

# Publications for 2005

## Refereed Article Publications

Author	Title
<b>Andrew Acker</b>	"On the non-starlikeness of solutions to the starlike interior wake problem", Proceedings of the American Mathematical Society. Will appear in Vol. 134, no. 3 (2006), pp. 749-753. The Electronic version appeared during 2005.
<b>Alexandre Boukhgueim</b>	(with G.V.Gyatlov, and E.V.Tantserev) "Uniqueness in one inverse problem for Maxwell system", Trudy Seminara Sobolev Institute of Mathematics,(2005):60-69.
<b>Dharam Chopra</b>	(with Dios,R.) "Contributions to orthogonal arrays of strength four with two levels", Congressus Numerantium 166 (2004), pp.207-214.
<b>Dharam Chopra</b>	(with Dios,R.) "On the non-existence of some orthogonal arrays", Journal of Combinatorial Designs and Combinatorial Computing 54 (2005), pp.129-136.
<b>Thomas DeLillo Victor Isakov</b>	(with T. Hrycak) "Theory and boundary element methods for nearfield acoustic holography", Journal of Computational Acoustics, 13(2005): 163-185.
<b>Thomas DeLillo Alan Elcrat</b>	(with C. Hu) "Computation of Helmholtz-Kirchhoff and reentrant jet flows using Fourier series", Applied Mathematics and Computation, 163(2005): 397-422.
<b>Alan Elcrat</b>	(with R.Treinen) Numerical results for floating drops, Discrete and Continuous Dynamical Systems, Supplement Volume 2005.
<b>Alan Elcrat Kenneth Miller</b>	(with B. Fornberg) "Stability of vortices in equilibrium with a cylinder", Journal of Fluid Mechanics, 544 (2005), 53-68.
<b>Victor Isakov</b>	"An inverse problem for the dynamical Lamé system with two sets of local boundary data", Control Theory of Partial Differential Equations. Lecture Notes in Pure and Applied Mathematics, Marcel Dekker, 2005. 101-111.
<b>Thalia Jeffres</b>	"A maximum principle for parabolic equations on manifolds with cone singularities", Adv. Geom. 5 (2005), 319-323.
<b>Zhiren Jin Kirk Lancaster</b>	"Convergent rate of solutions of Dirichlet problems for quasilinear equations", Journal of London Mathematical Society, (2) 71 (2005) 415-437.
<b>Zhiren Jin</b>	"Dirichlet problems for semilinear elliptic equations with a fast growth coefficient on unbounded domains", Electron. J. Diff. Eqns., Vol. 2005(2005), No. 109, pp. 1-12.
<b>Kirk Lancaster</b>	(with Hasan Almfefleh) "Phragmn-Lindelf theorems in cylinders", Proc. Roy. Soc. Edinburgh Sect. A, 135 (2005), no.3, 439--459.
<b>Chunsheng Ma</b>	"Spatio-temporal variograms and covariance models", Advances in Applied Probability, 37 (2005), 706-725.
<b>Chunsheng Ma</b>	"Linear combinations of space-time covariance functions and variograms", IEEE Transactions on Signal Processing, 53 (2005), 857-864.
<b>Chunsheng Ma</b>	"A class of stationary random fields with a simple correlation structure", Journal of Multivariate Analysis, 94 (2005), 313-327.
<b>Chunsheng Ma</b>	"Semiparametric spatio-temporal covariance models with the autoregressive temporal margin", Annals of the Institute of Statistical Mathematics, 57 (2005), 221-233.
<b>Daowei Ma</b>	(with K.T. Kim) "A note on Kim-Ma characterization of the Hilbert ball," Journal of Mathematical Analysis and Applications, 309(2005): 761-763.

**Hari Mukerjee** (with H. El Barmi) "Inferences under a stochastic ordering constraint: the k-sample case", Journal of American Statistical Association, 100 (2005): 252-261.

