Spectra and Dynamics on (Locally) Symmetric Spaces

Universität Paderborn

February 14-18, 2022

Organizing Committee

Benjamin Delarue (Universität Paderborn)
Jan Frahm (Aarhus University)
Tobias Weich (Universität Paderborn)

Conference Venue

Institut für Mathematik, Universität Paderborn, Warburger Straße 100, D-33098 Paderborn

Building O

This conference is financially supported by the German Science Foundation DFG (Grant No. WE 6173/1-1), the Priority Programme "Geometry at Infinity" (SPP 2026) and the Villum Foundation (Grant No. 00025373).

General information

Corona restrictions

The Corona restrictions are quite complicated at the moment and depend on the individual immunisation status. There are currently 3 categories which we only describe rougly here. Please carefully check the details under:
https://www.land.nrw/corona-multilingual#d30e6144.

- **3G** (Geimpft, Genesen oder Getestet): You roughly fulfil 3G if you are recently recovered, twice vaccinated or have a negative official test certificate (¡24h)
- **2G** (Geimpft, Genesen): You roughly fulfill 2G if you are recently recovered or, twice vaccinate.
- **2G+**: You roughly fulfill 2G if you have a negative test certificate AND are recently recovered or twice vaccinate. People how received a Booster vaccinations do not need an additional test certificate. In this case pleas check carefully if your vaccination status is also officially accepted as a Booster.

Below we give a non-comprehensive list, which rule applies where:

- Public transport: 3G
- Hotels for non touristic reasons: 3G
- Accessing the university buildings: 3G
- Restaurants (including Mensa and conference dinner): 2G+

Conference venue: Building O

All talks are held in lecture room O2. The room is equipped with blackboards and a projector. Coffee breaks take place in Room O1.252.

Transport

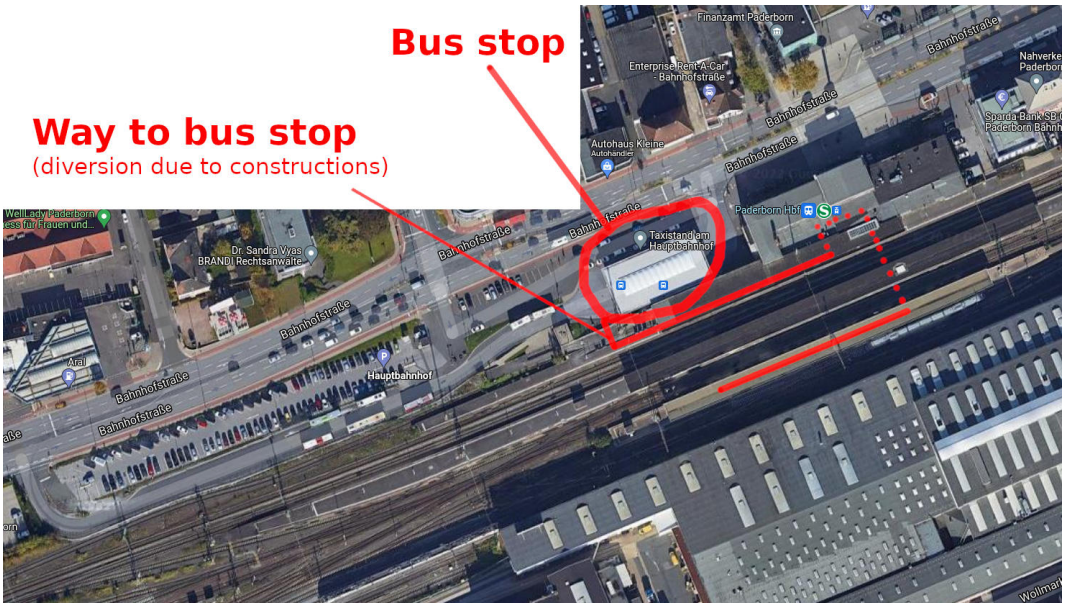
It is possible to reach the University Campus from the city center by foot in roughly 30 minutes or alternatively by bus in about 15 minutes. Tickets can be purchased on the bus (only cash), at many bus stations (including Hauptbahnhof=main station), as well as online at shop.padersprinter.de (credit card payment). The latter option is unfortunately somewhat complicated because it requires a lengthy registration, however it features a 20% discount one single one-way tickets. We recommend to buy either **4er Tickets** (4 one-way rides, 8,80 €) or a **7 Tage Ticket** (unlimited rides for 7 days, 20,80 €). A single one-way ride costs 2,70 €. The bus stations are indicated on the maps below.

