

Publications for 2013

Refereed Article Publications

Author	Title
Elizabeth Behrman	(with J.E. Steck) “Multiqubit entanglement of a general input state,” <i>Quantum Information and Computation</i> , 13 (2013), 36-53.
Dharam V. Chopra	(with R.M. Low and R. Dios) “Further results on some Bi-level Balanced Arrays using coincidences,” <i>The Journal of combinatorial mathematics and combinatorial computing</i> , Vol.86 (2013), pp.171-181.
Dharam V. Chopra	(with Richard M. Low and R. Dios) “Investigations on balanced arrays of strength eight using coincidences and moment matrix, Published in <i>Congressus Numerantium</i> , Vol.213 (2012), pp.133-141.
Thomas K. DeLillo	(with A. R. Elcrat, E. H. Kropf, and J. A. Pfaltzgraff) “Efficient calculation of Schwarz-Christoffel transformations for multiply connected domains using Laurent series,” <i>Computational Methods and Function Theory Journal</i> , 13 (2013), pp. 307-336.
Jason W. Ferguson	(with Neil Vaytet, Gilles Chabrier, Edouard Audit, Benoît Commerçon, Jacques Masson, and Franck Delahaye) “Simulations of protostellar collapse using multigroup radiation hydrodynamics II The second collapse,” <i>Astronomy & Astrophysics</i> , 557 (2013), 90.
Jason W. Ferguson	(with S. Cassisi, A. Mucciarelli, A. Pietrinferni, and M. Salaris) “Photometric properties of stellar populations in Galactic globular clusters: the role of the Mg-Al anticorrelation,” <i>Astronomy & Astrophysics</i> , 554 (2013), 19.
Buma Fridman Daowei Ma	“Holomorphic functions on subsets of C,” <i>Journal of the Mathematical Society of Japan</i> , vol. 65 (2013), 1-12.
Hussein H Hamdeh	(with Zein K. Heiba, Mohamed Maker Mohamed, M.A.A. Moussa, and M.A. Ahmed) “Cation Distribution and dielectric properties of nanocrystalline Gallium substituted Nickel ferrite,” <i>Journal of Metals and Compounds</i> , 586 (2014) 773-781, DOI 10.1016/j.jallcom.2013.10.137.
Hussein H Hamdeh	(with Muthu Kumaran Gnanamani, Wilson D. Shafer, Dennis E. Spark, and Burtron H. Davis) “Effect of potassium on Activity and Selectivity for oxide and carbide Fe catalysis,” <i>Catalysis Letters</i> , Volume 143, (2013) Issue 11, Page 1123-1131 (DOI 10-1007/s10562-013-1110-7).
Hussein H Hamdeh	(with M.H. Mahmoud, A.M. Elshahawy, and Salah Makhlof) “Mössbauer and Magnetization Studies of Nickel Ferrite Nanoparticles Synthesized by the Microwave-Combustion Method,” <i>JMMM</i> , 243 (2013), 21-26.
Hussein H Hamdeh	(with Muthu Kumaran Gnanamani, Gary Jacob, Wilson D. Shafer, and Burtron H. Davis) “Fischer-Tropsch Synthesis: Mössbauer investigation of Iron containing catalysts for Hydrogenation of Carbon Dioxide,” <i>Catalysis Today</i> , 207 (2013), 50-56.

- Tianshi Lu** “Numerical Modeling of Experimentally Obtained Lightning Arc Root Damage in Metal Sheets,” *Int'l J. Eng. Prac. Res.*, 2 (2013), 139-147.
- Chunsheng Ma** “The Schoenberg-Lévy kernel and relationships among fractional Brownian motion, bifractional Brownian motion, and others,” *Theory of Probability and Its Applications*, vol. 57 (2013), 619–632.
- Chunsheng Ma** “Student's t vector random fields with power-law and log-law decaying direct and cross covariances,” *Stochastic Analysis and Applications*, vol. 31 (2013), 167-182.
- Chunsheng Ma** “Mittag-Leffler vector random fields with Mittag-Leffler direct and cross covariances,” *Annals of the Institute of Statistical Mathematics*, vol. 65 (2013), 941-958.
- Chunsheng Ma** “K-distributed vector random fields in space and time,” *Statistics and Probability Letters*, vol. 83 (2013), 1143-1150.
- Chunsheng Ma** (with J. Du) “Vector random fields with compactly supported covariance matrix functions,” *Journal of Statistical Planning and Inference*, vol. 143 (2013), 457-467.
- Chunsheng Ma** (with J. Du and Y. Li). Isotropic variogram matrix functions on spheres. *Mathematical Geosciences*, vol. 45 (2013), 341-357.
- Victor Isakov** (with S. Leung and J. Qian) “A three-dimensional inverse gravimetry problem for ice with snow caps,” *Inv. Probl. Imaging*, 7 (2013), 523-545.
- Hari Mukerjee** (with E. Lorezo and G. Malla) “Estimation of a survival function with the new batter than used in expectation property,” *Statistics and Probability Letters*, Vol. 83, 1346-1352.
- Hari Mukerjee** (with E. Lorenzo and G. Malla) “A new test for new better than used in expectation lifetime,” *Communications in Statistics*, (In press).
- Hari Mukerjee** (with Edgardo Lorenzo), “Improved asymptotics of a decreasing mean residual life estimator,” *Communications in Statistics: Theory and Methods*, (In press).
- Holger Meyer
Nick Solomey** (with F. Sarzain, A. Gaume, B. Genolini, L. Guglielmi, M. Hevinga, J. Hodgson, J. Hollenbeck, K. Kuhn, M. Malinowski, M. Marton, M. Maskevics, K. Nelson, E. Raully, S. Robinson, A. Rokos, C. Spellman, J. Thompson, T. Nguyen, O. Wolf and J. Yadon) “The Pierre Auger Research and Development Array (RDA) in southeastern Colorado – R&D for a giant ground array,” *European Physical Journal*, 53 (2013), 08017.
- Holger Meyer** “Status and latest results from MIPP,” *Nucl. Phys. B Proc. Suppl.* 233 (2012) 270-275. (This paper was actually published in 2013 although the year listed in the volume is 2012).
- Mark Walsh** “Cobordism invariance of the homotopy type of the space of metrics of positive scalar curvature,” *Proceedings of the American Mathematical Society*, 141 (2013) 7, 2475-2485.

