

**BENEMÉRITA UNIVERSIDAD AUTÓNOMA DE PUEBLA**



**INSTITUTO DE FÍSICA  
“Luis Rivera Terrazas”**



**SEMINARIO EXTRAORDINARIO  
“DR. JESUS REYES CORONA”**

## **“MRI-based brain morphometric growth charts”**

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In this talk, I will introduce the concept of MRI-based gender-specific growth charts for whole brain and regional neuroanatomical morphometrics. A preliminary database was constructed using publicly available T1-weighted data from 1655 typically developing children ages 3-20 years. A growth curve model was estimated for each neuroanatomic morphometric using the Generalized Additive Models for Location, Scale and Shape. In addition to the database, there is a computational framework where users can generate a report about how an individual subject's brain morphometrics compare to age norms for that gender. The database and all the code are publicly available through GitHub: <https://github.com/ini-bdds/braincharts>. Ultimately, these tools can be used clinically to aid in early diagnosis of diseases and to monitor response to interventions.

**Auditorio-IFUAP  
Lunes 18 de junio de 2018  
13:00 Hrs.**