There are three lines going to the University campus from Paderborn train station (Hauptbahnhof) through the city center: line 4, line 9 and line 68. Busses 4 and 9 are running every 15 minutes.

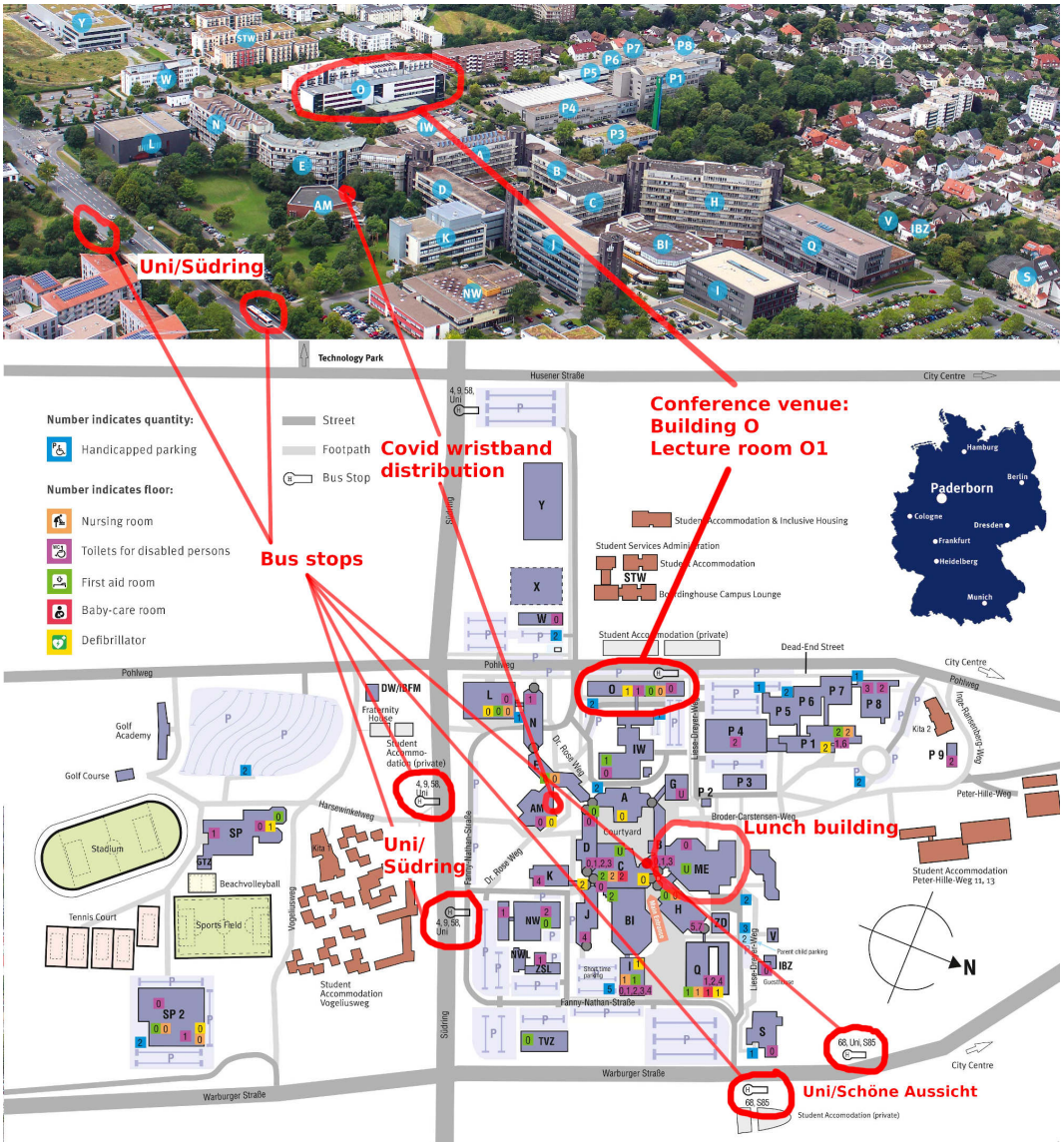
Bus stops close to the campus:

