Contribution ID: **12**   Type: **not specified**

Reciprocity and symplecticity

Tuesday, 18 September 2018 12:00 (30 minutes)

Reciprocity relations in physics signal the existence of potentiality of a system. Maxwell-Betti reciprocity for virtual work in elasticity, Onsager's reciprocity in thermodynamics or quantum mechanical reciprocity of the received signal all state that the observables are unchanged when the input and output agents are traversed. Those distinct systems share a similar property: they are defined under some well-defined potential. The work we present here grew out of questioning what kind of potentiality Etherington's distance reciprocity in relativity corresponds to. The outcome of such an investigation turns out to be a symplectic phase space reformulation of first order geometric optics in relativity.

Presenter: UZUN, Nezihe (Ústav teoretické fyziky MFF UK)

Session Classification: Tuesday Session 2