

Fig. 3. Numerical model of two-layered CSPs (Take regular configuration for example).

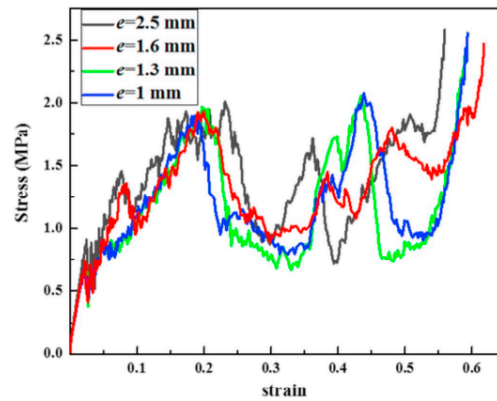


Fig. 4. Comparison of stress-strain curves for two-layered regular CSPs with different mesh sizes.

Material failure occurs when the failure factor  $R_i (f_t, f_c, m_t, m_c) > 1.0$ . The stiffness degradation parameters corresponded to different failure modes are shown in Table 2.

From: Liming Chen, Shiwei Peng, Jian Liu, Houchang Liu, Liliang Chen, Bing Du, Weiguo Li and Daining Fang, "Compressive response of multi-layered thermoplastic composite corrugated sandwich panels: Modelling and experiments", *Composites Part B*, Vol. 189, 107899, 2020



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### Summary:

After graduating from the College of Aerospace Engineering in Chongqing University, I am working in the Department of Composite Materials and Engineering at Chongqing University of Science and Technology. My current research interest is the design, fabrication and investigation of the mechanical properties of thermoplastic composite structures by means of analytical, numerical and experimental methods.

### Selected Publications:

Liming Chen, Bing Du, Jian Zhang, Hao Zhou, Diansen Li and Daining Fang, "Numerical study on the projectile impact resistance of multi-layer sandwich panels with cellular cores", *Latin American Journal of Solids and Structures*, Vol. 13, pp 2876-2895, 2016

Du, B., Chen, L. M., Zhou, H., Guo, Y. G., Zhang, J., Peng, S. W., Liu, H. C., Li, W. G. and Fang, D. N. [2017] "Fabrication and flatwise compression property of glass fiber-reinforced Polypropylene corrugated sandwich panel," *International Journal of Applied Mechanics* 9(8), 1750110.

Liu, H., Chen, L., Du, B., Peng, S., Guo, Y., Zhao, Y., Chen, L., Zhou, H., Li, W., Liu, P., Flatwise Compression Property of Hierarchical Thermoplastic Composite Square Lattice, *Composite Structures* (2018)

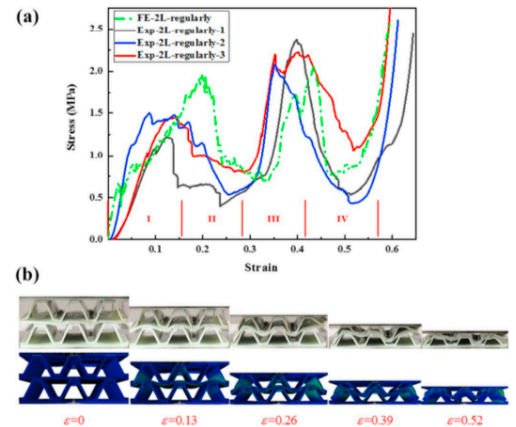
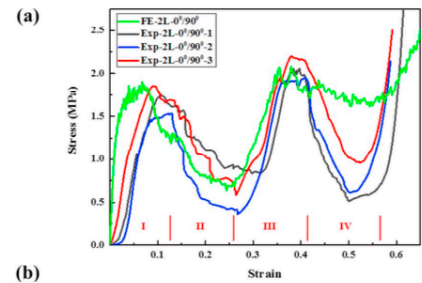


Fig. 5. The compressive responses of two-layered regular CSPs in experiment and simulation: (a) Stress-strain curves and (b) deformation processes.



Liming Chen, Jian Zhang, Bing Du, Hao Zhou, Houchang Liu, Yongguang Guo, Weiguo Li and Daining Fang, "Dynamic crushing behavior and energy absorption of graded lattice cylindrical structure under axial impact load", *Thin-Walled Structures*, Vol. 127, pp 333-343, 2018

Bing Du, Liming Chen, Wenjun Wu, Houchang Liu, Yang Zhao, Shiwei Peng, Yongguang Guo, Hao Zhou, Liliang Chen, Weiguo Li and Daining Fang, "A novel hierarchical thermoplastic composite honeycomb cylindrical structure: Fabrication and axial compressive properties", *Composites Science and Technology*, Vol. 164, pp 136-145, August 2018

Bing Du, Liming Chen, Jingyan Tan, Hao Zhou, Yang Zhao, Wenjun Wu, Weiguo Li, Daining Fang and Liliang Chen, "Fabrication and bending behavior of thermoplastic composite curved corrugated sandwich beam with interface enhancement", *International Journal of Mechanical Sciences*, Vol. 149, pp 101-111, December 2018

Yu Duan, Bing Du, Xiaopeng Shi, Bing Hou, Yulong Li, "Quasi-static and dynamic compressive properties and deformation mechanisms of 3D printed polymeric cellular structures with Kelvin cells", *International Journal of Impact Engineering*, Vol. 132, Article 103303, October 2019

Liming Chen, Shiwei Peng, Jian Liu, Houchang Liu, Liliang Chen, Bing Du, Weiguo Li and Daining Fang, "Compressive response of multi-layered thermoplastic composite corrugated sandwich panels: Modelling and experiments", *Composites Part B*, Vol. 189, 107899, 2020