1. Bus stop **Uni-Südring** can be reached from downtown (Hauptbahnhof, Westerntor, Rathausplatz, Kamp) by line 4 (direction Dahl) and line 9 (direction Kaukenberg).
2. Bus stop **Schöne Aussicht** can be reached from downtown (Hauptbahnhof, Neuhäuser Tor, Detmolder Tor, Am Bogen) by line 68, direction **Schöne Aussicht**. It operates every 30 minutes.

Notice: The line **UNI** does not operate during the semester break.



Map of the train station (Hauptbahnhof)



Campus map

Access to the university building

To get access to the university buildings you need a 3G certificate. However there is a particularity: There are several registration areas in which you have to present your certificate. You then get a kind of ”festival bracelet” with which you can enter every university entrance. People that are vaccinated only need to perform this registration once.

Furthermore in all buildings it is mandatory to wear a medical mask. This includes the lecture hall during the talks, with an exception for the lecturer who can remove the mask during the talk.

Meals

The University Restaurant (Mensa, denoted by ME on the campus map) is located near the main University entrance in the C-building. It offers a varied selection of meals including vegetarian and vegan options. Each registered participant of the conference will receive a Mensa-Guest-Card which allows for a free daily lunch paid by the university. It is easiest if you only use this card, as direct payment by cash or credit card is not possible. The opening hours are 11:15-14:00 Monday-Thursday and 11:15-13:30 on Friday. Be aware that eating at the Mensa requires a 2G+ certificate. However you can get takeaway food with a 3G certificate.

As an alternative the shopping mall “Südring Center” (5-10 Minutes walk) offers various snack and fast food options.

Some recommended restaurants in Paderborn downtown:

- Restaurant Orangerie (Italian), Mühlenstraße 6
- Restaurant “La Petite Galerie” (in the Abdinghof Hotel), Bachstraße 1
- Goa Curry (Indian), Westernmauer 86
- Koaya (Vietnamnese), Neuhäuser Str 1
- El Chingon (Mexican), Kamp 31
- Paderborner Brauhaus (German), Kisau 2
- Staebner (we will hae the conference dinner here), Marienplatz 7a
- Kö13 (German/Mediterranean), Neuer Platz
- Balthasar (if you want to work on your list of Michelin-*-restaurants), Warburger Str 28

Conference dinner: Thursday, February 17, 19:00

The Conference Dinner will be held in the **Restaurant Staebner**, Marienplatz 7a, 33098 Paderborn. The restaurant is located in the city center close to the town hall, the Marienplatz and most hotels. Here is a link to Google Maps:

https://goo.gl/maps/fQ4vXPJLpY4R7pju5

Internet Access

We provide two networks for the WIFI access: Eduroam and WEBAUTH. Please follow the instructions on the information sheet which is part of your conference material.

Schedule

Monday, February 14

8:30 – 9:00	**Registration** (room O1.252)
9:00 – 9:05	**Opening** (Lecture room O2)
9:05 – 10:05	Jasmin Matz *Quantum ergodicity in the level aspect*
10:05 – 11:05	Jean-Philippe Anker *Towards arithmetic quantum unique ergodicity in higher rank*
11:05 – 11:30	Coffee/Tea
11:30 – 12:30	Gabriele Viaggi $\mathrm{SO}(2,n)$*-Maximal representations and hyperbolic surfaces*
12:30 – 14:30	Lunch
14:30 – 15:30	Michael Magee *The maximal spectral gap of a hyperbolic surface*
15:30 – 16:00	Coffee/Tea
16:00 – 17:00	Laura Monk *The spectral gap of random hyperbolic surfaces*

