

**Joint CMP/CORE-CM Seminar
Michigan State University**

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Ohio State University**

***Physics and technology of spin-dependent phenomena in
graphene***

Graphene has emerged as one of the most exciting systems for investigating spin transport and other spin-dependent phenomena. It turns out to be one of the best materials for spin transport, with room temperature spin diffusion lengths of several microns. This is far better than any other material. As a 2D atomic crystal, it turns out to be very surface sensitive and its spin-dependent properties could be modified by surface modifications. We are exploring induced phenomena such as magnetism in adatom-doped graphene as well as hybrid structures with complex oxides. Finally, I will discuss some concrete possibilities for technologies related to spin-based logic in graphene.

**Monday, September 8, 2014
4:10 PM
BPS 1400
Prof. John McGuire - Host**