

# Contact manifolds as boundaries of symplectic manifolds

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There are two principal relations between contact and symplectic topology: Either one can look for symplectic hypersurfaces in a contact manifold, or as will be interesting to us in this talk, one can try to study contact hypersurfaces of a symplectic manifold.

More specifically, we want to view contact manifolds as boundaries of symplectic manifolds. For this we need to first explain several compatibility conditions that the contact structure on the boundary should satisfy with respect to the symplectic structure.

At the end several obstructions will be discussed that show that many contact manifolds are not the outer boundary of any symplectic manifold. Such manifolds are said to be non-fillable.