Program

Venue:

- The Hill University Center is located on University Boulevard between 14th and 15th Street South.
- The Education Building is located between 13th and 14th Street South behind a little park on University Boulevard.
- The Marshall Center is located on 11th Street South (next to the Best Western Hotel).
- The Alys Robinson Stephens Performing Arts Center is on 10th Avenue South between 12th and 13th Street South.
- The mathematics department is on the fourth floor of Campbell Hall which is on University Boulevard between 13th and 14th Street South.

Registration: Registration will start Monday, March 25, at 7:00 PM in the Marshall Center. We will also have registration in front of the lecture hall on both Tuesday and Wednesday from 8:30 to 9:00 AM and in the Education Building on Tuesday from 1:00 to 1:30 PM. Outside these times registration will take place in the office of the mathematics department (Campbell Hall 452). The office is open from 8 AM to 5 PM. We accept checks (drawn on a US financial institution) and cash. Checks are preferred.

Plenary Talks: Plenary talks will be held in the mornings at 9:00 AM and 10:30 AM in the Auditorium of the Hill University Center.

Parallel Sessions: Parallel sessions are in the afternoons between 1:30 and 6:00 PM. All parallel sessions take place in the Education Building.

Informal Gatherings: Each night, starting on Monday, March 25, with the exception of Wednesday, March 27, there will be informal gatherings with complimentary beer, crackers and cheese. These gatherings will take place in the Marshall Center and they will start at 7:00 PM. On Thursday night (March 28) a Southern Style BBQ will be served instead of only crackers and cheese.

Reception: There will be a reception with heavy hors d'oeuvres (including wine and beer) on Wednesday, March 27, in the lobby of the Alys Robinson Stephens Performing Arts Center. During the reception, the Goodfellows will provide background jazz music. There is an extra fee of $25 for the reception. It starts at 7:00 PM.

Monday, March 25

7:00 PM

MC Informal gathering at the Marshall Center. Registration.

Tuesday, March 26

9:00 AM

(Hill) Michael Aizenman: Localization in Schrödinger Dynamics with Random Potentials

10:30 AM

(Hill) Svetlana Jitomirskaya: Nonperturbative localization.

1:30 PM

131 Rafael del Rio Castillo: Coexistence of spectra in rank-one perturbation problems
133 Gang Bao: TBA
145 Thomas Chen: Infrared renormalization and infraparticle states in QED
146 Daphne Gilbert: Spectral analysis of a class of singular differential operators
152 Maria Hoffmann-Ostenhof: A geometrical version of Hardy's inequality

2:00 PM

131 Richard Brown: Some recent results, applications, and open problems concerning Opial's inequality
133 Jean-Pierre Fouque: Time-reversal mirror techniques in the regime of separation of scales
145 David Damanik: Quantum Dynamical Bounds for One-Dimensional Quasicrystals
146 Pavlo Krokhmal: An approach to solving boundary-value problems of elasticity in coordinate systems with incomplete separation of variables
152 Thomas Hoffmann-Ostenhof: Eigenvalues in Symmetry Subspaces

2:30 PM

131 Robert Sims: Fractional Moment Methods for Finite Rank Perturbations
133 Jeong-Rock Yoon: On a nonlinear PDE arising in magnetic resonance electrical impedance tomography (MREIT)
145 Rainer Hempel: On the discrete spectrum of Schrödinger operators with strong magnetic fields of compact support.
146 Igor Tralle: Exact Solution of the Dirichlet Problem for Nonlinear Poisson Equation on the Plane
152 Bernhard Kawohl: Anti-eigenvalues and a conjecture of McKenna and Walter

3:00 PM

131 Mayumi Ohmiya: Darboux-Lamé equation and isomonodromic deformation on the torus
133 Lin Ji: Stiffness Identification in Biological Tissue
145 Dirk Hundertmark: A diamagnetic inequality for semigroup differences
146 Bongsoo Ko : Multiplicity of Unstable Nontrivial Solutions in Semilinear Elliptic Indefinite Weight Boundary Value Problems
152 Semjon Vugalter: Enchanced Binding in non-relativistic QED

4:00 PM

131 Antonio Hernandez: Bifurcation of relative equilibria in symmetric Hamiltonian systems at singular momentum values
133 Lizabeth Rachele: Inverse Problems for Elastic Media
145 Horst Knorrer: Asymmetric Fermi Surfaces for Magnetic Schrödinger Operators
146 Yuri Podlipenko: Minimax approach to solving some inverse problems for Maxwell equations
152 Alexander Kozhevnikov: On a Complete Scale of Isomorphisms for Elliptic and Parabolic Pseudodifferential Boundary-Value Problems