Published Conference Proceedings

Author	Title
Abdelhamid Albaid	“Higgs boson Mass in GMSB with Messenger-Matter mixing,” Nucl. Phys. Proc. Suppl. (2012).
Abdelhamid Albaid Holger Meyer Nick Solomey	(with Marco Bozzo, B. Abbott, P. Gutierrez, A. Khanov, M. Murray, F. Rizatdinova, Patrizia Cenci, Janis McKenna) “BEACH 2012 Proceedings of the 10th International Conference on Beauty, Charm and Hyperons in Hadronic Interactions,” Wichita, Kansas, July 23-28, 2012, Nucl. Phys. B Proc. Suppl. 233 (2013).
Elizabeth Behrman	(with J.E. Steck) “A quantum neural network computes its own relative phase,” Swarm Intelligence (SIS), IEEE Symposium Series on Computational Intelligence 2013, Singapore, April 15-19, 2013, pp 119-124 10.1109/SIS.2013.6615168.
Hussein H Hamdeh	(with M.H. Mahmoud, A.M. Elshahawy) “Mössbauer spectroscopy study of annealed Ni-ferrite synthesized by microwave-combustion method,” International Conference on the Application of the Mössbauer Effect, ICAME 2013, Opatija Croatia, 1-6 September (2013).
Daowei Ma	(with G. Chen) "Spectra of unitary integral operators on $L^2(R)$ with kernels $k(xy)$," Integral Equations, Boundary Value Problems and Related Problems, World Scientific, 2013, 195-210.

Formal Papers Delivered at Professional Meetings

Author	Title
Elizabeth Behrman	(with J.E. Steck) “Quantum neuron design,” Quantum Information Processing and Communication Conference (QIPC), Florence, Italy, June 30-July 5 2013.
Elizabeth Behrman	“A quantum neural network computes its own relative phase,” Bulletin of the American Physical Society paper B26.0010 March Meeting 2013.
Thomas K. DeLillo	(with A. Elcrat, E. Kropf, and D. Stewart) “Regularization methods applied to an inverse problem in gravimetry in two dimensions,” New Frontiers in Numerical Analysis and Scientific Computing-A conference on the occasion of Lothar Reichel's 60th birthday and on the 20th anniversary of ETNA, Kent State Univ., Kent, OH, 4/19-20/13.

- Thomas K. DeLillo (with E. H. Kropf) “Fourier Series Methods for Numerical Conformal Mapping of Smooth Domains,” First Central Region Conference on Numerical Analysis and Dynamical Systems, University of Kansas, Lawrence, KS, 5/3-5/13.
- Thomas K. DeLillo (with E. H. Kropf) “Fourier Series Methods for Numerical Conformal Mapping of Smooth Domains,” Conformal Geometry in Mapping, Imaging, and Sensing Workshop, Imperial College, London, 6/20-21/13. (Jointly sponsored by London Math Society, the Engineering and Physical Sciences Research Council, and Proceedings of the Royal Society A.)
- Xiaomi Hu “On the computations of A-basis and B-basis,” Quality and Productivity Conference 2013, GE Global Research Headquarter, Niskayuna, NY, June 5, 2013.
- Xiaomi Hu “Order restricted multivariate two sample problems, Cones and Projections in $\mathbb{R}^{p \times 2}$,” International Workshop on Matrices and Statistics 2013, Toronto, Canada, Aug. 14, 2013.
- Victor Isakov “Increasing Stability in the continuation,” Inverse Problems and Applications, University of Linkoping, Sweden, April 2013.
- Victor Isakov “Carleman estimates for transversely isotropic elasticity and applications,” PDE's, Inverse Problems, and Control Theory, Cortona, Italy, July 2013.
- Thalia D. Jeffres (with Rafe Mazzeo and Yanir Rubenstein) “Kähler-Einstein Metrics with Edge Singularities,” Shanks Workshop, Vanderbilt University, March 2013.
- Nick Solomey “Studies of the North American central high plains for the next large cosmic ray experiment,” 10th International Conference on Cosmology and Astro-Particle Physics, Honolulu, Hawaii, Nov. 12-28, 2013.