

# SEMINAR NOTICE

*Department of Physics and Engineering Physics  
University of Saskatchewan*

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**SPEAKER:** Dr. Guillermo Hinojosa  
UNAM

**TOPIC:** *On the discovery and confirmation of a new anionic species.*

**DATE:** Tuesday October 4th

**TIME:** 3:30-4:30 p.m.

**PLACE:** *Physics 103*

## **Abstract:**

Negative ions are a strange species and yet very common. They are found in applied plasma, and even in the interstellar medium. Unexpected amounts of these species were discovered during the Cassini mission in Titan's atmosphere. In the case of plasma, the formation of negative ions is an important process because it can modify the electron distribution. Not every molecule or atom can form a stable negative ion. For instance, noble gas Ne has a close shell ten-electron configuration and does not form stable anions. Methane is the isoelectronic molecule-analogous to neon and it is not expected to form negative ions. Methane is a greenhouse gas several times more potent than carbon dioxide and knowledge of its fundamental details is relevant. In this talk, I will tell the history and the physics of how I discovered methane can form an extremely stable anion and why quantum mechanics is always right.