4:30 PM

131 Pavel Kurasov: Inverse scattering problem for quantum graphs
133 Chris Stolk: Constructing artifact free image families in seismic inversion
145 Heinz Siedentop: The Energy of Electrons in Heavy Atoms According to Jansen and Hess
146 Igor Popov: Asymptotics of bound states, bands and resonances for laterally coupled quantum waveguides and layers
152 Ivan Veselic: Wegner estimate with local continuity requirements on the coupling constants

5:00 PM

131 Zdzislaw Trzaska: Chaos and the coexistence of attractors in a model system of coupled difference equations
133 no talk
145 Daniel Lenz: Cantorspectrum for one-dimensional quasicrystals
146 no talk
152 Michael Hitrik: Trace distributions and heat invariants for Schrödinger operators

5:30 PM

131 Mikhail Shchukin: Homogeneous C*-algebras
133 no talk
145 Saidakhmat Lakaev: The Efimov effect of three-particle Schrödinger operators on a lattice. Asymptotics for the number of eigenvalues
146 no talk
152 Rafael Benguria: The Lane-Emden Equation revisited

7:00 PM

MC Informal gathering at the Marshall Center.

Wednesday, March 27

9:00 AM

(Hill) JOHANNES SJOESTRAND: Some recent progress on spectral asymptotics for non-self-adjoint operators

10:30 AM

(Hill) RICARDO WEDER: The Time-Dependent Approach to Inverse Scattering

1:30 PM

131 OLEG MARICHEV: The website functions.wolfram.com
133 ROBERT SEIRINGER: Proof of Bose-Einstein Condensation for Dilute Trapped Gases
145 W. DESMOND EVANS: On the Zero modes of Pauli and Dirac operators
146 TAALAIBEK IMANALIEV: Method of Supplementary Argument
152 ISABELLE CATTO: On a Dirac-Fock type models for crystals

2:00 PM

131 RONALD MICKENS: Analysis of a van der Pol Type Differential Equation Having a Nonpolynomial Elastic Term
133 MARCEL GRIESEMER: Asymptotic Completeness for Compton Scattering
145 EVANS HARRELL: Gap estimates for Schrödinger operators depending on curvature
146 ABDUNABI ABDUKARIMOV: On the Cauchy problem for first-order elliptic systems
152 THOMAS OSTERGAARD SORENSEN: Structure and regularity of molecular eigenfunctions and electron densities

2:30 PM

131 KIM TUAN VU : Paley-Wiener Theorem and Sturm-Liouville Transforms
133 LASZLO ERDOS: Derivation of the nonlinear Schrödinger equation with Coulomb potential
145 EDGARDO STOCKMEYER: The multi particle Brown-Ravenhall atom
146 ALEXANDER KOMECH: On attractors of nonlinear Hamiltonian equations
152 SOEREN FOURNAIS: The total magnetic moment of large atoms in strong magnetic fields

3:00 PM

131 JIANG WEI: On the Stabilizability of Systems with Control Delay Via Output Feedback
133 BRUNO NACHTERGAELE: From Schrödinger dynamics to the Euler equations
145 LOTFI HERMI: On Harrell-Stubbe Type Inequalities for the Discrete Spectrum of a Self-Adjoint Operator
146 MAHMADIYOR YAHSHIBOEV: Fractional integro-differentiation by Chen-Hadamard
152 MICHAEL PANG: An alternative proof of Pascu's theorem on hot spots

4:00 PM

131 IVAN AVRAMIDI: Heat Kernel Asymptotics of Zaremba Boundary Value Problem
133 GISELE GOLDSTEIN: The n-dimensional Heat Equation with Nonlinear Generalized Wentzel Boundary Conditions
145 HORST BEHNCKE: The Spectrum of Differential Operators with Almost Constant Coefficients
146 KONSTANTIN MAKAROV: On a Subspace Perturbation Problem
152 SERGUEI DENISSOV: The theory of orthogonal polynomials and spectral analysis of Schrödinger operators

4:30 PM

131 KETILL INGOLFSSON: Notes on the spontaneous decay
133 JERRY GOLDSTEIN: Instantaneous blow-up for heat equations
145 ANDREAS M. HINZ: Delocalization for Schrödinger operators
146 ALEXANDER K. MOTOVILOV: Factorization Problem for Operator-Valued Herglotz Functions: Geometric Approach
152 SUZANNE RIEHL: Consequences of the Connection Formulae for Sturm-Liouville Spectral Functions

