1063-37-226 **Darren Creutz*** (dcreutz@math.ucla.edu). *A Normal Subgroup Theorem for (Dense) Commensurators of Lattices.*

We prove a statement akin to Margulis' Normal Subgroup Theorem for lattices in Lie groups, but our Theorem applies not to lattices but to commensurators of lattices. We show that any infinite normal subgroup of a (dense) commensurator of a lattice in a Lie group necessarily intersects the lattice in a finite index subgroup. We then develop this into a correspondence between normal subgroups of the commensurator and open normal subgroups of the relative profinite completion.

The approach, as in Margulis' Theorem, involves, on the one hand, using cohomology and rigidity theory to prove a certain group has property (T), and on the other hand, Furstenberg's Boundary Theory to prove this group is also amenable. We will focus more on the amenability half of the proof, in particular our new "Factor Theorem" which facilitates the proof (and which is of independent interest). (Received August 16, 2010)