1070-11-100 **Ivan E. Horozov*** (`ivan.horozov@uni-tuebingen.de`), Institute of Mathematics, University of Tuebingen, Auf der Morgenstelle 10, 72076 Tuebingen, Germany. *Multiple Dedekind Zeta Functions.*

In this talk we define multiple Dedekind zeta functions as a new type of higher dimensional iterated integrals, which are the key technical ingredient. Multiple Dedekind zeta functions can be written as infinite sums. They have integral representation and meromorphic continuation. We also prove that at the positive integers the multiple Dedekind zeta values are periods. In particular, the Dedekind zeta function can be written in terms of the new type of higher dimensional iterated integral and at the positive integers the corresponding iterated integrals give periods, where the geometric object is the Weil restriction of scalars of one 1-dimensional projective space without 0, 1 and infinity over a number field K. (Received February 02, 2011)