

**On the set of the logarithm of the LMO invariant for integral  
homology 3-spheres**

TOSHIE TAKATA

The LMO invariant is expected to classify integral homology 3-spheres and it is a very strong invariant. We identify the set of the degree  $\leq 6$  parts of the logarithm of the LMO invariant for integral homology 3-spheres. As an application, we obtain best possible relations for Ohtsuki's invariants  $\{\lambda_i(M)\}$  for  $i \leq 6$ . The LMO invariant is expected to classify integral homology 3-spheres and it is a very strong invariant. We identify the set of the degree  $\leq 6$  parts of the logarithm of the LMO invariant for integral homology 3-spheres. As an application, we obtain best possible relations for Ohtsuki's invariants  $\{\lambda_i(M)\}$  for  $i \leq 6$ .

NIIGATA UNIVERSITY