Tuesday, February 15

9:00 – 10:00	Christian Arends *Spectral Correspondences for Rank One Locally Symmetric Spaces – The Case of Exceptional Parameters*
10:00 – 11:00	Yannick Bonthonneau *Ruelle-Taylor resonances for Anosov actions*
11:00 – 11:30	Coffee/Tea
11:30 – 12:30	Lasse Wolf *Locating Ruelle-Taylor resonances for the Weyl chamber flow*
12:30 – 14:30	Lunch
14:30 – 15:30	Daniel Monclair *Gromov-Thurston spacetimes*
15:30 – 16:00	Coffee/Tea
16:00 – 17:00	Ksenia Fedosova *Spectral theory of infinite-volume hyperbolic manifolds*

Wednesday, February 16

9:00 – 10:00	Salah Mehdi *A representation theoretic description of the spectrum of certain locally symmetric spaces*
10:00 – 11:00	Effie Papageorgiou *Asymptotic behavior of solutions to the heat equation on noncompact symmetric spaces*
11:00 – 11:30	Coffee/Tea
11:30 – 12:30	Hong-Wei Zhang *Schrödinger equation on symmetric and locally symmetric spaces*
12:30 – 14:30	Lunch
14:30 – 15:30	Jean-François Quint *Spectra of convolution operators*
15:30 – 16:00	Coffee/Tea
16:00 – 17:00	Jialun Li *Counting and equidistribution of periodic diagonal orbits*

Thursday, February 17

9:00 – 10:00	Yann Chaubet *Dynamical zeta functions for obstacle scattering and the modified Lax-Phillips conjecture*
10:00 – 11:00	Philipp Schütte *Weighted Zeta Functions for Patterson-Sullivan Distributions*
11:00 – 11:30	Coffee/Tea
11:30 – 12:30	Léo Bénard *Fried conjecture for non-unitary representations of unit tangent bundles of surfaces*
12:30 – 14:30	Lunch
14:30 – 15:30	Pablo Ramacher *Asymptotics for Hecke eigenvalues of automorphic forms on compact arithmetic quotients*
15:30 – 17:00	**Reception on the occasion of Joachim Hilgert's retirement**
19:00 –	**Conference dinner**

Friday, February 18

10:00 – 11:00	Colin Guillarmou *Spectral decomposition of Liouville Hamiltonian and unitary representations of the Virasoro algebra with central charge $c > 25$*
11:00 – 11:30	Coffee/Tea
11:30 – 12:30	Gestur Olafsson *Whittaker vectors related to maximal parabolic subgroups and holomorphic representations*

Abstracts

Quantum ergodicity in the level aspect

Jasmin Matz
University of Copenhagen (Denmark)

For a closed Riemannian manifold M with an orthonormal basis B of Laplace eigenfunctions in $L^2(M)$ a classical result of Shnirelman and others proves that if the geodesic flow on the cotangent bundle of M is ergodic, then M is quantum ergodic. This in particular means that on average the measures $|f|^2$ dx on M converges towards the Riemannian measure dx on M as f runs over elements in B with growing Laplace eigenvalue.

Following ideas of Abert, Bergeron, Le Masson, and Sahlsten, we look at a related situation: Instead of taking a fixed manifold and high energy eigenfunctions, we take a sequence of Benjamini-Schramm convergent compact Riemannian manifolds M_j together with Laplace eigenfunctions with eigenvalues varying in short intervals. In my talk I want to discuss joint work with F. Brumley in which we study this situation in higher rank for sequences of compact quotients of $SL(n,\mathbb{R})/SO(n)$.

Towards arithmetic quantum unique ergodicity in higher rank

Jean-Philippe Anker
Université d'Orléans (France)

Consider a compact locally symmetric space $X = \Gamma\backslash G/K$ Quantum unique ergodicity states that eigenfunctions of the Laplacian on X are asymptotically equidistributed. More precisely, any weak limit of $|\phi(x)|^2 dx$, where ϕ is a L^2 normalized eigenfunction of $-\Delta$ with eigenvalue $\lambda \to +\infty$, is equal to the Haar measure on X. This claim was proved for surfaces by Lindenstrauss under the additional assumption that ϕ is an eigenfunction of all Hecke operators, and later on by Brooks and Lindenstrauss under the additional assumption that ϕ is an eigenfunction of a single Hecke operator. On the other hand, Silberman and Venkatesh extended the first result of Lindenstrauss to quotients of $G = PGL_n$ and raised the question whether the approach of Brooks and Lindenstrauss could be generalized to higher rank. We shall report on joint work in progress with Bertrand Rémy and Bartosz Trojan about this issue.

