## 1047-11-89 **Byungchan Kim\*** (bkim4@illinois.edu), 1409 West green street, Urbana, IL 61801. On the subpartitions of the ordinary partitions.

Let  $a_1 \ge a_2 \ge \cdots \ge a_\ell$  be an ordinary partition. A subpartition with gap d of an ordinary partition is defined as the longest sequence satisfying  $a_1 > a_2 > \cdots > a_s$  and  $a_s > a_{s+1}$ , where  $a_i - a_j \ge d$  for all  $i < j \le s$ . This is a generalization of the Rogers-Ramanujan subpartition which was introduced by L. Kolitsch. In this talk, we will present various properties of the subpartition and as an application, we will give a combinatorial proof of two entries which are in Ramanujan's lost notebook. (Received January 19, 2009)