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*Cutting and gluing in symplectic geometry*

Surgery operations like “connected sum” have been standard tools in differential geometry for many years. In the last decade two operations of this type: “cutting” and “gluing” have become standard tools in symplectic geometry as well. In this lecture I will describe a number of recent developments in which these operations have played a role, among them the solution of the “quantization commutes with reduction” conjecture, an elementary proof of the Kirwan convexity theorem and the construction of many interesting examples of non-Kaehlerizable symplectic manifolds.