



EINLADUNG

im Rahmen Literaturseminars

zum Vortrag

von

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über

***„Compactness of minimizing sequences
for the Einstein-Vlasov system“***

Abstract:

It is well-known that spherically symmetric steady states of the Vlasov-Poisson system can be obtained as minimizers of an energy-Casimir functional. This has played an important role for the celebrated stability results in that case.

It is also well-known, cf. the recent review paper by Rein arXiv:2305.02098, that there are no analogue results for the Einstein-Vlasov system, mainly due to lack of compactness.

In this talk I will close this gap by showing compactness of minimizing sequences to a particle-number-Casimir functional, which then implies the existence of a minimizer. Under a regularity assumption it follows that the minimizer is a steady state of the spherically symmetric Einstein-Vlasov system.

As a consequence of the proof, a condition arises which we believe is sufficient for non-linear stability.

All claimed conditions of this type have so far been disproved in numerical studies. This is a joint work with Markus Kunze.

Ort: Seminarraum A, Währinger Straße 17, 2. Stock

Zeit: Mittwoch, 29.11.2023, 14.15 h - Seminarraum A, Währinger Straße 17, 2. Stock

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gez.: P. Chrusciel, D. Fajman