

## VO V. ANH

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### Academic qualifications

PhD	University of Tasmania, conferred 7 December 1978
MEc (Econometrics)	University of New England, conferred 14 April 1984
BSc (Hons)	University of Tasmania, conferred 26 March 1975

### Positions held

- **Distinguished Professor of Applied Mathematics**, Faculty of Science, Engineering and Technology, Swinburne University of Technology, Australia, since 1 October 2018
- **Distinguished Professor**, School of Mathematics and Computational Science, Xiangtan University, Hunan, China, since September 2017
- **Emeritus Professor**, Queensland University of Technology (QUT), Australia, since April 2016
- **Professor**, School of Mathematical Sciences, QUT, August 2004-July 2014
- **Member**, Research Evaluation Committee, Excellence in Research for Australia (ERA) 2012, Australian Research Council, 2012
- **Director**, Mathematical Sciences Cluster, QUT, 2009
- **Co-Director**, Program in Statistics and Operations Research, QUT, 2002-2008
- **Associate Director**, University Centre in Statistical Science & Industrial Mathematics, QUT, 1993-2002
- **Director**, Centre in Statistical Science, QUT, 1990-1992
- **Director**, Research Concentration in Mathematical Modelling, QUT, 1989
- **Lecturer** (1984-1991), **Senior Lecturer** (1991-1998), **Associate Professor** (1998-2004), QUT

### Honours and awards

- **Named as a Web of Science Highly Cited Researcher in 2015, 2016 and 2017**. These researchers were rated by Thomson Reuters as World's most influential scientific minds.
- **Received 9647 citations and h-index of 48** (Google Scholar Citations, 1 September 2018)
- **Distinguished Overseas Scholar**, Hunan Province, hosted by Xiangtan University, China, 2014
- **Julius Kühn Professor**, Martin-Luther Universität Halle-Wittenberg, Germany, July 2009
- **Invitation Fellow**, Japan Society for the Promotion of Science, hosted by Hokkaido University, November 2002
- **Guest Professor**, Martin-Luther Universität Halle-Wittenberg, Germany, January 1998
- **Invitation Fellow**, Foundation of Academic Advancement and International Exchange, Japan, hosted by Muroran Institute of Technology, July 1997
- **Fellow** of the Australian Mathematical Society since 1996
- **QUT Award for Outstanding Contribution in Research & Scholarship**, 1996

- **QUT Award for Distinguished Academic Service**, 1990
- **Inaugural Dean's Award**, Faculty of Science, QUT, 1988

## RESEARCH

### Publications

I have published 1 edited book, 279 papers in refereed international journals, 3 book chapters and 5 refereed papers in books. My full list of publications is given in the Appendix.