$\mathrm{SO}(2,n)$-Maximal representations and hyperbolic surfaces

Gabriele Viaggi
Ruprecht-Karls-Universität Heidelberg (Germany)

The aim of the talk is to provide a geometric approach to work of Collier, Tholozan, and Toulisse and link the geometry of locally homogeneous spaces associated with maximal representations in $\mathrm{SO}(2,n)$ to the one of hyperbolic surfaces and Teichmüller space. We show that information can flow in both directions by giving new proofs of a couple of known results: First, we use the pseudo-Riemannian geometry of maximal representations in $\mathrm{SO}(2,2)$ to give a geometric proof of (strict) convexity of length functions in shear coordinates for Teichmüller space. Second, we use the Weil-Petersson geometry of Teichmüller space to prove that the length spectrum of a $\mathrm{SO}(2,n)$-maximal representation (uniformly) dominates a Fuchsian one. Our constructions come from 2- and 3-dimensional hyperbolic geometry (laminations and pleated surfaces). Joint with Filippo Mazzoli.

The maximal spectral gap of a hyperbolic surface

Michael Magee
Durham University (UK)

A hyperbolic surface is a surface with metric of constant curvature -1. The spectral gap between the first two eigenvalues of the Laplacian on a closed hyperbolic surface contains a good deal of information about the surface, including its connectivity, dynamical properties of its geodesic flow, and error terms in geodesic counting problems. For arithmetic hyperbolic surfaces the spectral gap is also the subject of one of the biggest open problems in automorphic forms: Selberg's eigenvalue conjecture.

It was an open problem from the 1970s whether there exist a sequence of closed hyperbolic surfaces with genera tending to infinity and spectral gap tending to $1/4$. (The value $1/4$ here is the asymptotically optimal one.) Recently we proved that this is indeed possible. I'll discuss the very interesting background of this problem in detail as well as some ideas of the proof. This is joint work with Will Hide.

The spectral gap of random hyperbolic surfaces

Laura Monk
Max Planck Institute for Mathematics Bonn (Germany)

The focus of this talk is the first non-zero eigenvalue of the Laplacian on a compact hyperbolic surface, otherwise called spectral gap. Surfaces with a large spectral gap are well-connected, and have good dynamical properties. Finding surfaces with an optimal spectral gap is a hard and important problem, which has remained opened from the 80s until very recently.

In this talk, based on work in progress with Nalini Anantharaman, I will explain how a modern probabilistic approach has allowed major progress in this topic in the last year. Rather than exhibit examples, we now aim at proving that the probability for a random surface to have an optimal spectral gap is close to 1. I will explain how one can sample random surfaces using the Weil–Petersson probabilistic model, and provide a few tools used to tackle spectral gap questions in this setting.

Spectral Correspondences for Rank One Locally Symmetric Spaces – The Case of Exceptional Parameters

Christian Arends
Universität Paderborn (Germany)

There is a close connection between the Laplace spectrum for rank one compact locally symmetric spaces and the first band Ruelle-Pollicott resonances of the geodesic flow on its sphere bundle. This program was started by Flaminio and Forni for hyperbolic surfaces, continued by Dyatlov, Faure and Guillarmou for real hyperbolic spaces and by Guillarmou, Hilgert and Weich for general rank one spaces. Except for the case of hyperbolic surfaces a countable set of exceptional spectral parameters always left untreated since the corresponding Poisson transforms are neither injective nor surjective. We use vector valued Poisson transforms to treat also the exceptional spectral parameters. For surfaces the exceptional spectral parameters lead to discrete series representations of $\mathrm{SL}(2,\mathbb{R})$. In higher dimensions the situation is more complicated, but can be described completely.