**Phillip Parker** (with C. Jang, and K. Park) "Pseudo  $H$ -type 2-step nilpotent Lie groups", Houston J. Math., 31 (2005) 765-786.

**Phillip Parker** (with L. Del Riego) "Geometry of nonlinear connections", Nonlinear Anal., 63 (2005) e501-e510.

**Phillip Parker** (with C. Jang) "Conjugate loci of pseudoriemannian 2-step nilpotent Lie groups with nondegenerate center", Ann.Global Anal.Geom., 28 (2005) 1-18.

**Jianliang Qian** (with B. Cockburn, F. Reitich and J. Wang) "An Accurate Spectral Discontinuous Finite-Element Formulation of a Phase-Space-Based Level Set Approach to Geometrical Optics," J. Comput. Phys., 208(2005), 175-195.

**Jianliang Qian** (with T.C. Cecil, and Stanley Osher) "Simplex Free Adaptive Tree Fast Sweeping and Evolution Methods for Solving Level Set Equations in Arbitrary Dimension", J. Comput. Phys. (online).

**Ziqi Sun** "Note on exponentially growing solutions to the Schrodinger equations," Communications in Applied Math, 9 (2005), 327-336.

**Ziqi Sun** "Conjectures in Inverse Boundary Value Problems for Quasilinear Elliptic Equations," CUBO Math Journal, 7 (3), (2005), 65-73.

**Ziqi Sun** "Anisotropic Inverse Problems for Quasilinear Elliptic Equations, (2004)," Journal of Physics, 12 (2005), 156-164.

**Christian Wolf** (with R. Shafikov) "Stable sets, hyperbolicity and dimension", Discrete and Continuous Dynamical Systems, 12 (2005), no. 3, 403-412.

#### Book Publications

<b>Author</b>	<b>Title</b>
<b>Victor Isakov</b>	"Inverse Problems for PDE" was submitted to Springer-Verlag, New York in October 2005.

#### Published Conference Proceedings

<b>Author</b>	<b>Title</b>
<b>Andrew Acker</b>	"One-layer free-boundary problems with two free boundaries", Elliptic and Parabolic Problems-a special tribute to Haim Brezis (Proceedings of the 5th European conference on elliptic and parabolic problems), edited by C. Bandle, H. Berestycki, and B. Brighi, Vol. 63 in the book series: Progress in Nonlinear Differential Equations and their Applications, Birkhaeuser Verlag, 2005.
<b>Alexandre Boukhgueim</b>	"Inversion of the Radon Transform, Based on the Theory of A-analytic Functions, with Application to 3D Inverse Kinematic Problem with Local Data", 5th International Conference on Inverse Problems in Engineering, Theory and Practice Volume I, Editor D. Lesnic, Leeds University Press, UK, (2005) B11 :1-10.
<b>Chunsheng Ma</b>	"New space-time correlation models", The Joint Meeting of the Chinese Society of Probability and Statistics and the Institute of Mathematics and Statistics, July 9-12, 2005, Peking University, Beijing, China.
<b>Jianliang Qian</b>	(with S. Y. Leung "A Transmission Tomography Problem Based on Multiple Arrivals from Paraxial Liouville Equations", SEG 2005, PP 2589-2592.

