

## PUBLICATIONS OF NARN-RUEIH SHIEH (1992–present)

- A. journal papers B. conference papers C. preprints/technical reports
- (2014A) The Lamperti Transforms of Self-similar Gaussian Processes and Their Exponentials. To appear in *Stochastic Models*. Joint work with M. Matsui.
- (2013A) Rényi Function for Multifractal Random Fields. *Fractals* **21**, DOI: 10.1142/S0218348X13500096. Joint work with N.N. Leonenko.
- (2013B) Hitting Probabilities of the Random Covering Sets. In *A.M.S. Contemp. Math. Series*. Joint work with B. Li and Y.M. Xiao.
- (2012A) Free Fields Associated with the Relativistic Operator  $-(m - \sqrt{m^2 - \Delta})$ . *J. Pseudo-Differ. Oper. Appl.*, DOI 10.1007/s11868-012-0053-x.
- (2012A) On time-fractional relativistic diffusion equations. *J. Pseudo-Differ. Oper. Appl.*, DOI 10.1007/s11868-012-0049-6.
- (2012A) On the Exponential Process associated with a CARMA-type Process. *Stochastics*, DOI:10.1080/17442508.2012.654791. Joint work with M. Matsui.
- (2012C) Multi-scaling Limits for Relativistic Diffusion Equations with Random Initial Data. Working paper. Joint work with G.-R. Liu. Submitted.
- (2011A) Multiparameter multifractional Brownian motion: local nondeterminism and joint continuity of the local times. *Ann. Inst. Henri Poincaré – Prob. et Stat.* **47**, 1029-1054. Joint work with A. Ayache and Y.M. Xiao.
- (2011A) Homogenization of fractional kinetic equations with random initial data. *Electronic Journal of Probability*. **16**, Paper no. 32, 962-980. Joint work with G.-R. Liu.
- (2011B) Sample Paths of Fractional Lévy Processes. In *Infinite Divisible Processes and Related Topics (15)*. ISM (Tokyo, Japan) Cooperative Research Report No. 262. Joint work with M. Maejima.
- (2010C) Ornstein-Uhlenbeck Transform of Fractional Brownian Sheets. Working project. Joint work with A. Ayache.
- (2010A) Hausdorff and Packing dimension results for the images of random fields. *Bernoulli* **16**, 926-952. Joint work with Y.M. Xiao.
- (2010B) Multifractal scenarios for products of geometric Ornstein-Uhlenbeck type processes. In *Dependence in Probability and Statistics*, pp 103-119, ed. P. Doukhan, G. Lang, D. Surgailis, and G. Teyssiere. Springer Lecture Notes in Statistics **200**, 2010. Joint work with V. Anh and N.N. Leonenko.
- (2010A) Simulation of Multifractal Products of Ornstein-Uhlenbeck type processes. *Nonlinearity* **23**, 823-843. Joint work with V. Anh, N.N. Leonenko, and E. Taufer.
- (2010A) Scaling limits of time-fractional diffusion-wave systems with random initial data. *Stochastics and Dynamics* **10**, 1-35. Joint work with G.-R. Liu.
- (2010A) Scaling limits of some P.D.E. systems with random initial conditions. *Stochastic Analysis and Applications* **28**, 505-522. Joint work with G.-R. Liu.
- (2009A) Fractal Geometry of Lévy-based spatial-temporal random fields. *Fractals* **17**, 505-511.
- (2009A) Random p-adic Riesz products: continuity, singularity, and dimension. *Proceedings of American Math Society* **137**, 3477-3486. Joint work with X.Y. Zhang.

