

## Guido Mazzuca

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$$\mathcal{M} \subset \mathbb{R}^{2n}, \quad H(p, q), \quad d\mu \propto e^{-\beta H(p, q)} dp dq$$

- **Almost Integrable Systems**

- *adiabatic invariants*;
- consider them as perturbation of a **nonlinear** integrable system.

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- **Integrable Systems**

- Correlation functions;
- Universal behaviour of solutions;
- Random Matrix Theory plays a crucial role.

$$\dot{L} = [L; B]$$

Random Matrix	Integrable System
$G\beta E$	Toda lattice
$C\beta E$	Ablowitz-Ladik lattice
$J\beta E$	Schur flow
$AG\beta E$	Volterra lattice