## Formal Papers Delivered at Professional Meetings

<b>Author</b>	<b>Title</b>
<b>Dharam Chopra</b>	"Further contributions to the existence of some combinatorial arrays", Thirty-Sixth Southeast International Conference on Combinatorics, Graph Theory, and Computing, Boca Raton, FL, March 2005.
<b>Dharam Chopra</b>	(with R.Dios) "On the existence of some combinatorial arrays. Nineteenth Mid-West Conference on Combinatorics, Cryptography, and Computing", held in Rochester, NY, October 2005.
<b>Dharam Chopra</b>	(with S.M.Lee) "On Super Edge-Magic Graphs that are weak magic. Nineteenth Mid-West Conference on Combinatorics, Cryptography, and Computing", Rochester, NY, October 2005.
<b>Thomas DeLillo</b>	"Schwarz-Christoffel mapping of bounded, multiply connected domains", contributed talk, Computational Methods and Function Theory meeting, Joensuu, Finland, June, 2005.
<b>Thomas DeLillo</b>	"Schwarz-Christoffel mapping of multiply connected domains--formulas and computation", poster session, Strings 2005 Conference, U. of Toronto, Canada, July, 2005.
<b>Alan Elcrat</b>	"Computation of Multiply Connected Schwarz-Christoffel Transformations", CMFT, Joensuu, Finland, June 2005.
<b>Alan Elcrat</b>	"Stability of Inviscid Vortices Behind a Circular Cylinder", APS/DFD meeting, Chicago, November 2005.
<b>Lop-Hing Ho</b>	(with Kung-sik Chan) "On the unique representation of non-Gaussian multivariate linear processes," 2005 Joint Statistical Meetings, Minneapolis, MN, August 2005.
<b>Victor Isakov</b>	"On inverse problems in oil production", Inverse Problems Reunion, IPAM, UCLA, CA, June 2005.
<b>Victor Isakov</b>	"Increased stability in continuation of wave fields and inverse problems in acoustics", International conference "Applied Inverse Problems 2005", Cirencester, England, June 2005.
<b>Victor Isakov</b>	"Carleman estimates and their applications in inverse problems", AMS-IMS-SIAM Summer Research Conference "Control Methods in PDE-Dynamical Systems", Snowbird Resort, Utah, July 2005.
<b>Victor Isakov</b>	"Carleman estimates and their applications in inverse problems and control theory", The 5-th ISAAC Congress, Catania, Italy, July 2005.
<b>Kenneth Miller</b>	Free Surface Waves in Equilibrium with a Vortex", American Physical Society, Division of Fluid Dynamics, Annual Meeting, Chicago, IL, Nov. 20-22, 2005.
<b>Hari Mukerjee</b>	"Use of peakedness in statistics," Joint Statistical Meeting, Minneapolis, MN, August 10, 2005.
<b>Ziqi Sun</b>	"Developments in inverse boundary value problems for quasilinear elliptic equations," Joint Mathematics meetings, AMS-SIAM Special Session on Theoretical and Computational Aspects of Inverse Problems, Atlanta, January 2005.
<b>Christian Wolf</b>	"Ergodic theory of parabolic horseshoes", Ergodic Theory Conference, University of Bordeaux, June 2005.

## Book Reviews Published in Professional Journals and Abstracts

<b>Author</b>	<b>Title</b>
<b>Dharam Chopra</b>	"A primer on statistical distributions by N.Balakrishnan and V.Nezorov", Wiley-Interscience, Choice 41 (#5),2004,pp.946-947.
<b>Dharam Chopra</b>	"Mathematical methods using Mathematica by S.Hassani", Springer-Verlag, Choice 41 (No.5),2004,p.947.
<b>Dharam Chopra</b>	"Interactive statistics for the behavioral sciences by P.Williams.Sinauer", Associates, Choice 41 (No.7),2004,p.1331.
<b>Dharam Chopra</b>	"Foundations of Risk Analysis:a knowledge and decision-oriented perspective by T.Aven", Wiley, Choice 41(No.9),2004,pp.1698-1699.
<b>Dharam Chopra</b>	"Exercises in Probability by L.Chaumont and M.Yor", Cambridge Univ.Press, Choice 41(No.10),2004,p.1916.
<b>Dharam Chopra</b>	"Common errors in statistics (and how to avoid them) by P.Good and J.Harden", Wiley-Interscience, Choice 41(NO.10),2004,1916.
<b>Anna Sue Neal</b>	"Preparing Mathematics and Science Teachers for Diverse Classrooms", A. Rodriguea and R. Kitchen, Mathematics Teacher Magazine (2005)
<b>Anna Sue Neal</b>	"Conics", K. Kendig, Mathematics Teacher Magazine (2005)