

# High Energy Particle Seminar

Wednesday, April 25, 2018 / 705 Pupin Hall / 1:00 PM

## "Everything you need to know about the Borexino new results"

Zara Bagdasarian, Forschungszentrum Jülich

Borexino is located at the Laboratori Nazionali del Gran Sasso (LNGS) in Italy with the primary goal of detecting solar neutrinos, particularly those below 2 MeV, with unprecedentedly high sensitivity. The ultra-low radioactive background, Borexino's technical distinctive feature, is the basis of the outstanding achievements obtained so far. Since the start of operations in 2007, Borexino produced the first time measurements of  $^7\text{Be}$ , pp, and pep solar neutrinos, and set the best available upper limit on the flux of solar neutrinos produced in the CNO cycle (carbon, nitrogen, oxygen). The Borexino collaboration has recently completed the new measurements of the pp, pep,  $^7\text{Be}$ , hep and  $^8\text{B}$  neutrinos. These neutrinos are the products of the pp-chain of nuclear fusion reactions generating more than 99% of the Sun's energy.



*\*Lunch will be available\**