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**Spatially Aligning Datasets from Multiple Sections,
Sources and Sensors**

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Three-dimensional microstructural analysis can be greatly enhanced by combining information from sequential sets of images (such as during serial sectioning, or computed tomography), and/or the combination of information from multiple sensors (such as combining EBSD data with optical micrographs). However aligning these sets of data to make a coherent 3D reconstruction using manual methods can be highly labor intensive and difficult, especially if there are spatial distortions present within the datasets. In this talk we will present a number of image processing techniques that can greatly reduce the efforts involved in spatially aligning datasets with a number of practical examples of how these techniques can be applied.