Program

	Monday	Tuesday	Wednesday	Thursday	Friday
9:30-10:00	Registration				
10:00-10:30	Tshishiku	Kent/Leininger	Kent/Leininger	Kent/Leininger	Bestvina
10:30-11:00					
11:00-11:30	Coffee break	Coffee break/Poster session	Coffee break	Coffee break/Poster session	Coffee break
11:30-12:00	Hensel	Souto	Uyanik	Wilton	Kent/Leininger
12:00-12:30					
12:30-13:00	Lunch	Lunch	Hamenstädt	Lunch	
13:00-13:30					
13:30-14:00					
14:00-14:30	Taylor	Kudlinska		Gupta	
14:30-15:00					
15:00-15:30	Coffee break	Coffee break		Coffee break	
15:30-16:00	Sisto	Chen		Russell	
16:00-16:30					

Abstracts

Main lectures: Autumn Kent and Chris Leininger.
In these lectures we will discuss the general theory of atoroidal and gromov hyperbolic surface bundles. In the first lecture, we will recall Farb and Mosher's notion of convex cocompactness, and discuss several characterizations of it. This talk will also discuss the tension between surface bundles being atoroidal versus Gromov hyperbolic. In second the lecture, we will describe one potential source of examples of atoroidal surfaces bundles, particularly in connection to the Birman Exact Sequences. The third lecture will focus on our construction of the first examples of atoroidal surface bundles over surfaces. The final lecture will describe some future directions.

Introductory talks.

Monday, 10:00–11:00: Bena Tshishiku.
TBA

Monday, 11:30–12:30: Sebastian Hensel.
TBA

Monday, 14:00–15:00: Sam Taylor, Hyperbolicity and free group extensions.
While the other introductory talks focus on surface group extensions and their hyperbolic-like properties, we'll survey what's know about hyperbolicity of free group extensions. Our goal will be to compare and contrast the free group case with the surface group case and we'll end with some open questions.

Monday, 15:30–16:30: Alessandro Sisto.
TBA

Research talks.

Tuesday, 11:30–12:30: Juan Souto.
TBA

Tuesday, 14:00–15:00: Monika Kudlinska, L^2-Betti numbers of kernels and Thurston norm for groups.
The Thurston (semi)-norm is a real-valued function on the first cohomology of a 3-manifold M that measures minimal topological complexity of properly embedded surfaces dual to characters of M. In this talk, we will introduce a real-valued function on the first cohomology of an arbitrary group that generalises the Thurston norm. We will propose a strategy for proving that such a function is a semi-norm using the theory of L^2-invariants. Finally, we will implement this strategy for one-ended coherent right-angled Artin groups by calculating the L^2-Betti numbers of kernels of maps to $\mathbb{Z}$ for groups in this class.

Tuesday, 15:30–16:30: Lei Chen.
TBA

Wednesday , 11:30–12:30: Caglar Uyanik, Cannon-Thurston maps, dynamics, and rigidity.
Cannon and Thurston showed that a hyperbolic 3-manifold that fibers over the circle gives rise to a sphere-filling curve. The universal cover of the fiber surface is quasi-isometric to the hyperbolic plane, whose boundary is a circle, and the universal cover of the 3-manifold is 3-dimensional hyperbolic space, whose boundary is the 2-sphere. Cannon and Thurston showed that the inclusion map between the universal covers extends to a continuous map between their boundaries, whose image is onto. In particular, any measure on the circle pushes forward to a measure on the 2-sphere using this map. We compare several natural measures coming from this construction. (Joint with Gadre, Maher, and Pfaff)

Wednesday, 12:30–13:30: Ursula Hamenstädt, A boundary for the mapping class group.
We introduce the concept of a boundary of a group and properties of such a boundary that will lead to information on the group. We then explain that the mapping class group of a surface of finite type has such a boundary. We also give a short overview of earlier work in this direction while keeping the talk elementary.

Thursday, 11:30–12:30: Henry Wilton, On the congruence subgroup property for mapping class groups.
I will relate two notorious open questions in low-dimensional topology. The first asks whether every hyperbolic group is residually finite. The second, the congruence subgroup property, relates the finite-index subgroups of mapping class groups to the topology of the underlying surface. I will explain why, if every hyperbolic group is residually finite, then mapping class groups enjoy the congruence subgroup property. Time permitting, I may give some further applications to the question of whether hyperbolic 3-manifolds are determined by the finite quotients of their fundamental groups.

