

## **Title:** New approaches to molecular parity violation and the Gamma Factory

**Abstract:** We will first discuss the possibilities of measuring parity violation in chiral molecules using diastereomerism and in nonchiral diatomic molecules in singlet electronic states using the antisymmetric coupling between nuclear spins. In the second part of the talk, we will briefly describe the Gamma Factory proposal that offers many interesting physics opportunities from spectroscopy of highly charged ions to production of useful nuclear isotopes and isomers.