### Grants from the Australian Research Council (ARC)

- **ARC Discovery Grant DP160101366**, 2016-2018, \$324,686. P. Broadbridge (La Trobe), A. Olenko (La Trobe), V.V. Anh (QUT), N.N. Leonenko (Cardiff). Project: *New methods in theory and cosmic applications of spherical random fields*.
- **ARC Discovery Grant DP120103770**, 2012-2014, \$360,000. I. Turner (QUT), K. Burrage (QUT), V.V. Anh (QUT), T. Moroney (QUT). Project: *From genes to organs: Understanding how heterogeneity in tissue modulates cellular behaviour in the heart*.
- **ARC Discovery Grant DP0986766**, 2009-2011, \$185,000. I. Turner (QUT), V.V. Anh (QUT). Project: *A multi-scale approach for modeling coupled transport in heterogeneous and anisotropic porous media*.
- **ARC Discovery Grant DP0559807**, 2005-2009, \$353,000. V.V. Anh (QUT), K.S. Lau (Chinese University of Hong Kong), N.N. Leonenko (Cardiff University), J.M. Angulo and M.D. Ruiz-Medina (University of Granada). Project: *Stochastic modeling of spatiotemporal nonlinear diffusion processes with multifractal characteristics*.
- **ARC Linkage-Infrastructure Equipment & Facilities LE0453501**, 2004, \$406,097 from ARC with \$650,000 cash contributions from QUT and James Cook University. A.N. Pettitt (QUT), J.C. Patterson (JCU), D.L. McElwain (QUT), V.V. Anh (QUT), M. Mahendran (QUT), A.S. Hurn (QUT), S.R. Connolly (JCU), R.H. Crozier (JCU), T. Hardy (JCU), F.R. Keene (JCU). Project: *A computational research grid serving regional and metropolitan Queensland*.
- **ARC Linkage-Projects Grant LP0348653**, 2003-2006, \$263,300 plus \$60,000 cash contribution from Queensland Department of Natural Resources and Mines. V.V. Anh (QUT), I. Turner (QUT), K. Bajracharya (DNRM) and A. Durick (DNRM). Project: *Diffusion and transport of saltwater in coastal aquifers*.
- **ARC Linkage International Grant LX0348297**, 2003-2004, \$24,200. V.V. Anh (QUT), J.M. Angulo and M.D. Ruiz-Medina (University of Granada). Project: *Stochastic modeling and analysis of spatial-temporal processes with fractal characteristics*.
- **ARC Discovery Grant DP0345577**, 2003-2005, \$195,000. V.V. Anh (QUT), C.C. Heyde (Australian National University & Columbia University) and N.N. Leonenko (Cardiff University). Project: *Statistical estimation and approximation of anomalous diffusion*.
- **ARC Large Grant A10024117**, 2000-2002, \$153,000. V.V. Anh (QUT) and C.C. Heyde (ANU & Columbia University). Project: *Stochastic analysis of long-range dependent multifractals*.
- **ARC SPIRT Grant C10024101**, 2000-2002, \$225,000 plus \$48,000 cash contribution from Queensland Department of Natural Resources. V.V. Anh (QUT), I. Turner (QUT), K. Bajracharya (DNR) and J. Arunakumaren (DNR). Project: *Monitoring and modelling of saltwater intrusion into heterogeneous aquifer systems*.
- **ARC Research Infrastructure Equipment & Facilities Grant R0002823**, 2000, \$692,000 from ARC, \$596,000 from QUT and \$100,000 from Griffith University. A.N. Pettitt (QUT), J. Diederich (QUT), D. Thiel (GU), V.V. Anh (QUT) and D.S. McElwain

- (QUT). Project: *Queensland High Performance Computing (HPC) MetaCentre Enhancement*.
- **ARC Large Grant A69804041**, 1998-2000, \$186,000. V.V. Anh (QUT), C.C. Heyde (ANU) and M. Farge (CNRS, France). Project: *Structural study of long-range dependence, infinite variance and coherent structures*.
  - **ARC Large Grant A89601825**, 1996-1998, \$175,140. V.V. Anh (QUT), P.E. Kloeden (Deakin University & Goethe University) and W.H. Melbourne (Monash University). Project: *Multifractal analysis and stochastic models of turbulence dispersion*.
  - **ARC Collaborative Grant C19600199**, 1996-1998, \$180,000 plus \$20,000 cash contribution from Environment Protection Authority of New South Wales. V.V. Anh (QUT), P.E. Kloeden (Deakin University & Goethe University) and G. Johnson (CSIRO, Sydney). Project: *Stochastic models for air quality management*.
  - **ARC Large Grant A69531724**, 1995-1997, \$91,330. V.V. Anh (QUT) and C.C. Heyde (ANU). Project: *Statistical analysis of data with long-range dependence*.
  - **ARC Small Grant**, 2000, \$16,000. V.V. Anh (QUT). Project: *Characterisation and representation of multifractals*.
  - **ARC Small Grant**, 1997, \$12,500. V.V. Anh (QUT), C.C. Heyde (ANU) and P.E. Kloeden (Goethe University). Project: *Financial stochasticity*.
  - **ARC Small Grant**, 1995, \$10,300. V.V. Anh (QUT). Project: *Real-time forecasting models for air quality management*.
  - **ARC Small Grant**, 1994, \$19,900. V.V. Anh (QUT). Project: *Real-time forecasting models for air quality management*.

