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## Oberseminar Dynamische Systeme

### On the Hofer-Zehnder capacity for twisted tangent bundles over closed surfaces

Dienstag, 12. Januar 2021  
16:15 Uhr – per Zoom

**Johanna Bimmermann**  
(Heidelberg)

#### Abstract:

In this talk I will present the computation of the Hofer–Zehnder capacity for magnetic systems on closed surfaces with constant (weak) magnetic field. While finding a lower bound for the Hofer–Zehnder capacity is relatively easy, as any admissible Hamiltonian function provides one, finding an upper bound is much harder. By a theorem of G. Lu for closed symplectic manifolds an upper bound is given by the symplectic area of a homology class that has a non-vanishing Gromov–Witten invariant. Our strategy is therefore, to find an embedding of the magnetic system into a closed symplectic manifold. We will then use the theorem to find an upper bound of the Hofer–Zehnder capacity. Finally we will see that upper and lower bound agree and therefore determine the Hofer-Zehnder capacity.

Guests are very welcome!