



Der Vorsitzende des Promotionsausschusses

EINLADUNG

Hiermit lade ich ein zum öffentlichen Promotionskolloquium von

Herr M.Sc. Navid Khangholi

Experimentalphysik
(Prof. Dr. Ralf Seemann)

am

Montag, 22. April 2024, 14:00 Uhr s.t.

per Videokonferenz; Link für MS Teams:

<https://teams.live.com/join/944314551640?p=g2UwIJK9oUCqocc>

Raum für die Prüfung: Gebäude E2.9, Seminarraum

Thema der Dissertation:

Microfluidic Platform to Study the Transport Properties of Model Cell Membranes

The thesis introduces a novel microfluidic method to regulate the creation of free-standing lipid bilayers, extending their lifespan and enabling precise control over mechanical properties. This approach facilitates the exploration of protein-membrane interactions and membrane mechanical properties. Published works demonstrate the method's effectiveness in forming stable lipid bilayers and studying protein behavior within them. Additionally, ongoing research aims to elucidate phototransduction in porcine retinas incorporated into lipid bilayers. This microfluidic system allows simultaneous measurement of surface and bilayer tensions, reducing experimental error and enabling exploration of asymmetric lipid bilayers. Further investigations focus on protein interactions with lipid bilayers, demonstrating the potential for studying light-responsive proteins and G-protein coupled receptor signaling cascades.

Saarbrücken, 8. April 2024

Prof. Dr. Uli Kazmaier