How are Segmentation and Binding Computed and Represented in the Brain?

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As the Gestalt Psychologists observed a hundred years ago, our brain has the ability to extract from the sensory input as well as represent to our mind arrays of sensory elements that somehow relate to each other and that can, in their entirety, be subsumed under a particular abstract form, a "gestalt." This raises questions: How are sensory elements represented by neurons in our brain? How is the relatedness of sensory elements determined (the segmentation problem)? How are the relations of these elements expressed (the binding problem)? How is the subsumption of coherent arrays of elements under a comprehensive abstract form determined (the problem of comprehension) and how is this subsumption expressed in neural terms? I will describe a conceptual framework that gives answers to these questions.