



Physical Sciences Seminar

The many-body physics of dispersion forces between atomically thin crystals

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Dispersion forces (e.g. the Casimir, Van der Waals, and London forces) appear as a result of quantum or thermal fluctuations of the electromagnetic fields which live in the space between charge-neutral objects. Recently, dispersion forces between neighboring layers of atomically thin crystals have been measured in optical experiments on few-layer transition-metal dichalcogenides (TMDs). These forces exceed the expectations of the well-known Lifshitz formulation of Van der Waals forces. In this talk, I will discuss our recent work towards developing a many-body theory capable of describing these interlayer forces, and I will specifically discuss the role of disorder, electronic screening, and finite-thickness effects.

Thursday, January 31, 2019 11:00am - 12:45pm

IST Austria Campus Big Seminar room Ground floor / Office Bldg West (I21.EG.101)



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