
Amir Shahdin, Laurent Mezeix, Christophe Bouvet, Joseph Morlier and Yves Gourinat. Fabrication and mechanical testing of a new sandwich structure with carbon fiber network core. Journal of Sandwich Structures

and Materials, 2010, vol.12 (n° 5). pp. 569-589. ISSN 1099-6362
Amir Shahdin, Joseph Morlier, Laurent Mezeix, Christophe Bouvet and Yves Gourinat, "Evaluation of the impact resistance of various composite sandwich beams by vibration tests", Shock and Vibration, Vol. 18, pp 769-805, 2011
Bouvet C, Rivallant S, Barrau J (2012) Low velocity impact modeling in composite laminates capturing permanent indentation. Compos Sci Technol 72:1977–1988
Christophe Bouvet, Natthawat Hongkarnjanakul, Samuel Rivallant, Jean-Jacques Barrau. Discrete Impact Modeling of Inter- and Intra-laminar Failure in Composites. Dynamic Failure of Composite and Sandwich Structures, 192, 2013, Solid Mechanics and Its Applications, 978-94-007-5329-7. <10.1007/978-94-007-5329-7_8>
Hongkarnjanakul, Natthawat and Rivallant, Samuel and Bouvet, Christophe and Miranda, Arturo Permanent indentation characterization for low-velocity impact modelling using three-point bending test. (2013) Journal of Composite Materials. ISSN 0021-9983
Amelie Kolopp, Samuel Rivallant and Christophe Bouvet, "Experimental study of sandwich structures as armour against medium-velocity impacts", International Journal of Impact Engineering, Vol. 61, pp 24-35, November 2013
Abdulhamid H, Kolopp A, Bouvet C, Rivallant S, 2013. Experimental and numerical study of AA5086-H111 aluminium plates subjected to impact, International Journal of Impact Engineering, Vol. 51, Elsevier.
Rivallant S, Bouvet C, Hongkarnjanakul N (2013) Failure analysis of CFRP laminates subjected to compression after impact: fe simulation using discrete interface elements. Compos A 55:83–93
Hongkarnjanakul N, Bouvet C, Rivallant S (2013) Validation of low velocity impact modelling on different stacking sequences of CFRP laminates and influence of fibre failure. Compos Struct 106:549–559
Amelie Kolopp, Raquel A. Alvarado, Samuel Rivallant and Christophe Bouvet, "Modeling impact on aluminium sandwich including velocity effects in honeycomb core", Journal of Sandwich Structures & Materials, Vol. 15, No. 6, pp 733-757, November 2013
Israr Ahmad Hab, Rivallant, S, Bouvet, C, Barrau, J-J. Finite element simulation of 0°/90° CFRP laminated plates subjected to crushing using a free-face-crushing concept. Compos Part A: Appl Sci Manuf 2014; 62: 16–25.
H.A. Israr, N. Hongkamjanakul, S. Rivallant and C. Bouvet, "Post-impact investigation of CFRP Laminated Plate", Jurnal Teknologi, Vol. 71, No. 2, pp 71-78, 2014
H. Abdulhamid, Ch. Bouvet, L. Michel, J. Aboissière, C. Minot, Influence of internally dropped-off plies on the impact damage of asymmetrically tapered laminated CFRP, Compos Part A, 68 (2015), pp. 110-120
Ostré, B, Bouvet, C, Lachaud, F. Edge impact damage scenario on stiffened composite structure. J Compos Mater 2015; 49: 1599–1612.
H Abdulhamid, C Bouvet, L Michel, J Aboissiere, C Minot, "Numerical simulation of impact and compression after impact of asymmetrically tapered laminated CFRP", Int J Impact Eng, 95 (2016), pp. 154-164
B. Ostré, C. Bouvet, C. Minot, and J. Aboissière, "Experimental analysis of CFRP laminates subjected to compression after edge impact," Compos. Struct., 152, 767-778 (2016).
Serra J, Pierré JE, Passieux JC, Périé JN, Bouvet C, Castanié B. Validation and modeling of aeronautical composite structures subjected to combined loadings: the VERTEX project. Part 1: experimental setup, FE-DIC instrumentation and procedures. Compos Struct 2017;179:224–44.
Serra J, Pierré JE, Passieux JC, Périé JN, Bouvet C, Castanié B, et al. Validation and modeling of aeronautical composite structures subjected to combined loadings: the VERTEX Project. Part 2: load envelopes for the assessment of panels with large notches. Compos Struct 2017;180:550–67.
J. D. D. Rodríguez-Ramírez, B. Castanié, and C. Bouvet, "Analysis of nonlinear behavior on honeycomb cores", 21st International Conference on Composite Materials, Xi'an, China, 20-25 August 2017
J. D. D. Rodríguez-Ramírez, B. Castanié, and C. Bouvet, "Damage Mechanics Modelling of the shear nonlinear behavior of Nomex honeycomb core. Application to sandwich beams," Mech. Adv. Mater. Struc., pp. 1–10, 2018.
J. de D. Rodríguez Ramírez, B. Castanié, and C. Bouvet, "Experimental and numerical analysis of the shear nonlinear behavior of the Nomex honeycomb core: application to insert sizing," Compos. Struct., vol. 193, pp. 121–139, 2018.
N. Dubary, C. Bouvet, S. Rivallant, L. Ratsifandrihana, Damage tolerance of an impacted composite laminate, Compos Struct, 206 (2018), pp. 261-271

J.D.D. Rodriguez-Ramirez, B. Castanie and C. Bouvet, “Virtual testing of metallic inserts for sandwich structures”, ECCM18 – 18th European Conference on Composite Materials, Athens, Greece, 24-28 June, 2018
Mezeix L, Dols S, Bouvet C, Castanié B, Giavarini J-P, Hongkarnjanakul N. Experimental analysis of impact and post-impact behaviour of inserts in Carbon sandwich structures. J Sand Struct Mater, on line. http://dx.doi.org/10.1177/ 1099636216687582.
Laurent Mezeix, Simon Dois, Christophe Bouvet, Bruno Castanie, Jena-Paul Giavarini and Natthawat Hongkarnjanakui, “Experimental analysis of impact and post-impact behaviour of inserts in carbon sandwich structures”, Journal of Sandwich Structures & Materials, Vol. 21, No. 1, pp 135-153, January 1, 2019
John Susainathan, Florent Eyma, Emmanuel De Luycker, Arthur Cantarel, Chrisophe Bouvet and Bruno Castanie, “Experimental investigation of compression and compression after impact of wood-based sandwich structures”, Composite Structures, Vol. 220, pp 236-249, 15 July 2019
A. Trellu, G. Pichon, C. Bouvet, S. Rivallant, B. Castanie, J. Serra and L. Ratsifandrihana, “Combined loadings after medium velocity impact on large CFRP laminate plates: Tests and enhanced computation/testing dialogue”, Composites Science and Technology, Vol. 196, Article 108194, 18 August 2020
Bruno Castanie , Christophe Bouvet , Malo Ginot , Review of Composite Sandwich Structure in Aeronautic Applications, Composites Part C: Open Access (2020), doi: https://doi.org/10.1016/j.jcomc.2020.100004