Mini-Symposium Title: **Data-driven Modeling and Design of Functionally Graded Materials**

**Organizers:**

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**Description:**

Functionally Graded Materials (FGM) attract renewed interest with the advancements in manufacturing techniques. However, it is still a challenging task to discover and design FGMs with optimal properties, functionalities, and performances. The challenges include i) the high dimensionality of the design space, ii) computational costs in predicting FGM performances, and iii) uncertainties induced by manufacturing, material heterogeneity, etc. Recently, many data-driven and machine learning-assisted approaches have seen successes in FGM-related research. This symposium will not only welcome applications of data-driven approaches to model, design, and manufacture a wide variety of FGMs but also dive deep into the issue of combining data-driven approaches with physics-based theories.