Julian K. Edward

Department of Mathematics
Florida International University
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Education

Massachusetts Institute of Technology, Cambridge, Massachusetts. PhD in Mathematics, June 1989.

McGill University, Montreal, Quebec. BA in Mathematics, Spring 1985.

Employment

Florida International University, Miami, Florida.

Chair 2005-present.

Professor, 2008-present.

Associate Professor 1998-2008.

Assistant Professor, August 1993-1998.

McGill University, Montreal, Canada. Visiting Scholar, 9/99-12/00.

University of Toronto, Toronto, Ontario. Assistant Professor, July 1989-August 1993.

Refereed Publications:

Published:

Edward, J. and Tebou, L., **Uniform internal controllability for structurally damped beam equation**, Asymptotic Analysis, 47 (2006), 55-83.

Edward, J. **Complex Ingham type inequalities and applications to control theory**, Journal of Mathematical Analysis and Applications, 324 (2006)

Dougherty, K. and Edward, J. **A non-equilibrium analysis of Unanimity, Majority, and Two Pareto Concepts**, Economic Inquiry 43 (2005), 855-865.

Dougherty, K. and Edward, J. **The Pareto efficiency and expected cost of k-Majority rules: a probabilistic study of the Calculus of Consent**, Politics, Philosophy, and Economics 3, (2004), p.161-189.

Edward, J. **Trapped modes for periodic structures on waveguides**, Mathematical Methods in Applied Sciences 27, (2004), p.91-99.

Edward, J. **On the resonances of the Laplacian on waveguides**, J. Math. Anal. Appl. 272 (2002) 89-116.

Edward, J. **Corrigendum to the paper "Spectrum of the Neumann Laplacian on planar domains with horn-like ends"**, Canad. J. Math. 52, (2000), p.119-122.

Edward, J. **Eigenfunction decay for the Neumann Laplacian on Horn-like domains**, Canad. Math. Bull. 43, (2000), p.51-59.

Edward J. and Pravica D. **Bounds on resonances of the Laplacian on perturbations of half-space**, SIAM J. Math. Anal., 30, (1999), 1175-1184.

Edward, J. **Eigenvector decay and eigenvalue accumulation on asymptotically perturbed waveguides**, Journal of London Mathematical Society 59, (1999),p. 620-636.

Edward, J. **Spectrum of Schrodinger operators on planar domains with ends of increasing cross-section.**, Math. Methods Appl. Sci., 22 p.139-169, (1999).

Edward, J., **Spectrum of the Neumann Laplacian on planar domains with horn-like ends**, Canadian J. Math., 49, (1997), 232-262.

Edward, J., **"An Inequality for Steklov Eigenvalues for Planar Domains"**, Zeitsdhrift fur angewandte Mathematik und Physik 45, (1994), pp. 493-496.

Edward, J., **"Pre-Compactness of Isospectral Sets of Planar Domains for the Neumann Operator."**, Communications in Partial Differential Equations, Vol. 18, Numbers 7, 8, (1993), pp. 1249-1270.

Edward, J., **"Jacobi Matrices and the Spectrum of the Neumann Operator on a Family of Riemann Surface"**, Canadian Journal of Mathematics, Vol. 45, Number 4, (1993), pp. 709-726.

Edward, J., **"The Spectra of Jacobi Matrices, Differential Operators on the Circle, and the su(1,1) Lie Algebra"** SIAM Journal of Mathematical Analysis, Vol. 24, No. 3, (1993), pp. 824-831.

Edward, J., **"An inverse spectral result for the Neumann Operator on smooth planar domains"**, Journal of Functional Analysis, Vol. 111, No. 2, February (1993), pp. 312-322.

Edward, J. and Wu, S., **"Determinant of the Neumann Operator on smooth Jordan curves,"** AMS Proceedings, Volume 111, Number 2, February (1991), pp 357-363.

External Talks

"Complex Ingham Inequalities and Applications to Control Theory", Analysis seminar, McGill University, March 16/07.

20 minute seminar: "Ingham type inequalities for complex frequencies and applications to control theory", Florida International University, Mini-conference in analysis, 20/10/05.

