

# Topological approaches to contact geometry

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## Abstract

Contact geometry is the odd-dimensional cousin of symplectic geometry. Defined in terms of differential forms, contact geometry has an inherently analytical flavor. Perhaps surprisingly, significant advances in the field have also come from tools of purely topological nature. The most striking instance of this is the celebrated Giroux Correspondence between contact structures and “open book” decompositions of a three-manifold. After introducing the basic objects of study, I’ll describe the Giroux Correspondence and some of its consequences. Time permitting, I’ll mention some other settings where analytical notions in contact geometry can be recast in topological terms.