TexAMP 2019/20

Friday, January 31

15:00-16:00 Arrival and Registration, HBH 220

16:00-17:00, HBH 227: Konstantin Khanin (University of Toronto)
On stationary solutions to the stochastic heat equation

17:30-18:30, HBH 227: Paul Bourgade (Courant Institute, NYU)
Branching processes in random matrix theory and analytic number theory

18:45-20:45: Conference Banquet, Brockman 101

Saturday, February 1

09:30-10:30, HBH 227: Bryna Kra (Northwestern University)
Symmetries of shift systems

11:00-12:00, HBH 227: Dmitry Dolgopyat (University of Maryland)
Randomness of toral translations

14:00-18:00 **Contributed Talks** in lecture rooms **HBH 227, 423, 427, 453**

Sunday, February 2

09:00-10:00, HBH 227: Balint Virag (University of Toronto)
The random planar geometry of the directed landscape

10:30-11:30, HBH 227: Jared Speck (Vanderbilt University)
A new formulation of compressible Euler flow: Miraculous geo-analytic structures and applications

TexAMP 2019/20: Contributed Talks

Session 1 in HBH 227

14:00-14:25
Gregory Berkolaiko, Texas A&M University
Global extrema of dispersion relation of tight-binding models

14:30-14:55
Davit Karagulyan, University of Maryland
Dynamical walks in random environment

15:00-15:25
Yaofeng Su, University of Houston
Random Young tower and quenched limit law

15:30-15:55
Coffee break and Poster Session HBH 438

16:00-16:25
Jing Zhou, University of Maryland
A rectangular billiard with moving slits

16:30-16:55
Aaron Yeager, College of Coastal Georgia
Real zeros of random sums with i.i.d. coefficients

17:00-17:25
Shannon Starr, University of Alabama at Birmingham
Probability in quantum spin systems and vice-versa

TexAMP 2019/20: Contributed Talks

Session 2 in HBH 423

14:00-14:25
Jake Fillman, Texas State University
Multidimensional Schrodinger operators whose spectrum features a half-line and a Cantor set

14:30-14:55
Blake Allan, Baylor University
Explicit Krein resolvent identities for singular Sturm-Liouville operators

15:00-15:25
Darren Ong, Xiamen University Malaysia
A closed-form formula for Thue-Morse autocorrelation coefficients

15:30-15:55
Coffee break and Poster Session HBH 438

16:00-16:25
Anton Kutsenko, Jacobs University Bremen
An entire function connected with the approximation of the golden ratio

16:30-16:55
Ali Pirhadi, Oklahoma State University
Random cosine polynomials with dependent coefficients

17:00-17:25
Wencai Liu, Texas A&M University
A discrepancy problem related to multi-frequency shifts and semi-algebraic sets and its applications to the large deviation theorem of analytic quasi-periodic operators

TexAMP 2019/20: Contributed Talks

Session 3 in HBH 427

14:00-14:25
Jonas Luhrmann, Texas A&M University
Asymptotics for the 1D Klein-Gordon equation with variable coefficient nonlinearities

14:30-14:55
Giorgio Young, Rice University
Uniqueness of solutions of the KdV hierarchy via Dubrovin-type flows

15:00-15:25
Jacky Chong, University of Texas at Austin
Dynamical Hartree-Fock-Bogoliubov approximation to interacting bosons

15:30-15:55
Coffee break and Poster Session HBH 438

16:00-16:25
Xin Dong, University of Maryland
Estimates for Pauli-type operators and local well-posedness for the reduced Hartree-Fock equation

16:30-16:55
Ken Deng, University of Louisiana at Lafayette
Global existence and blow-up for nonlinear diffusion equations with boundary flux governed by memory

TexAMP 2019/20: Contributed Talks

Session 4 in HBH 453

14:00-14:25
Brian Simanek, Baylor University
Zeros of paraorthogonal polynomials

14:30-14:55
Burak Hatinoglu, Texas A&M University
Inverse problems for Jacobi operators with mixed spectral data

15:00-15:25
Manki Cho, University of Houston – Clear Lake
Steklov representations of regularized harmonic functions

15:30-15:55
Coffee break and Poster Session HBH 438

16:00-16:25
Xutian Qi, UT Rio Grande Valley
Singular perturbation theory and its applications

16:30-16:55
Lijun Hu, UT Rio Grande Valley
A shock stable Roe scheme for hypersonic flows

17:00-17:25
Erik Harwell, Texas A&M University Kingsville
Complex mass-energy & hyper-spherical space: Complex energy and momentum, superluminal particles, antimatter and black holes