Parametrizing a Lie group

To investigate whether there is an effective method of parametrizing a Lie group, in other words a small number of charts providing coordinate systems which cover the entire group. This is known for SU(2) or SO(3) (Euler angles) but we would like to provide a more general procedure for a larger class of Lie groups.

This would have important applications in science and engineering, since Lie groups appear frequently in many contexts. It would also have applications to quantum computers.

Supervisor: Lisa Jeffrey jeffrey@math.toronto.edu