## QUT grants

- **QUT Strategic Collaborative Program Grant**, 2003-2004, \$300,000. J. Hogan, P. Timms, A. Pettitt, V. Anh, P. Roe, W. Kelly, S. Geva, A. van Daal, P. Chen. Project: *High performance computing and algorithms for molecular biology*.
- **QUT Strategic Collaborative Program Grant**, 2003-2004, \$236,400. M. Cox, A. Goonetilleke, V. Anh, I. Turner, R. Frost. Project: *Environmental hydrology and groundwater resource sustainability*.
- **QUT Strategic Links Scheme Grant**, in collaboration with Queensland Department of Primary Industries-Forestry and Pacific Harbour, 2002-2004, \$30,000. M. Cox, V.V. Anh and I. Turner. Project: *Modelling of Bribie Island groundwater*.
- **QUT Research Encouragement Award**, 2003, \$10,000. V.V. Anh Project: *A hydrological system for modeling and prediction of soil erosion during landscape evolution*.
- **QUT Research Encouragement Award**, 1994, \$16,645. V.V. Anh. Project: *Parameter estimation and filtering of random fields*.
- **QUT Meritorious Grant**, 1993, \$14,500 plus matching funds from Voxson Pty Ltd. V.V. Anh and S. Sridharan (School of Electrical & Electronic Systems Engineering). Project: *Full motion picture video compression to MPEG standard*.
- **QUT Research Encouragement Award**, 1992, \$19,000. V.V. Anh and S. Sridharan (School of Electrical & Electronic Systems Engineering). Project: *Statistical image compression*.
- **QUT R&D Grant**, 1991, \$14,000. V.V. Anh and S. Sridharan (School of Electrical & Electronic Systems Engineering). Project: *Image compression for videotelephone systems*.
- **DEET Mechanism B funding**, 1992, \$114,000. V.V. Anh, Director, School Centre in Statistical Science.
- **DEET Mechanism B funding**, 1991, \$150,000. V.V. Anh, Director, School Centre in Statistical Science.

- **QUT Special Research Grant**, 1990, \$25,000. V.V. Anh, D. Huang (School of Mathematics) and J. Wong (School of Physics). Project: *Development of a low-cost 2D digital filter*.

## TEACHING

### Postgraduate teaching

#### Coordinator of postgraduate studies:

- Coordinating the PhD and Research Masters degrees in Mathematics 1996-2012
- Coordinating the Coursework Masters of Mathematical Science 2003-2005. The following strands were offered: Mathematical Finance; Visualization and Data Mining; Statistical Modelling; Mathematical Modelling; Computational Mathematics; Operations Research.

**Principal supervisor** of 15 PhD graduates

**Units taught** to honours, Masters and PhD students in their coursework components:

- *Statistical Modeling of Financial Processes*
- *Time Series Analysis II*
- *Analysis*

### Undergraduate teaching

- *Time Series Analysis I*
- *Statistical Inference*
- *Mathematical Modelling*
- *Operations Research 1A and 1B*

## SERVICE

### Contributions to professional activities

#### Editorial positions

- **Associate Editor**, *Journal of Probability and Statistics* since 2008.
- **Associate Editor**, *International Journal of Stochastic Analysis* since 2005
- **Associate Editor**, *Stochastic Analysis and Applications* since 2002
- **Associate Editor**, *Journal of Statistical Planning & Inference*, 2002-2007.
- **Guest Editor**, *Special Issue on Long-Range Dependence, Journal of Statistical Planning & Inference* 80(1999)
- **Associate Editor**, *Bulletin of the Australian Mathematical Society*, 1987

#### Member of International Advisory Board

*International Workshop on Soft Computing in Industry* (June 1999, Japan)  
*Board of Global Advisors, International Federation of Nonlinear Analysts* (since May 2011).

