



Actividad formativa del máster y del doctorado en matemáticas.

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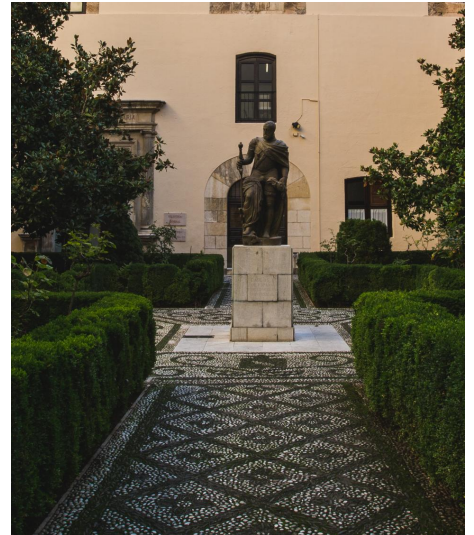
Actividad formativa del máster y del doctorado en matemáticas.

Minicurso impartido como actividad formativa del máster y del doctorado en matemáticas.

Conferenciante: Maciej Czarnecki (University of Lodz)

Título: QUASI-GEODESIC FLOWS

Abstract: After Danny Calegari and Steven Frankel we describe a structure of quasi-geodesic flows on 3-dimensional hyperbolic manifolds. A flow in an action of the additive group \mathbb{R} on given manifold. We concentrate on closed 3-dimensional hyperbolic manifolds i.e. having locally isometric covering by the hyperbolic space H^3 . Such flow is quasi-geodesic if every flowline of the lifted flow is a quasi-geodesic in H^3 . Quasi-geodesic flows are probably the only reasonable metric objects which are foliations of hyperbolic 3-manifolds which do not carry neither geodesic foliation in any dimension (Zeghib) nor quasi-geodesic foliations of dimension 2 (Fenley). We start with foundations of hyperbolic manifolds, hyperbolic groups and their asymptotic properties. Then we describe shortly notions for foliations and flows mentioning their type like (quasi)-isometric, (quasi)-geodesic, (pseudo)-Anosov etc. We take care of topology of the plane focusing on decompositions into continua. For such decompositions we construct a circular order in the set of their topological ends. Since after Calegari any quasi-geodesic flow on a hyperbolic 3 manifold has the Hausdorff flowspace (i.e. the plane) we are able to apply decompositions for a compactification the flowspace by ends of flowlines making it a closed disc. Finally, we study new results of Frankel on extension properties of quasi-geodesic flow. In particular we take a look for its proof of Calegari conjecture stating that such flows need to have closed orbits. At the end,



we add some remarks about (quasi)-geodesic flows in non-compact case.

Fecha y lugar: 16, 17 y 18 de abril de 2018 de 9:00 a 11:00 horas en el seminario de la primera planta del IEMath-Gr

Ficheros Adjuntos

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