Seminar"Ingham type inequalities for complex frequencies and applications to control theory", at AMS Workshop in Dynamical Systems and PDE in Control Theory, Snowbird, Utah 7/7/05.

20 minute seminar: "Ingham-type inequalities and null-controllability of beam equation with internal damping". Florida Atlantic University, Mini-conference in analysis, 1/20/05.

Seminar: "Resonances and embedded eigenvalues on manifolds with infinite cylindrical ends", Medical Mathematics Conference, East Carolina University, May 29, 2003.

Seminar: "Quantifying the fairness of various voting schemes", Dept. of Mathematics, Florida Atlantic University, Dec. 6, 2001.

Seminar: "Resonances on acoustic waveguides", in workshop on Scattering Theory at the Erwin Schrodinger Institute, Vienna, Austria, May 26, 2001.

Seminar: "Resonances for the Laplacian on waveguides", on special session: Partial Differential Equations in Mathematical Physics, 1999 UAB-GIT International Conference on Mathematical Physics and Differential Equations, Birmingham, Ala., Nov. 12, 2000.

Seminar: "Bounds on the number of resonances for the Laplacian on certain asymptotically Euclidean spaces", Dept. of Mathematics, McGill University, Sept. 7, 1999.

Seminar: "Bounds on the number of resonances for the Laplacian on certain asymptotically Euclidean spaces", Dept. of Mathematics, University of Toronto, Oct. 15, 1999.

Colloquium: "Trapped waves on waveguides", Dept. of Mathematics, University of Ottawa, Nov. 12, 1999.

"Scattering theory for quotients of $\mathbf{R}^n$ by finite subgroups of $GL(n)$", The 1999 UAB-GIT International Conference on Mathematical Physics and Differential Equations, Birmingham, Ala., March 16, 1999.

"Spectral resonances contained by compact potential barrier", Dept. of Mathematics, University of Kentucky, April 30, 1998.

American Mathematical Society Special Session, “PDE’s and mathematical physics”, University of Missouri, Columbia MO.: “Spectrum of Schrodinger operators on domains with ends of increasing cross-section”, Nov. 3, 1996.

American Mathematical Society Special Session, “PDE’s and mathematical physics”, Northeastern University, Boston: “Spectrum of the Neumann Laplacian on planar domains with ends”, Oct. 7, 1995.

University of Miami, Dept. of Mathematics: “Spectrum of the Neumann Laplacian on planar domains with ends”, Sept. 19, 1995.

Conference: Partial Differential Equations and Applications, Fields Institute, Toronto: “Spectrum of the Neumann Laplacian on planar domains with horn-like ends”, June 19, 1995.

University of Toronto, Dept. of Mathematics, “Spectrum of the Neumann Laplacian on planar domains with horn-like ends”, Feb. 27 , 1995,

Ohio State University, Dept. of Mathematics, “Spectrum of the Neumann Laplacian on planar domains with horn-like ends”, Jan. 6 , 1995,

University of Miami, Dept. of Mathematics, “On the Eigenvalues of the Laplacian on Manifolds with Cusps”, Sept. 19 1993.

McGill University (Montreal), Dept. of Mathematics, “On the Eigenvalues of the Laplacian on Manifolds with Cusps”, Oct. 5 1993.

Canadian Mathematical Society Congress, Victoria, British Columbia, “Jacobi matrices and the spectrum of the Neumann operator on a family of Riemann surfaces”, Dec. 8, 1991.

Universite de Montreal, Dept. of Mathematics, “Invariants spectrales de l’operateur Neumann”, Feb. 20, 1990.

<u>Visiting positions</u>

Visiting scholar, McGill University, 8/1999-12/1999.

<u>Invitations to workshops, etc.</u>

Invited to Medical Mathematics Conference, East Carolina University, May 25-28 2003.
Invited to the program “Scattering Theory” at Erwin Schrodinger Institute, Vienna, Austria, May 16-30.
Invited to the “Program on microlocal methods in geometric analysis and mathematical physics”, Aug.-Dec. 1997 at Fields Institute, Toronto, Canada.