#### Professional membership

- *American Mathematical Society* since 1996
- *Modelling and Simulation Society of Australia* since 1993
- *Statistical Society of Australia* since 1991
- *Australian Mathematical Society* since 1984 (accredited **Fellow** since March 1996)

### Invited speaker

- 45-minute lecture, *Workshop on Infinite Dimensional Stochastic Systems : Theory and Applications*, January 2014, Wittenberg, Germany
- 45-minute lecture, *Annual Meeting of the American Institute of Mathematics*, July 2012, Orlando, USA
- One-hour lecture, *World Congress of Nonlinear Analysts*, July 2008, Orlando, USA
- One hour lecture, *The International Conference on Stochastics: Theory and Applications*, June 2006, Kyiv, Ukraine
- 45-minute lecture, *Special Session in Financial Mathematics, the 49th Annual Conference of the Australian Mathematical Society*, September 2005, University of Western Australia
- 45-minute lecture, *World Congress of Nonlinear Analysts*, July 2004, Orlando, Florida
- *CMA National Research Symposium on Probability Theory and its Applications*, April 2004, Australian National University
- *International Conference on Analysis and Probability*, December 2000, Chinese University of Hong Kong
- *The 11<sup>th</sup> International Colloquium on Differential Equations*, August 2000, Plovdiv, Bulgaria
- *The Australian-Taiwan Joint Symposium on Environmental Modelling & Management*, June 2000, Tonghai University, Taiwan
- *International Workshop on Soft Computing in Industry*, June 1999, Muroran Institute of Technology, Japan
- *International Workshop on Fractals*, May 1999, Institute of Mathematical Sciences, Hong Kong

### Organiser

- *International Workshop on Long-Range Dependence* (January 1997, Brisbane), with Professor C.C. Heyde of ANU & Columbia University. Plenary talks were delivered by Professors M. Taqqu (Boston University), W. Willinger (AT&T Labs), P. Robinson (London School of Economics) and M. Farge (Laboratoire de Meteorologie Dynamique, CNRS).
- *Workshop in Image Processing and Vision Research* at QUT, 1990. Keynote speaker: Professor T. Caelli, Melbourne University.
- *Workshop in Time Series* at QUT, 1989. Keynote speaker: Professor E.J. Hannan (FAA), ANU.
- *Session in Time Series and Forecasting at the International Workshop on Soft Computing in Industry* (June 1999, Japan)
- *Session in Financial Modelling* at the 15<sup>th</sup> International Conference of the Australian Society of Operations Research (July 1999, Gold Coast)

## Appendix: List of Publications

### BOOK EDITED

- [1] **V.V. Anh** and C.C. Heyde (Eds.) (1999), *Special Issue on Long-Range Dependence*, **J. Statist. Planning & Inference**, 80, 1-290