- (2009A) Multifractal moment-scalings in geometric birth and death processes. *Bernoulli* **15**, 508-531. Joint work with V. Anh and N.N. Leonenko.
- (2009A) Multifractal products of stationary diffusions. *Stochastic Analysis and Applications* **27**, 475-499. Joint work with V. Anh and N.N. Leonenko.
- (2009A) On the exponentials of fractional Ornstein-Uhlenbeck Processes. *Electronic Journal of Probability* **14**, Paper no. 23, 594-611. Joint work with M. Matsui.
- (2009A) The exact packing measure of Brownian double points. *Probability Theory and Related Fields* **143**, 113-136. Joint work with P. Mörters.
- (2008A) Multifractality of products of geometric Ornstein-Uhlenbeck type processes. *Advances in Applied Probability* **40**, 1129-1156. Joint work with V. Anh and N.N. Leonenko.
- (2008A) Log-Euler's gamma multifractal scenario for products of Ornstein-Uhlenbeck type processes. *Mathematical Communications* **13**, 133-448. Joint work with V. Anh and N.N. Leonenko.
- (2008B) Multifractal Analysis of Branching Measure on a Galton-Watson Tree. In *Proceedings of ICCM 2004*, pp 655-662, ed. K.S. Lau, Z.P. Xin, and S.T. Yau. AMS/IP Studies in Advanced Math **42**, 2008. Joint work with P. Mörters.
- (2008A) Hausdorff dimension of the contours of symmetric additive Levy processes. *Probability Theory and Related Fields* **140**, 129-167. Joint work with D. Khoshnevisan and Y.M. Xiao.
- (2008B) Dilation-stable-like processes on fractals. In *Proceedings of German-Japan Symposium at RIMS Kyoto University*, pp 213-219, ed. M. Fukushima and I. Shigekawa. RIMS Research Notes Series Special Volume (RIMS Kôkyûroku Bessatsu B6), 2008.
- (2008B) Operator semi-selfsimilar processes induced by multi-dimensional random walks in multi-dimensional random scenery. In *Infinite Divisible Processes and Related Topics (12)*. ISM (Tokyo, Japan) Cooperative Research Report 213. Joint work with T. Saigo and H. Takahashi.
- (2007B) Dimensions for images and contours of additive Lévy processes. In *Infinite Divisible Processes and Related Topics (11)*. ISM (Tokyo, Japan) Cooperative Research Report 195. Joint work with Y.M. Xiao.
- (2006A) Images of Gaussian random fields: Salem sets and interior points. *Studia Mathematica* **176**, 37-60. Joint work with Y.M. Xiao.
- (2006A) Critical behavior for an oriented percolation with long-range interactions in dimension  $d > 2$ . *Taiwanese Journal of Mathematics* **10**, 1345-1378. Joint work with L.C. Chen.
- (2005C) Collisions of stable sheets. In *NCTS/Taipei Technical Report Series 2005-005*. Joint work with Z.Y. Lin and R.M. Zhang.
- (2005A) Dimensional properties of random fractals with overlaps. *Taiwanese Journal of Mathematics* **9**, 313-330. Joint work with J.H. Yu.
- (2004A) On the multifractal spectrum of branching measure on a Galton-Watson tree. *Journal of Applied Probability* **41**, 1223-1229. Joint work with P. Mörters.
- (2004A) Dimensions of supercritical branching processes in varying environments. *Statistics and Probability Letters* **70**, 299-308. Joint work with J.H. Yu.

- (2003C) Galton-Watson trees and iterated function systems. Preprint. Joint work with J.H. Yu.
- (2003C) Multifractal spectrum for for a supercritical age-dependent branching process. Unpublished manuscript.
- (2002A) Thin and thick points for branching measure on a Galton-Watson tree. *Statistics and Probability Letters* **58**, 13-22. Joint work with P. Mörters.
- (2002A) Mlutfractional spectra of branching measure on a Galton-Watson tree. *Journal of Applied Probability* **39**, 100-111. Joint work with S.J. Taylor.
- (2000A) Multifractal spectra of certain random Gibbs measures. *Statistics and Probability Letters*, **47**, 25-31. Joint work with A.H. Fan.
- (2000A) Some fractal properties of Brownian paths. *Taiwanese Journal of Mathematics* **4**, 45-53.
- (1999A) Small scale limit theorems for the intersection local times of Brownian motions. *Electronic Journal of Probability* **4**, Paper No. 9 1-23. Joint work with P. Mörters.
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- (1995A) Collisions of Markov processes. *Tokyo J. Math.* **18** (1995) 111-121.
- (1995A) Some self-similar processes related local times. *Stat. and Probab. Letters* **24** (1995) 213-218.
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- (1993A) Local times and related sample path properties of certain self-similar processes. *J. Math. Kyoto Univ.* **33** (1993) 51-64. Joint work with N. Kono.
- (1992B) Local nondeterminism and self-intersection of certain self-similar processes. In: *Probab. Theory and Math. Statistics, Proceedings of 6th Japan-Russia Symposium*

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