Ruelle-Taylor resonances for Anosov actions

Yannick Bonthonneau
Université Paris 13, CNRS (France)

Abstract: tba

Locating Ruelle-Taylor resonances for the Weyl chamber flow

Lasse Wolf
Universität Paderborn (Germany)

For the Ruelle-Taylor resonances of a general higher rank Anosov action on a closed manifold it is unknown if there is a spectral gap and if there are resonances other than 0. I will explain how to solve these questions for the Weyl chamber flow which is the main example for Anosov actions. The main ingredient is a quantum-classical correspondence provided by the Poisson transform.

Gromov–Thurston spacetimes

Daniel Monclair
Université Paris-Saclay (France)

The geometry, topology and dynamics of globally hyperbolic anti-de Sitter spacetimes of dimension $2+1$ are well understood since the groundbreaking work of Mess, through a description of their moduli space. In higher dimensions, very little is known apart from some of their dynamical properties. In this talk, we will discuss the possible topologies. Since they are globally hyperbolic, they are diffeomorphic to a product of a manifold M with the real line. In the first examples, M is a hyperbolic manifold. With Jean-Marc Schlenker and Nicolas Tholozan, we constructed examples for which M is a Gromov–Thurston manifold, which is a class of non hyperbolic closed manifolds with pinched negative curvature.

Spectral theory of infinite-volume hyperbolic manifolds

Ksenia Fedosova
Albert-Ludwigs-Universität Freiburg (Germany)

In this talk, we define a twisted Laplacian on an orbibundle over a hyperbolic surface (that might be of infinite volume). We prove a meromorphic continuation of the resolvent to the entire complex plane and prove an upper bound on the number of resonances.

A representation theoretic description of the spectrum of certain locally symmetric spaces

Salah Mehdi
Université de Lorraine (France)

We consider non-compact connected closed reductive subgroups L an H of a connected semisimple Lie group G such that G/H is a symmetric space on which L acts transitively with $L \cap H$ compact. Let Γ be a discrete subgroup of L such that $\Gamma\backslash G/H$ is a compact locally symmetric space and let $L^2(\Gamma\backslash G/H)$ be the Hilbert space of square integrable complex functions on $\Gamma\backslash G/H$. We will describe features of the (joint) spectrum of the (commutative) algebra $D(G/H)$ of invariant differential operators on G/H acting, as unbounded operators, on $L^2(\Gamma\backslash G/H)$. Although the group G does not act on $\Gamma\backslash G/H$, we will explain how representations of G, H, and L are actually involved in the spectral decomposition of $L^2(\Gamma\backslash G/H)$. As a byproduct, we obtain that certain unitary representations of G are L-admissible. This is joint work with Martin Olbrich.

Asymptotic behavior of solutions to the heat equation on noncompact symmetric spaces

Effie Papageorgiou
University of Crete (Greece)

We study the long-time asymptotic behavior of solutions to the heat equation on Riemannian symmetric spaces G/K of noncompact type and of general rank. We show that any solution to the heat equation with bi-K-invariant L^1 initial data behaves asymptotically as the mass times the fundamental solution, and provide a counterexample in the non bi-K-invariant case. These answer problems recently raised by J.L. Vázquez.

Schrödinger equation on symmetric and locally symmetric spaces

Hong-Wei Zhang
Universiteit Gent (Belgium)

This talk concerns the Schrödinger equation on symmetric and locally symmetric spaces of noncompact type. I will start by sharing recent progress on symmetric spaces G/K of any rank. By overcoming a difficulty in higher rank analysis, namely that the Plancherel density is not a differential symbol in general, we establish the sharp-in-time pointwise estimates for the Schrödinger kernel. Then we deduce dispersive properties, Strichartz inequality for a large family of admissible pairs, and global well-posedness and scattering both for small initial data. Next, I will discuss which properties of Γ affect these results on locally symmetric spaces $\Gamma\backslash G/K$.

Spectra of convolution operators

Jean-Françcois Quint
Université de Bordeaux (France)

Let G be a discrete group, m be a symmetric probability measure on G and H be a Hilbert space, equipped with a unitary action of G. The convolution operator P associated with m is defined by

$$Pv = \sum_{g \in G} m(g) gv$$

for $v \in H$. The symmetry assumption on m implies that P is self-adjoint. Nevertheless, it in general difficult to compute the spectral invariants of P. I will provide a large new family of examples where such computations can be achieved.

