

**PhD research topic proposal**  
**BME, Doctoral School of Mathematics and Computer Science**

**Name and degree of supervisor :**

**Stipsicz, András, DSc, Member of HAS**

**Are you willing to supervise Stipendium Hungaricum applicants?**

No

**Title of the topic:**

**Legendrian knots in contact three-manifolds**

**Short description:**

Legendrian knots admit two classical invariants (the rotation number and the Thurston-Bennequin number), but it is known that these do not characterize them. Further Legendrian invariants can be derived from knot Floer homology, and the project aims to understand these invariants better.

**Requirements:**

Prerequisite: topology, manifold topology, algebraic topology

**Contact:**

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**Place of work:**

Rényi Institute