Thursday, 14:00–15:00: Radhita Gupta, An invariant for free-by-cyclic groups.
For a free group automorphism we define 'lamination depth' to be the length of the longest properly nested sequence of its attracting laminations. I will talk about joint work with Spencer Dowdall, Yassine Geurch, Jean Pierre Mutanguha and Caglar Uyanik, where we show that lamination depth is a group invariant of a free-by-cyclic group. That is, a free-by-cyclic group can be viewed as the mapping torus of a free group automorphism in multiple ways and we show that each such automorphism has the same lamination depth.

Thursday, 15:30–16:30: Jacob Russell.
TBA

Friday , 10:00–11:00: Mladen Bestvina, Automatic continuity of big groups.
A Polish group satisfies automatic continuity (AC) if every homomorphism to a separable group is continuous. In a recent preprint with George Domat and Kasra Rafi we classified those stable surfaces (of infinite type) whose mapping class groups satisfy AC. In the talk I will try to outline a proof of the simpler result (also in the paper) that the homeomorphism group of every stable Stone space (e.g. the endspace of a stable surface) is AC. Our work builds on the previous work of Rosendal, Rosendal-Solecki, K. Mann and others.

Posters.

Tuesday, 11:00–11:30: Jean-Baptiste Bellynck, Periodic splitting sequences of the twice punctured torus.
We start with a pseudo-Anosov map ϕ. There is a train track which is invariant under the action of ϕ in the sense that the image is carried by the preimage. Now, we forget ϕ and only study the train track. Agol showed that it is possible to apply splits naturally, yielding a splitting sequence. Doing this often enough will, surprisingly, recreate the action of the original pseudo-Anosov homeomorphism on the train track. The combinatorics of this on the easiest example, the once-punctured torus, is well understood and can be characterised by continued fractions. To understand the general behaviour I study the second easiest example, the twice-punctured torus.

Tuesday, 11:00–11:30: Richard Cao, Spheres in the Curve Complex.
The curve complex of a surface is a simplicial complex that is intertwined with the mapping class group and Teichmüller space. We summarize some known results about the curve complex and a recent research direction. We examine the question: how connected are metric spheres in the curve complex?

Tuesday, 11:00–11:30: Sergio Domingo, Finiteness properties of asymptotically rigid handlebody groups.
Asymptotically rigid handlebody groups are an instance of Thompson-like groups, with finiteness properties that vary depending on the space of ends of the underlying handlebody. In some cases, the homology of these groups coincides with the stable homology of handlebody groups, as studied by Hatcher and Wahl.

Thursday, 11:00–11:30: Alejandro García Projective deformations of hyperbolic 3-orbifolds with turnover ends.
We study projective deformations of (topologically finite) hyperbolic 3-orbifolds whose ends have turnover cross section. These deformations are examples of *projective cusp openings*, meaning that hyperbolic cusps are deformed in the projective setting such that they become totally geodesic generalized cusps with diagonal holonomy. We find that this kind of structure is the only one that can arise when deforming hyperbolic turnover cusps, and that turnover funnels remain totally geodesic. Therefore, we argue that, under no infinitesimal rigidity assumptions, the deformed projective 3-orbifold remains properly convex. This poster presents part of my ongoing thesis under the supervision of Joan Porti, and part of a preprint [1] available on arXiv.

[1] Alejandro García and Joan Porti. Projective deformations of hyperbolic 3-orbifolds with turnover ends, 2025.

Thursday, 11:00–11:30: Pankaj Kapari, Liftable mapping class groups of abelian covers.
Consider a finite-sheeted regular abelian cover p of the closed and oriented surface S of genus $g > 1$. The subgroup of the mapping class group $Mod(S)$ consisting of mapping classes represented by homeomorphisms that lift under the cover p is called the liftable mapping class group, denoted by $LMod_p(S)$, associated with the cover p. It is known that $LMod_p(S)$ is finitely generated. For $g > 2$, an explicit finite generating set for the Torelli group $I(S)$ of S is known. Hence, one can obtain a finite generating set for $LMod_p(S)$ by combining this finite generating set of $I(S)$ and taking one lift of each element in a finite generating set of the image of $LMod_p(S)$ in the symplectic representation of $Mod(S)$. For $g = 2$, it is known that the Torelli group of S is a free group of countable rank. Furthermore, an explicit infinite generating set is unknown for the Torelli group; therefore, this approach does not work for $g = 2$. In my poster, I will discuss a method to derive a finite generating set for $LMod_p(S)$ when $g = 2$. This is a joint work with Dhanwani, Rajeevsarathy, and Tomar.