Counting and equidistribution of periodic diagonal orbits

Jialun Li
Universität Zürich (Switzerland)

Let G be the group $SL_d(R)$, Γ be the lattice $SL_d(Z)$ and M be the group of sign. I will talk about the counting and equidistribution of compact periodic orbits of the diagonal group on $\Gamma\backslash G/M$. Counting periodic diagonal orbits is a generalization of the prime geodesic theorem on compact hyperbolic surfaces, dating back to Huber, Margulis and Bowen. For $SL_2(Z)$ case, it is considered in Sarnak's thesis.

I will sketch a proof. We use Hopf coordinates, an idea of Roblin for hyperbolic cases, the angular distribution of lattices points (Gorodnik–Nevo) and a version of non-escape of mass of periodic diagonal orbits. The talk is based on a recent joint work with Thi Dang.

Dynamical zeta functions for obstacle scattering and the modified Lax-Phillips conjecture

Yann Chaubet
Université Paris-Saclay (France)

In this talk, we will present some recent results about the meromorphic continuation of certain dynamical zeta functions counting periodic trajectories in an open billiard system which consists in several convex bodies in the Euclidian space. We will explain how these zeta functions can be used to recover informations about the scattering resonances for the wave equation. Namely, we will show the existence of a strip with an infinite number of resonances for the Dirichlet problem, provided that the obstacles are analytic. This is a work in collaboration with Vesselin Petkov.

Weighted Zeta Functions for Patterson-Sullivan Distributions

Philipp Schütte
Universität Paderborn (Germany)

In a recent joined work with Tobias Weich and Sonja Barkhofen we introduced new weighted zeta functions for open hyperbolic systems. After proving their meromorphic continuation to the complex plane we obtained a residue formula in terms of invariant Ruelle distributions. This in turn allowed us, using previous work of Guillarmou/Hilgert/Weich, to obtain new residue formulae for Patterson-Sullivan distributions on compact Riemannian locally symmetric spaces of rank one. In this talk we will present an overview over these results and further applications to convex cocompact hyperbolic surfaces.

Fried conjecture for non-unitary representations of unit tangent bundles of surfaces

Léo Bénard
Georg-August Universität Göttingen (Germany)

Given a compact riemannian manifold M, a vector field with "good" dynamical properties and a unitary representation of the fundamental group of the unit tangent bundle of M, Ruelle defined a zeta function on the set of periodic orbits of this vector field. The statement of Fried conjecture is that the value of the zeta function of Ruelle at 0 is the modulus of the Reidemeister torsion of the unit tangent bundle of the manifold in the given representation. This conjecture is a theorem in many cases now, but when the representation is not unitary, still few is currently known.

In the case of the unit tangent bundle of a 2-dimensional hyperbolic orbifolds, we prove that the value of the Ruelle zeta function at 0 is the Reidemeister–Turaev torsion with respect to the Euler structure induced by the geodesic flow.

Joint work with Jan Frahm and Polyxeni Spilioti (Aarhus University).

Asymptotics for Hecke eigenvalues of automorphic forms on compact arithmetic quotients

Pablo Ramacher
Philipps-Universität Marburg (Germany)

In this talk, we shall describe the asymptotic distribution of Hecke eigenvalues for certain families of Hecke-Maass forms on compact arithmetic quotients. The major novelty of our approach consists in applying methods from the modern theory of partial differential equations, more precisely, the theory of Fourier integral operators, to the analysis of automorphic forms. This allows us to circumvent the study of the geometric side of the trace formula, the main tool of previous approaches, and study not only spherical Hecke–Maass forms, but also non-spherical ones, which were deemed difficult to treat up to now. Our asymptotic formulas for Hecke eigenvalues do imply corresponding Plancherel density theorems and Sato-Tate equidistribution theorems which present new evidence towards the generalised Ramanujan conjecture. This is joint work with Satoshi Wakatsuki.