### REFEREED JOURNAL PAPERS

#### 2018

- [2] **V.V. Anh**, P. Broadbridge, A. Olenko, Y.G. Wang, On approximation for fractional stochastic partial differential equations on the sphere, *Stochastic Environmental Research and Risk Assessment*, 32(9)(2018) 2585-2603
- [3] **V.V. Anh**, N. Leonenko, A. Olenko, V. Vaskovych, On the rate of convergence in non-central limit theorems, *Bernoulli* (second revision)
- [4] R. Chen, F. Liu, **V.V. Anh**, Numerical methods and analysis for multi-term time-space variable-order fractional advection-diffusion equations and applications, *Journal of Computational and Applied Mathematics* (to appear)
- [5] J. Zhang, F. Liu and **V.V. Anh**, Analytical and numerical solutions of a two-dimensional multi-term time-fractional Oldroyd-B model, *Numerical Methods for Partial Differential Equations* (to appear)
- [6] M. Zheng, F. Liu, **V.V. Anh**, Novel spectral collocation method for fractional differential equations, *Journal of Computational and Applied Mathematics* (to appear)
- [7] W. Fan, X. Jiang, F. Liu, **V.V. Anh**, The unstructured mesh finite element method for the two-dimensional multi-term time-space fractional diffusion-wave equation on an irregular convex domain, *Journal of Scientific Computing* (to appear)
- [8] S. Shen, F. Liu, **V.V. Anh**, The analytical solution and numerical solutions for a two dimensional multi-term time fractional diffusion and diffusion-wave equation, *Journal of Computational and Applied Mathematics* (to appear)
- [9] **V.V. Anh** and N.N. Leonenko, Fractional Stokes-Boussinesq-Langevin equation and Mittag-Leffler correlation decay, *Theory Probab. Math. Statist.* 98(2018), 21 pages
- [10] H. Zhang, F. Liu, S. Chen, **V.V. Anh** and J. Chen, Fast numerical simulation of a new time-space fractional option pricing model governing European call option, *Applied Mathematics and Computation* 339(2018) 186-198
- [11] H.L. Zou, Z.G. Yu, **V.V. Anh** and Y.L. Ma, From standard alpha-stable Lévy motions to horizontal visibility networks: dependence of multifractal and Laplacian spectrum, *J. Stat. Mech.* (2018) 053403
- [12] S. Chen, F. Liu, I. Turner and **V.V. Anh**, A fast numerical method for two-dimensional Riesz space fractional diffusion equations on a convex bounded domain, *Applied Numerical Mathematics*, 134(2018) 66-80

#### 2017

- [13] Wei Y, Yu Z, Zou H, **Anh VV**, [2017] Multifractal temporally weighted detrended cross-correlation analysis to quantify power-law cross-correlation and its application to stock markets, *Chaos*, 27 (6), p1-9
- [14] **Anh VV**, Leonenko NN, Sikorskii A, [2017] Stochastic representation of fractional Bessel-Riesz motion, *Chaos, Solitons and Fractals*, 102, p135-139
- [15] Feng L, Zhuang P, Liu F, Turner IW, **Anh VV**, Li J, [2017] A fast second-order accurate method for a two-sided space-fractional diffusion equation with variable coefficients, *Computers and Mathematics with Applications*, 73 (6), p1155-1171, Cites: 3
- [16] Zhao Y, Zhang Y, Liu F, Turner IW, Tang Y, **Anh VV**, [2017] Convergence and superconvergence of a fully-discrete scheme for multi-term time fractional diffusion equations, *Computers and Mathematics with Applications*, 73 (6), p1087-1099
- [17] Zhao L, Liu F, **Anh VV**, [2017] Numerical methods for the two-dimensional multi-term time-fractional diffusion equations, *Computers and Mathematics with Applications*, 74 (10), p2253-2268
- [18] Xie X, Yu Z, Ma Y, Han G, **Anh VV**, [2017] A novel genome signature based on inter-nucleotide distances profiles for visualization of metagenomic data, *Physica A: Statistical Mechanics and its Applications*, 482, p87-94
- [19] Huang D, Yu Z, **Anh VV**, [2017] Multifractal analysis and topological properties of a new family of weighted Koch networks, *Physica A: Statistical Mechanics and its Applications*, 469, p695-705
- [20] **Anh VV**, Olenko A, Vaskovych V, [2017] Non-central limit theorems and convergence rates, *Theory of Probability and Mathematical Statistics*, 95, p3-15

