## 1046-03-716

Christian Rosendal\* (rosendal@math.uic.edu), University of Illinois at Chicago, 322 Science and Engineering Offices (M/C 249), 851 S. Morgan Street, Chicago, IL 60607. *Generic isometries and measure preserving homeomorphisms are conjugate to their powers.* 

We consider the groups of isometries of the rational Urysohn metric space and (Haar) measure preserving homeomorphisms of Cantor space. It is well known that these groups admit comeagre conjugacy classes and we show that any element of this conjugacy class is also conjugate to all of its integers powers. This can be used to construct roots of all orders of the generic element of these groups. (Received September 10, 2008)