5:00 PM

131 Martin Juras: Equations in involution and intermediate integrals for a scalar second-order hyperbolic PDE in the plane
133 Tomio Umeda: Asymptotic properties of the generalized eigenfunctions of relativistic Schrödinger operators
145 B Malcolm Brown: Computing the spectrum of the one-dimensional p-Laplacian
146 Vadim Kostrykin: Perturbation of Spectral Projections and the Riccati Equation
152 Vadim Tkachenko: 1d periodic differential operator of order 4

5:30 PM

131 Rathinasamy Sakthivel: Existence Of Solutions Of Differential Equations
133 Luc Rey-Bellet: Fluctuations of entropy production in anharmonic chains
145 Kevser Ozden Koklu: The Asymptotic Formula For The Eigenvalues Of The Second Order Partial Differential Equation With Operator Coefficient
146 Abdumalik Rakhimov: On the localization of the spectral expansions of distributions
152 Alexei Rybkin: On a new transformation of the one-dimensional Schrödinger equation and higher order WKB-type asymptotics

7:00 PM

MC Informal gathering at the Marshall Center.

Thursday, March 28

9:00 AM

(Hill) Ari Laptev: Negative spectrum of Schrödinger operators

10:30 AM

(Hill) Claude-Alain Pillet: Spectral Theory of Open Quantum Systems

7:00 PM

MC Informal gathering at the Marshall Center.

Friday, March 29

9:00 AM

(Hill) Elliott Lieb: Stability of a Model of Relativistic Quantum Electrodynamics

10:30 AM

(Hill) Joel Lebowitz: Complex Time Evolution of Simple Quantum Systems

1:30 PM

131 C. Maeve McCarthy: Torsional Waves in Functionally Graded Isotropic Elastic Rods
133 Susan Friedlander: A dyadic model for non-Newtonian fluid equations
145 Michael Solomyak: Schrödinger operator on homogeneous metric trees: spectrum in gaps
146 katarzyna saxton: Nonlinear balance laws in low temperature heat propagation
152 Michael Loss: A Bound on Binding Energies and Mass Renormalization in Models of Quantum Electrodynamics

2:00 PM

131 Karl Michael Schmidt: Eigenvalue asymptotics of perturbed periodic Dirac systems in the slow-decay limit
133 Natasa Pavlovic: Finite time blow-up for a dyadic model of the Euler equations
145 Leonid Friedlander: On the spectrum of second order elliptic differential operators with periodic coefficients
146 Almut Burchard: On the Cauchy problem for a dynamical Euler's elastica
152 oliver knill: On a spectral notion of integrability

2:30 PM

131	Kyril Tintarev: Concentration compactness and nonlinear subelliptic problems without compactness
133	Mikhail Vishik: Harmonic analysis methods for incompressible flows of an ideal fluid
145	Pavel Exner: Generalized Schrödinger operators of the graph type
146	Baljeet Singh: Wave Propagation in Cracked Thermoelastic Solid Half-Space
152	Marco Lenci: Large deviations for ideal quantum systems

3:00 PM

131	Nataliya Bantsur: A note on existence and stability of periodic and almost periodic solutions of quasilinear equations with ”maxima”
133	Fedor Nazarov: TBA
145	Vassilis Papanicolaou: Recent Developments in the Theory of the Periodic Euler-Bernoulli Equation
146	Mary Ann Horn: Modelling of Nonlinear Dynamic Linked Elastic Structures
152	Leonid Bunimovich: Walks in Rigid Environments: Continuous Limits

4:00 PM

131	Toshihiko Hoshiro: The maximal smoothing effect of dispersive equations
133	Anna L. Mazzucato: The Navier-Stokes equation in distribution spaces
145	Peter Hislop: Global Continuity of the Integrated Density of States
146	Inci Albayrak: Asymptotic expression of negative eigenvalue number of an operator differential equation with even order according to small parameter having weighted function in eigenvalue
152	Wolfgang Spitzer: A new proof of the Scott correction

4:30 PM

131	Alexandra Smirnova: Regularization of nonlinear ill-posed problems by dynamical system method
133	Yuri Latushkin: Spectrum of the linearized Euler operator
145	Rowan Killip: Trace Formulae and Tri-diagonal Matrices
146	Abdurasul Gaziev: On the singular Cauchy type integrals with a continuous density for function of many variables
152	Vitali Vougalter: Pauli operator and Aharonov-Casher theorem for measure valued magnetic fields

