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Research field :   Topology, Dynamical systems

Keywords :   Foliations, Geometric structures, Characteristic classes

Current research

Foliations with transverse structures are interesting not only as foliations but as dynamical systems on manifolds with structures.

I am quite interested in those which admit transverse holomorphic structures.

One of the main subjects is the study of secondary characteristic classes.

They are related with the topology of classifying spaces, deformations of foliations, properties of automorphism groups of complex manifolds, etc.

Another subject is the study of minimal sets.

Minimal sets are closely related with secondary characteristic classes and play a significant role in the study of real codimension-one foliations.

It is expected that minimal sets play an important role also in the study of complex codimension-one foliations.

To understand properties of minimal sets and their relationship to secondary characteristic classes is an important question in my study.

Prerequisites

   You will need to study and find something in order to finish your degree.

The most important thing for this purpose is that to find your own subject.

It is barely possible by simply taking courses.

You will need to read books and papers, or take part in seminars held in our and other universities.

It is also necessary to have discussions with mathematicians including your colleagues.

It is not relevant to fully understand the details of recent studies, however, you are supposed to try it.

   Some knowledge from fields other than those of your interest will be often necessary for your study.

The time you can spend to acquiring such things will be so limited that I expect that you learn basic materials common in mathematics well in undergraduate courses.