



Der Vorsitzende des Promotionsausschusses

EINLADUNG

Hiermit lade ich ein zum öffentlichen Promotionskolloquium von

Frau M.Sc. Mahsa Mohammadian

Experimentalphysik
(Prof. Dr. Ralf Seemann)

am

Freitag, 25. September 2026, 16:00 Uhr s.t.

per Videokonferenz: Link für MS Teams: <https://bit.ly/4xJo8tX>

Raum für die Prüfung: Gebäude E 2.9, Seminarraum 0.07

Thema der Dissertation:

Membrane-Mediated Intracellular and Intercellular Communication: Insights from Lipid Droplet Contact Sites and Viral Fusion in Model Systems

Membrane fusion governs vital physiological and pathogenic processes, including intracellular communication, organelle interactions, and viral infections. This dissertation investigates the coordination of lipids and proteins in membrane fusion across two biomimetic systems: lipid droplet contact sites and viral entry.

The first project demonstrates how phospholipid composition and LD-associated protein Perilipin5 regulate membrane fusion between the organelles. The second project reveals how viral fusion peptides actively reorganize lipids to help viral entry. Together, these findings elucidate the fundamental mechanisms of lipid-protein cooperation during membrane fusion, offering insights to support targeted strategies for metabolic disease interventions, antiviral therapies, and improved viral vectors.

Saarbrücken, 11. September 2026. August 2026



Prof. Dr.-Ing. Georg Frey