5:00 PM

131	Gerard Awanou: Spline Approximations of the 3D Navier-Stokes Equations
133	Radu Cascaval: Pulse Waves in Elastic Tubes
145	George Hagedorn: A Time-Dependent Born-Oppenheimer Approximation with Exponentially Small Error Estimates
146	no talk
152	Kenji Yajima: Local decay for time period Schrödinger equations

5:30 PM

131	Olesya Zhupanska: A Singular Integral Equation with Sum-Difference Kernel Arising in Contact Problems with Friction
133	no talk
145	Stephen Gustafson: Effective dynamics of magnetic vortices
146	no talk
152	Alina Suzko: Time-dependent solvable models in quantum mechanics

7:00 PM

MC	Informal gathering at the Marshall Center.

Saturday, March 30

9:00 AM

(Hill) James Glimm: Predictability and Solution Error Models for Flow in Porous Media

10:30 AM

(Hill) Tai-Ping Liu: Boltzmann equation and conservation laws in gas dynamics

1:30 PM

131 Christer Bennewitz: Paley-Wiener methods in inverse spectral theory

133 Gui-Qiang Chen: Multidimensional Transonic Shocks and Free Boundary Problems for the Euler Equations for Potential Fluids

145 Tuncay Aktosun: Wave focusing on the line

146 Julio Toloza: Exponentially Small Error Estimates of Quasiclassical Eigenvalues

152 Domokos Szasz: Local Limit Theorems and Recurrence for the Planar Lorentz Process

2:00 PM

131 Christian Remling: Inverse spectral theory for one-dimensional Schrödinger operators

133 Hailiang Liu: Concentration and Cavitation of Density in Invicid Compressible Fluid Flow

145 Michael J Gruber: Spectral theory of Schrödinger Operators with periodic magnetic field

146 Daniel Ueltschi: On the sum of eigenvalues of the discrete Laplace operator

152 Thomas Murphy: Sequences of Classical Hard-Core Collisions

2:30 PM

131 Amin Boumenir: Interpolation and Inverse Spectral Theory

133 Bo Su : Discontinuous Solutions of Hamilton-Jacobi Equations: Existence, Uniqueness and Regularity.

145 Boris Belinskiy: Stability of a general linear mechanical system with a white noise in parameters

146 Eduard Tsekanovskii: On von Neumann's problem

152 Predrag Cvitanovic: Hopf's last hope: Spatiotemporal chaos in terms of unstable recurrent patterns

3:00 PM

131 no talk

133 Moulay Tidriri: Analysis of coupled systems of kinetic equations and conservation laws

145 Peter Kuchment: Spectra of Neumann Laplacians in thin graph like domains

146 Rajendrasinh H. Parmar: Generalized Laguerre Polynomial Solutions for Central Potentials in Quantum Mechanics

152 no talk

4:00 PM

131 Alexander Makin: On boundary value problems for one-dimensional Schrödinger operator

133 Konstantina Trivisa: Systems of Conservation Laws in Continuum Physics

145 Carlos Villegas-Blas: The regularization of the Kepler problem and the Bargmann Transform

146 Nasiba Raupova: Stability of solving systems Differential Equations of special form in R2

152 Dimitri Gioev: Lower order terms in Szego type asymptotic formulas

4:30 PM

131 Rasul Mardiev: Invertibility of the functional operators with shift having singularity

133 David Wagner: Exotherimic Reacting Euler Equations

145 Lyonell Boulton: D-S projection methods for discrete Schrödinger operators

146 Yahyo Muhtorov: Qualitative Analysis Of Two Dimensional System Differential Equations Of Special Form

152 Alexei Iantchenko: Birkhoff normal forms for Fourier integral operators

5:00 PM

131 no talk
133 ROBIN YOUNG: The p-system with Large Data
145 CHRISTIAN HAINZL: One non-relativistic particle coupled to a photon field
146 VAFOKUL ERGASHEV: Qualitative Analysis of Three Dimensional System Differential Equations of Special Forms.
152 MIKHAIL KOVALYOV: nonlinear analogues of $e^{i(kx-\omega t)}$ for integrable systems

5:30 PM

131 no talk
133 no talk
145 no talk
146 TOLIBJON BURIEV: Qualitative Analysis of Three Dimensional System Differential Equations of Special Forms
152 no talk

7:00 PM

MC Informal gathering at the Marshall Center.