

**SEMINARIO**  
**Departamentos de Física Teórica I y II**  
**Universidad Complutense de Madrid**

**INVITADO:** Jonathan Home

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**TITULO:** Quantum science with mixed-species ion chains

**LUGAR:** FACULTAD DE CIENCIAS FÍSICAS UCM

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**ABSTRACT**

I will describe recent progress and give future perspectives for the use of mixed-species ion chains in quantum information, simulation and precision measurement. The key feature of such systems is that the transition frequencies in each ion are very different (enabling species specific addressing), while the motional modes of all ions are shared. As examples, I will focus on recent experiments which we performed at NIST, and give an overview of efforts to realise control of calcium and beryllium ions in our new group at ETH Zurich.