Statisztikus Fizika Szemináriumok

2019. december 11.
szerda, 11.00
ELTE TTK Északi Tömb 2.54

Norbert Barankai

Onsager's ideal turbulence: Rigidity proofs above the threshold and Shnirelmann's dissipative solutiuon in 3D

In 1949, Lars Onsager wrote the article entitled ´Statistical hydrodynamics´ which appeared in Nouvo Cimento. This is the only published work of Onsager in the field of turbulence. However, his insights led him to groundbreaking contributions to turbulence theory in two and three spatial dimensions. In three dimensions, Onsager formulated a conjecture concerning regularity of incompressible solutions of Euler equations and the anomalous dissipation observed in ideal turbulent flows.

In this seminar, we continue the review of 'ideal turbulence´. Above threshold results of Eyink and Constantin, Weinan & Titi will be presented. We will review in detail the below-threshold construction of Shnirelmann. Other particular constructions will be also mentioned.