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Symplectic structures on closed manifolds

The classification of symplectic structures on closed (even) dimensional manifolds is a relatively new subject. Projective and Kähler manifolds provide a rich source of examples. But the scope of symplectic manifolds is far beyond.

We have made tremendous progress in dimension 4 via the pseudo-holomorphic curves theory and the Seiberg-Witten theory. I will describe some results in this direction. I will also briefly mention the symplectic minimal model program in higher dimensions, especially in dimension 6.