<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Title</th>
<th>Speaker</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday, January 25, 2016</td>
<td>4:00pm-5:00pm</td>
<td>Complex Analysis, Dynamics and Geometry -- Sarah Koch (U(M))</td>
<td>Postcritical configurations in moduli space</td>
<td>3096 East Hall</td>
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<tr>
<td>Monday, February 01, 2016</td>
<td>4:00pm-5:00pm</td>
<td>Complex Analysis, Dynamics and Geometry -- Dan Thompson (OSU)</td>
<td>Uniqueness of equilibrium states for geodesic flows in manifolds of nonpositive curvature</td>
<td>3096 East Hall</td>
</tr>
<tr>
<td>Monday, February 08, 2016</td>
<td>4:20pm-5:30pm</td>
<td>Complex Analysis, Dynamics and Geometry -- Ronen Mukamel (Rice University)</td>
<td>Kronecker's congruence and Teichmuller curves in positive characteristic</td>
<td>4088 East Hall</td>
</tr>
<tr>
<td>Monday, February 15, 2016</td>
<td>4:00pm-5:00pm</td>
<td>Complex Analysis, Dynamics and Geometry -- Moon Duchin (Tufts University)</td>
<td>The Heisenberg group in complex hyperbolic geometry</td>
<td>3096 East Hall</td>
</tr>
<tr>
<td>Monday, February 22, 2016</td>
<td>4:00pm-5:00pm</td>
<td>Complex Analysis, Dynamics and Geometry -- Matthieu Astorg (U(M))</td>
<td>Summability condition and rigidity for finite type maps</td>
<td>3096 East Hall</td>
</tr>
<tr>
<td>Monday, March 07, 2016</td>
<td>4:00pm-5:00pm</td>
<td>Complex Analysis, Dynamics and Geometry -- Luke Edholm (OSU)</td>
<td>The Bergman projection of certain generalizations of the Hartogs triangle</td>
<td>3096 East Hall</td>
</tr>
<tr>
<td>Monday, March 14, 2016</td>
<td>4:00pm-5:00pm</td>
<td>Complex Analysis, Dynamics and Geometry -- Michael Kelly (U(M))</td>
<td>TBA</td>
<td>3096 East Hall</td>
</tr>
<tr>
<td>Monday, March 21, 2016</td>
<td>4:00pm-5:00pm</td>
<td>Complex Analysis, Dynamics and Geometry -- Holly Krieger (MIT)</td>
<td>TBA</td>
<td>3096 East Hall</td>
</tr>
<tr>
<td>Monday, March 28, 2016</td>
<td>4:00pm-5:00pm</td>
<td>Complex Analysis, Dynamics and Geometry -- Margaret Stawiska-Friedland (Math Reviews)</td>
<td>TBA</td>
<td>3096 East Hall</td>
</tr>
<tr>
<td>Monday, April 04, 2016</td>
<td>4:00pm-5:00pm</td>
<td>Complex Analysis, Dynamics and Geometry -- Misha Hlushchanka (Jacobs University)</td>
<td>TBA</td>
<td>3096 East Hall</td>
</tr>
<tr>
<td>Monday, April 11, 2016</td>
<td>4:00pm-5:00pm</td>
<td>Complex Analysis, Dynamics and Geometry -- Sandrine Daurat (U(M))</td>
<td>TBA</td>
<td>3096 East Hall</td>
</tr>
<tr>
<td>Monday, April 18, 2016</td>
<td>4:00pm-5:00pm</td>
<td>Complex Analysis, Dynamics and Geometry -- Alastair Fletcher (Northern Illinois University)</td>
<td>TBA</td>
<td>3096 East Hall</td>
</tr>
</tbody>
</table>
Abstracts

Complex Analysis, Dynamics and Geometry
Monday, January 25, 2016, 4:00pm-5:00pm
3096 East Hall
Sarah Koch (U(M))

Postcritical configurations in moduli space

A postcritically finite rational map with n postcritical points determines a point in the moduli space $M_{0,n}$. We explore the question: which configurations of n points on the Riemann sphere arise as postcritical configurations? It follows from Thurston rigidity that postcritical configurations are algebraic points of moduli space. We prove that the set of postcritical configurations is dense (in the analytic topology) using postcritically finite endomorphisms of projective space and some results from dynamics in several complex variables. This is joint work with L. DeMarco.

Complex Analysis, Dynamics and Geometry
Monday, February 01, 2016, 4:00pm-5:00pm
3096 East Hall
Dan Thompson (OSU)

Uniqueness of equilibrium states for geodesic flows in manifolds of nonpositive curvature

We establish results on uniqueness of equilibrium states for geodesic flows on rank one manifolds. This is an application of machinery developed by Vaughn Climenhaga and myself, which applies when systems satisfy suitably weakened versions of expansivity and the specification property. The geodesic flow on a rank one manifold is a canonical example of a non-uniformly hyperbolic flow and I'll explain why it satisfies our hypotheses. Our methods are completely different from those used by Knieper in his seminal proof that there is a unique measure of maximal entropy in this setting. This is joint work with Keith Burns (Northwestern), Vaughn Climenhaga (Houston) and Todd Fisher (Brigham Young).
By Kronecker's congruence relation, the modular polynomial of level $n$ is reducible mod primes dividing $n$. This fact is closely related to the bad reduction of modular curves at primes dividing the level, and is the first hint that modular curves and their cousins Shimura curves have a rich theory of integral models. In this talk, we will present a similar story for Teichmüller curves, i.e., isometric curves in higher genus moduli spaces. This is joint with the Number Theory seminar.

Just as the intrinsic geometry of horospheres in real hyperbolic space is Euclidean, the horospheres in $CH^2$ carry the geometry of the Heisenberg group. I'll discuss some recent work on the continuous and discrete Heisenberg groups and give applications in the complex hyperbolic setting.

Finite type maps are a class of analytic maps on complex 1-manifolds introduced by Epstein, that notably include rational maps and entire functions with a finite singular set. Each of those maps possess a natural finite-dimensional moduli space, and one can define a Teichmueller space parametrizing their quasiconformal conjugacy class. Using the fact that this Teichmueller space immerses into a moduli space, we will generalize rigidity results of Dominguez, Makienko and Sienra under assumption of expansion along the critical orbits.
Given a domain in $\mathbb{C}^n$, the Bergman projection and its corresponding kernel function are important tools used to investigate holomorphic function theory on this domain. Though originally defined as the projection from the space of $L^2$ functions onto its holomorphic subspace, it is natural to investigate the action of the Bergman projection on other associated Banach spaces.

I'll present new results about the $L^p$ boundedness of Bergman projections of certain types of non-smooth domains in $\mathbb{C}^2$. I explicitly compute the Bergman kernels of these domains, then focus on mapping properties of the Bergman projection operator. The main result shows that two domains which are arbitrarily close as sets may have drastically different Bergman mapping behavior.
Complex Analysis, Dynamics and Geometry  
Monday, April 04, 2016, 4:00pm-5:00pm  
3096 East Hall  
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