

# Knots-quivers correspondence

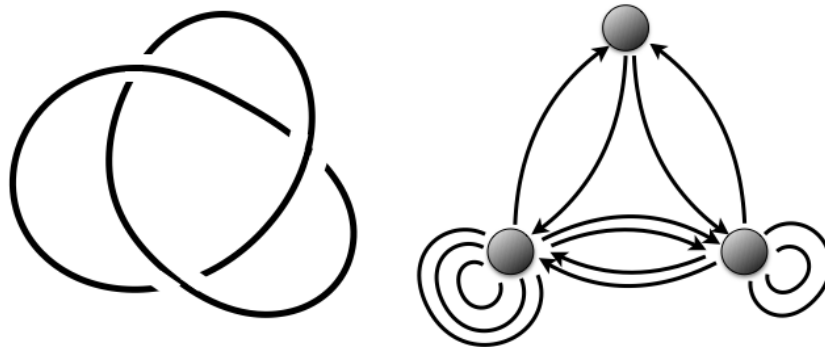
Piotr Sułkowski

I will present a surprising relation between knot invariants and quiver representation theory, motivated by various string theory constructions involving BPS states. Consequences of this relation include explicit (and unknown before) formulas for colored HOMFLY polynomials for various knots, new viewpoint on knot homologies, novel type of categorification, relation between knot invariants and motivic Donaldson-Thomas invariants, the proof of the famous Labastida-Marino-Ooguri-Vafa conjecture, new dualities between quivers, and many others. For details see [1, 2].

WYDZIAŁ FIZYKI, UNIWERSYTET WARSZAWSKI, UL. PASTEURA 5, 02-093 WARSZAWA  
Adres e-mail: [psulkows@fuw.edu.pl](mailto:psulkows@fuw.edu.pl)

## Literatura

- [1] Piotr Kucharski, Markus Reineke, Marko Stosic, and Piotr Sułkowski, *BPS states, knots and quivers*, (2017).
- [2] ———, *Knots-quivers correspondence*, (2017).



Rysunek 1: Trefoil knot and the corresponding quiver.