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Mechanical Metamaterials: Optimization and New Design Ideas

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Message from the Guest Editors

Mechanical metamaterials are artificial structures that have properties contrary to conventional mechanical properties, realized mainly by carefully constructing the geometric structure of the microstructure units rather than their material composition. Although mechanical metamaterials have been extensively studied in recent years, the potential of their performances has not been fully reached, mostly due to the limitation of design techniques. To give full play to their excellent and diverse mechanical properties, novel optimization methods and new design ideas are desired.

This Special Issue explores the latest research in structural optimization methods for enhancing the functionalities of mechanical metamaterials, including size, shape, and topology optimization strategies, and new ideas for designing novel mechanical metamaterials with prominent and diverse mechanical properties, e.g., origami/kirigami techniques and artificial intelligence.

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Message from the Editor-in-Chief

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