Spectral decomposition of Liouville Hamiltonian and unitary representations of the Virasoro algebra with central charge $c > 25$

Colin Guillarmou
Université Paris-Saclay (France)

We will explain, in the context of a certain 2 dimensional conformal field theory, how the Virasoro algebra appears naturally through a unitary representation in a Fock space and how to obtain a spectral resolution and a Plancherel formula using this resolution. The Virasoro algebra is an infinite dimensional Lie algebra that extends the algebra of polynomial vector fields on the unit circle. This work allows to prove in particular the conformal bootstrap for the Liouville conformal field theory. It can be seen as a sort of infinite dimensional version of the Plancherel formulas for finite dimensional Lie algebras. This is a joint work with Kupiainen-Rhodes-Vargas.

Whittaker vectors related to maximal parabolic subgroups and holomorphic representations

Gestur Ólafsson
Louisiana State University (USA)

One of the fundamental problems in representation theory and abstract harmonic analysis is the decomposition of induced representations, in particular the decomposition of $L^2(G/H)$ for a closed subgroup H. This is quite well understood if G is reductive and H is a symmetric subgroup. Somewhat antipodal to reductive subgroups are unipotent subgroups $N \subseteq G$. In this case, the theory becomes richer if we allow to induce from a generic unitary character $\psi : N \to \mathbb{T}$ and denote $L^2(G/N, \psi) = \mathrm{Ind}_N^G(\psi)$. For a maximal unipotent subgroup, the Plancherel formula for $L^2(G/N, \psi)$, also called *Whittaker Plancherel formula*, was obtained by Harish-Chandra, Wallach and van den Ban. The Whittaker Plancherel formula is formulated in terms of Whittaker vectors which are N-covariant distribution vectors. Whittaker vectors also play an important role in analytic number theory, where they are used to expand automorphic forms into generalized Fourier series. In particular, Whittaker vectors on holomorphic discrete series representations are important in the study of holomorphic automorphic forms on Hermitian groups.

We give a quite explicit construction of Whittaker vectors in the case where N is the unipotent radical of the minimal Siegel parabolic subgroup $P = MAN$ with N abelian, and ψ is a non-degenerate unitary character on N. We also construct an embedding of the holomorphic discrete series into $L^2(G/N, \psi)$ in the case where G/K is a tube domain and determine the multiplicity of those representations in $L^2(G/N, \psi)$. Finally we realize the contribution of the holomorphic discrete series as a Hardy space of holomorphic functions on a G-invariant complex domain in $G_{\mathbb{C}}/N_{\mathbb{C}}$ cotaining G/N as in the boundary. This is joint work with Jan Frahm and Bent Ørsted.

List of Participants

Anker	Jean-Philippe	Université d'Orléans
Arends	Christian	Paderborn University
Bang-Jensen	Frederik	Aarhus University
Bénard	Léo	Georg-August-Universität Göttingen
Bonthonneau	Yannick	LAGA, Université Paris 13, CNRS
Brennecken	Dominik	Paderborn University
Chaubet	Yann	Université Paris-Saclay
Delarue	Benjamin	Paderborn University
Ditlevsen	Jonathan	Aarhus University
Fedosova	Ksenia	University of Freiburg
Frahm	Jan	Aarhus University
Guillarmou	Colin	Université Paris-Saclay
Han	Zhicheng	University of Göttingen
Hide	Will	Durham University
Hilgert	Joachim	Paderborn University
Ioos	Louis	Max-Planck-Institute for Mathematics Bonn
Li	Jialun	Universität Zürich
Magee	Michael	Durham University
Matz	Jasmin	University of Copenhagen
Mehdi	Salah	Université de Lorraine & IECL - CNRS
Monclair	Daniel	Université Paris-Saclay
Monk	Laura	Max-Planck-Institute for Mathematics Bonn
Neeb	Karl-Hermann	FAU Erlangen-Nürnberg
Olafsson	Gestur	Louisiana State University
Papageorgiou	Effi	University of Crete
Peterson	Carsten	University of Michigan
Quint	Jean-François	Université de Bordeaux
Ramacher	Pablo	Philipps-Universität Marburg
Rösler	Margit	Paderborn University
Schmitt	Maximilian	Philipps-Universität Marburg
Schütte	Philipp	Paderborn University
Spilioti	Polyxeni	Aarhus University
Viaggi	Gabriele	Ruprecht-Karls-Universität Heidelberg
Weich	Tobias	Paderborn University
Wolf	Lasse	Paderborn University
Zhang	Hongwei	Ghent University