



Contribution ID: 15

Type: **Invited**

## Using electron collision methods to characterise Rydberg states

*Monday 22 November 2021 15:05 (30 minutes)*

The R-matrix method is widely used to study a range of electron collision problems. However use scattering a negative energies has been found to be a much more effective method of characterising Rydberg states than traditional quantum chemistry techniques, which struggle reproduce high  $n$  states with conventional basis sets. The utility of the scattering method for obtain potential energy curves of many Rydberg states will be demonstrated by calculations on the nitrogen molecule.

**Author:** TENNYSON, Jonathan (University College London)

**Presenter:** TENNYSON, Jonathan (University College London)

**Session Classification:** Collisions