

**BECAS DE COLABORACIÓN – JAE INTRO 2020
EN CENTROS DE EXCELENCIA SEVERO OCHOA – CSIC**

TÍTULO DEL PROYECTO:

Theoretical modelling of phonon transport

IP:

Ricardo Rurali

**RESUMEN DE LA PROPUESTA:
(Máximo 500 caracteres)**

The goal of this project is providing a theoretical framework aimed at understanding and controlling heat flux within reduced dimensionality systems. The student will learn how to perform state-of-the-art numerical simulations to calculate the vibrational properties of solids, including phonon dispersions and phonon scattering rates. The project aims at designing systems with tailor-made thermal conductivity for renewable energy applications and for the visionary goal of implementing phonon-based logic and computing.