## 2016

- [21] **Anh VV**, Leonenko NN, Ruiz-Medina MD, [2016] Fractional-in-time and multifractional-in-space stochastic partial differential equations, *Fractional Calculus and Applied Analysis*, 19(6), p1431-1459
- [22] **Anh VV**, Leonenko NN, Ruiz-Medina MD, [2016] Space-time fractional stochastic equations on regular bounded open domains, *Fractional Calculus and Applied Analysis*, 19(5), p1161-1199
- [23] Zheng M, Liu F, **Anh VV**, Turner IW, [2016] A high-order spectral method for the multi-term time-fractional diffusion equations, *Applied Mathematical Modelling*, 40 (7 - 8), p4970-4985
- [24] Feng L, Zhuang P, Liu F, Turner IW, **Anh VV**, Li J, [2016] A fast second-order accurate method for a two-sided space-fractional diffusion equation with variable coefficients, *Computers and Mathematics with Applications*, Online (Online), p1-17
- [25] Ming C, Liu F, Zheng L, Turner IW, **Anh VV**, [2016] Analytical solutions of multi-term time fractional differential equations and application to unsteady flows of generalized viscoelastic fluid, *Computers and Mathematics with Applications*, 72 (9), p2084-2097
- [26] Ming C, Zheng L, Zhang X, Liu F, **Anh VV**, [2016] Flow and heat transfer of power-law fluid over a rotating disk with generalized diffusion, *International Communications in Heat and Mass Transfer*, 79, p81-88

- [27] Zhuang P, Liu F, Turner IW, **Anh VV**, [2016] Galerkin finite element method and error analysis for the fractional cable equation, *Numerical Algorithms*, 72 (2), p447-466
- [28] Hu X, Liu F, Turner IW, **Anh VV**, [2016] An implicit numerical method of a new time distributed-order and two-sided space-fractional advection-dispersion equation, *Numerical Algorithms*, 72 (2), p393-407

## 2015

- [29] Ye H, Liu F, **Anh VV**, [2015] Compact difference scheme for distributed-order time-fractional diffusion-wave equation on bounded domains, *Journal of Computational Physics*, 298, p652-660
- [30] Liu S, **Anh VV**, McGree JM, Kozan E, Wolff R, [2015] A new approach to spatial data interpolation using higher-order statistics, *Stochastic Environmental Research and Risk Assessment*, 29 (6), p1679-1690
- [31] Zheng M, Liu F, Turner IW, **Anh VV**, [2015] A novel high order space-time spectral method for the time fractional Fokker-Planck equation, *SIAM Journal on Scientific Computing*, 37 (2), pA701-A724
- [32] Zheng M, Liu F, **Anh VV**, Turner IW, [2016] A high-order spectral method for the multi-term time-fractional diffusion equations, *Applied Mathematical Modelling*, 40 (7 - 8), p4970-4985
- [33] Chen S, Liu F, Jiang X, Turner IW, **Anh VV**, [2015] A fast semi-implicit difference method for a nonlinear two-sided space-fractional diffusion equation with variable diffusivity coefficients, *Applied Mathematics and Computation*, 257, p591-601
- [34] Liu J, Yu Z, **Anh VV**, [2015] Determination of multifractal dimensions of complex networks by means of the sandbox algorithm, *Chaos*, 25 (2), p1-9
- [35] Liu F, Zhuang P, Turner IW, **Anh VV**, Burrage K, [2015] A semi-alternating direction method for a 2-D fractional FitzHugh-Nagumo monodomain model on an approximate irregular domain, *Journal of Computational Physics*, 293, p252-263
- [36] **Anh VV**, Leonenko NN, Olenko A, [2015] On the rate of convergence to Rosenblatt-type distribution, *Journal of Mathematical Analysis and Applications*, 425 (1), p111-132
- [37] Xie X, Yu Z, Han G, Yang W, **Anh VV**, [2015] Whole-proteome based phylogenetic tree construction with inter-amino-acid distances and the conditional geometric distribution profiles, *Molecular Phylogenetics and Evolution*, 89, p37-45
- [38] Shen S, Liu F, Liu Q, **Anh VV**, [2015] Numerical simulation of anomalous infiltration in porous media, *Numerical Algorithms*, 68 (3), p443-454
- [39] Ye H, Liu F, **Anh VV**, Turner IW, [2015] Numerical analysis for the time distributed-order and Riesz space fractional diffusions on bounded domains, *IMA Journal of Applied Mathematics*, 80 (3), p825-838

