

Meeting: 1005, Newark, Delaware, SS 1A, Special Session on Homotopy Theory (in Honor of Donald M. Davis's and Martin Bendersky's 60th Birthdays)

1005-55-60 **Jie Wu*** (matwuj@nus.edu.sg), Department of Mathematics, National University of Singapore, 2 Science Drive 2, 117543 Singapore, Singapore. *Shuffle relations on the Cohen groups.*

By adding shuffle relations to the Cohen groups, a universal ring for functorial self maps of double loop spaces of double suspensions is given. Moreover the obstructions to the classical exponent problem in homotopy theory are displayed in the extension groups of the dual of the important symmetric group modules $\text{Lie}(n)$, as well as in the top cohomology of the Artin braid groups with coefficients in the top homology of the pure braid groups. (Received January 25, 2005)