

Mathematisch – Naturwissenschaftliche Fakultät
der Universität zu Köln
- Der Dekan –

Einladung

zu dem am Donnerstag, dem 30. Juni 2016, ab 14 Uhr
im Geo-Bio Hörsaal,
Zülpicher Straße 49, 50923 Köln

stattfindenden öffentlichen

wissenschaftlichen Habilitationsvortrag
im Fach Theoretische Physik

von

Dr. Dmitry Fedosov
über das Thema

Why is ice slippery?

Everybody knows from personal experience that ice is quite slippery. However, ice is in solid state, and what makes its friction so low has been a long-standing topic of many scientific investigations. A common belief is that near frictionless sliding on ice is facilitated by a thin liquid layer at the surface of a sliding object (i.e., liquid water wets the interface between solid ice and the sliding object), which is formed through ice melting by an applied pressure. Nevertheless, this hypothesis seems to fail for low enough temperatures (below approximately -5°C), where the ice friction can become even smaller. Current knowledge about ice friction suggests that the ice surface is always covered by a thin layer of water, even at temperatures much below the freezing point and that frictional heating might play a prevailing role in comparison to the pressure melting idea. In this talk, I will discuss these two hypotheses and will illustrate several attempts to test them.

A. Büschges
Dekan