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Wei-Kuo Chen* (wkchen@umn.edu), 235 Vincent Hall 206 Church St. SE, Minneapolis, MN 55414, and **Arnab Sen**. *Parisi formula, disorder chaos and fluctuation for the ground state energy in the spherical mixed p-spin models.*

Spin glasses are disordered spin systems originated from the desire of understanding the strange magnetic behaviors of certain alloys in physics. As mathematical objects, they are often cited as examples of complex systems and have provided several fascinating structures and conjectures. In this talk, we will focus on the spherical mixed p-spin mean-field spin glass model. We will present the Parisi formula and some fluctuation properties for the maximum energy. In addition, we will discuss results concerning the chaotic nature of the location of the maximum energy under small perturbations to the disorder. This talk is based on a joint work with Arnab Sen. (Received February 22, 2016)