

Project Summary

We propose a Concentration Year in dynamical systems for 2002–03 at the University of Washington. A major focus of activity will be a collaborative effort to solve the Furstenberg Conjecture, a central problem in dynamics. What makes it a central problem is that it forms a very clear test case of a certain “rigidity” philosophy, whereby the orbits of the joint action of several transformations are woven together so tightly that the only invariant objects (measures, compact sets, etc) are the known algebraic ones. Recent developments indicate that the time is ripe for a concerted effort to solve this long standing problem. Other aspects of the Concentration Year will involve investigating the joint action of several transformation, especially those that preserve an algebraic structure, as well as tiling dynamical systems.

Participants in the program will include a mix of long-term participants, including regular faculty, visiting faculty, post-docs, and graduate students at the University of Washington, and short-term visitors who will infuse new perspectives and energy into the project.

In addition, two week-long workshops relevant to the Concentration Year have been approved for the new Banff International Research Station, sponsored by the Pacific Institute of Mathematical Sciences.

A web site on the Furstenberg Conjecture will be established, giving a state-of-the-art account together with recent developments.