## 2014

- [40] Liu F, Zhuang P, Turner IW, Burrage K, **Anh VV**, [2014] A new fractional finite volume method for solving the fractional diffusion equation, *Applied Mathematical Modelling*, 38 (15 - 16), p3871-3878
- [41] Chen J, Liu F, Liu Q, Chen X, **Anh VV**, Turner IW, Burrage K, [2014] Numerical simulation for the three-dimension fractional sub-diffusion equation,



- Applied Mathematical Modelling: simulation and computation for engineering and environmental systems*, 38 (15 - 16), p3695-3705
- [42] Liu Q, Liu F, Turner IW, **Anh VV**, Gu Y, [2014] A RBF meshless approach for modeling a fractal mobile/immobile transport model, *Applied Mathematics and Computation*, 226, p336-347
- [43] Ye H, Liu F, **Anh VV**, Turner IW, [2014] Maximum principle and numerical method for the multi-term time-space Riesz-Caputo fractional differential equations, *Applied Mathematics and Computation*, 227, p531-540
- [44] Zhang H, Liu F, Zhuang P, Turner IW, **Anh VV**, [2014] Numerical analysis of a new space-time variable fractional order advection-dispersion equation, *Applied Mathematics and Computation*, 242, p541-550
- [45] Han G, Yu Z, **Anh VV**, [2014] Secondary structure element alignment kernel method for prediction of protein structural classes, *Current Bioinformatics*, 9 (3), p253-257
- [46] Shen S, Liu F, **Anh VV**, Turner IW, Chen J, [2014] A novel numerical approximation for the space fractional advection-dispersion equation, *IMA Journal of Applied Mathematics*, 79 (3), p431-444
- [47] Han G, Yu Z, **Anh VV**, [2014] A two-stage SVM method to predict membrane protein types by incorporating amino acid classifications and physicochemical properties into a general form of Chou's PseAAC, *Journal of Theoretical Biology*, 344, p31-39
- [48] Zhou Y, Liu J, Yu Z, Zhao Z, **Anh VV**, [2014] Fractal and complex network analyses of protein molecular dynamics, *Physica A: Statistical Mechanics and its Applications*, 416, p21-32,
- [49] Yu Z, Leung Y, Chen YD, Zhang Q, **Anh VV**, Zhou Y, [2014] Multifractal analyses of daily rainfall time series in Pearl River basin of China, *Physica A: Statistical Mechanics and its Applications*, 405, p193-202
- [50] Liu J, Yu Z, **Anh VV**, [2014] Topological properties and fractal analysis of a recurrence network constructed from fractional Brownian motions, *Physical Review E (Statistical, Nonlinear, and Soft Matter Physics)*, 89 (3), p1-12

## 2013

- [51] Chen S, Liu F, Turner IW, **Anh VV**, [2013] An implicit numerical method for the two-dimensional fractional percolation equation, *Applied Mathematics and Computation*, 219 (9), p4322-4331
- [52] Liu F, Cheng S, Turner IW, Burrage K, **Anh VV**, [2013] Numerical simulation for two-dimensional Riesz space fractional diffusion equations with a nonlinear reaction term, *Central European Journal of Physics*, 11 (10), p1221-1232
- [53] Ye H, Liu F, Turner IW, **Anh VV**, Burrage K, [2013] Series expansion solutions for the multi-term time and space fractional partial differential equations in two- and three-dimensions, *European Physical Journal: Special Topics*, 222 (8), p1901-1914
- [54] Wang Y, Yu Z, **Anh VV**, [2013] Fuzzy C-means method with empirical mode decomposition for clustering microarray data, *International Journal of Data Mining and Bioinformatics*, 7 (2), p103-117
- [55] Shen S, Liu F, **Anh VV**, Turner IW, Chen J, [2013] A characteristic difference method for the variable-order fractional advection-diffusion equation, *Journal of Applied Mathematics and Computing*, 42 (1 - 2), p371-386

