

Abstract: I will describe some of my recent work on defects in supersymmetric field theories. The first part of my talk is focused on line defects in certain large classes of 4d $N=2$ theories and 3d $N=2$ theories. I will describe geometric methods to compute the ground states spectrum of the bulk-defect system, as well as implications on the construction of link invariants. In the second part I will talk about some perspectives of surface defects in 4d $N=2$ theories and related applications on the exact WKB method for ordinary differential equations. This talk is based on past joint work with A. Neitzke, various work in progress with D. Gaiotto, S. Jeong, A. Khan, G. Moore, as well as work by myself.