

Review on the grand challenges for engineering: a framework for the future

ABSTRACT

The paper presents the thrust research outcomes to solve the engineering grand challenges for the 21st century. Fourteen grand challenges were addressed and introduced in 2008 as a framework that capture the most immediate solution engineers need to address within the 21st century by the National Academy of Engineers. The grand challenges are grouped as 14 grand challenges in order to create focus groups. The fourteen challenges are comprehensively presented and a framework classification to identify our research directions towards societal purpose and value is presented.

Keyword: Grand challenges; Sustainable strategy; Engineering solutions; Grand challenges