- [56] Ruiz-Medina MD, **Anh VV**, Espejo R, Angulo J, Frias M, [2013] Least-squares estimation of multifractional random fields in a Hilbert-valued context, *Journal of Optimization Theory and Applications*, Online (Online), p1-24
- [57] Chen C, Liu F, Turner IW, **Anh VV**, Chen Y, [2013] Numerical approximation for a variable-order nonlinear reaction-subdiffusion equation, *Numerical Algorithms*, 63 (2), p265-290
- [58] Han G, Yu Z, **Anh VV**, Krishnajith A, Tian GY, [2013] An ensemble method for predicting subnuclear localizations from primary protein structures, *PLOS ONE*, 8 (2), p1-14
- [59] Ruiz-Medina MD, **Anh VV**, Espejo R, Frias M, [2013] Heterogeneous spatial dynamical regression in a Hilbert-valued context, *Stochastic Analysis and Applications*, 31 (3), p509-527
- [60] **Anh VV**, Leonenko NN, Ruiz-Medina MD, [2013] Macroscaling limit theorems for filtered spatiotemporal random fields, *Stochastic Analysis and Applications*, 31 (3), p460-508
- [61] Frias M, Ruiz-Medina MD, **Anh VV**, [2013] Wavelet-based estimation of anisotropic spatiotemporal long-range dependence, *Stochastic Analysis and Applications*, 31 (3), p359-380
- [62] Liu F, Turner IW, **Anh VV**, Yang Q, Burrage K, [2013] A numerical method for the fractional Fitzhugh-Nagumo monodomain model, *The ANZIAM Journal*, 54, pC608-C629

## 2012

- [63] Shen S, Liu F, Chen JH, Turner IW, **Anh VV**, [2012] Numerical techniques for the variable order time fractional diffusion equation, *Applied Mathematics and Computation*, 218 (22), p10861-10870
- [64] Chen J, Liu F, **Anh VV**, Shen S, Liu Q, Liao C, [2012] The analytical solution and numerical solution of the fractional diffusion-wave equation with damping, *Applied Mathematics and Computation*, 219 (4), p1737-1748
- [65] Wang D, Yu Z, **Anh VV**, [2012] Multifractal analysis of complex networks, *Chinese Physics B*, 21 (8), p1-12
- [66] Inoue A, **Anh VV**, [2012] Prediction of fractional processes with long-range dependence, *Hokkaido Mathematical Journal*, 41 (2), p157-183
- [67] Chen C, Liu F, **Anh VV**, Turner IW, [2012] Numerical methods for solving a two-dimensional variable-order anomalous subdiffusion equation, *Mathematics of Computation*, 81 (277), p345-366
- [68] Yu Z, **Anh VV**, Eastes R, Wang D, [2012] Multifractal analysis of solar flare indices and their horizontal visibility graphs, *Nonlinear Processes in Geophysics*, 19 (6), p657-665
- [69] Grecksch W, **Anh VV**, [2012] An infinite-dimensional fractional linear quadratic regulator problem, *Stochastic Analysis and Applications*, 30 (2), p203-219
- [70] Ruiz-Medina MD, **Anh VV**, Angulo JM, [2012] Random fields with multifractional regularity order on heterogeneous fractal domains, *Stochastic Analysis and Applications*, 30 (5), p849-864

## 2011

- [71] ANH, V.V., Grecksch, W. and Yong, J. (2011), *Regularity of backward stochastic Volterra integral equations in Hilbert spaces*, **Stochastic Analysis and Applications** 29, 146-168.
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