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### Functionally graded shape memory alloys and their applications

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Functionally graded shape memory alloys have the advantage of joining the properties of shape memory materials and those of functionally graded structures. By proper material and structural design, they can exhibit new and complex thermomechanical behaviour that are different from uniform shape memory alloys. One of their advantages is their expanded transformation stress and temperature windows which provide improved controllability in actuating application. This study reports on the general concept, fabrication, experimentation and modelling of several designs of functionally graded NiTi alloys, including compositionally graded, microstructurally graded and geometrically graded NiTi structures, and the various techniques that may be used to create them.

#### Biography

Bashir S Shariat has completed his PhD in 2013 at the University of Western Australia. Then, he pursued Post-doctoral studies at the same university. He has published more than 20 papers in reputed journals in the field of Material Science and Mechanical Engineering.

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