

Curriculum Vitae

Name : Hung-Ju Kuo (郭紅珠)

Highest education : Ph. D. Indiana University, 1986

Present position : Professor (Feb. 1989 -) at National Chung-Hsing University, Taiwan.

Research interests : Partial differential equations, Difference operator, Numerical analysis.

Publications :

- 1 The error in spatial truncation for the system of parabolic conservation laws, Transactions of American Mathematical Society Vol. 311, 1989. P433—465.
- 2 Linear elliptic difference inequalities with random coefficients, (with N. Trudinger), Math. of Comp., vol 54, no.191(1990)37—53.
- 3 Discrete methods for fully nonlinear elliptic equations, (with N. Trudinger), SIAM Journal of Numerical Analysis, 29(1992), 123—135.
- 4 On the discrete maximum principle for parabolic difference operators, (with N. Trudinger), Math. Modeling & Num. Analysis. 27(1993), 719—737..
- 5 Local estimates for parabolic difference operators, (with N. Trudinger), J. of Diff. Eq., vol. 122(1995), 398—413.
- 6 Positive difference operators on general meshes, (with N. Trudinger), Duke Math. Journal 83(1996), 415-433.
- 7 Maximum principles for difference operators, (with N. Trudinger), invited paper by Lecture notes in pure and applied mathematics, Marcel Dekker Inc., 177(1996), p209—219.
- 8 Evolving monotone difference operators on general space-time meshes, (with N. Trudinger), Duke Mathematical Journal, 91(1998). 587—607.
- 9 A note on the discrete Aleksandrov-Bakelman maximum principle (with N. Trudinger), invited paper by Taiwanese Journal of Mathematics, 4 (2000), 55—64.
- 10 Schauder estimates for fully nonlinear elliptic difference operators (with N. Trudinger), Proc. Roy. Soc. Edin. 132A, 1395—1406 (2002).
- 11 Estimates for solutions of fully nonlinear discrete schemes, (with N. Trudinger), invited paper, Progress in Nonlinear Differential Equations and Their Application, V61, 278-282(2005). Birkhäuser Verlag Basel/Switzerland
- 12 New maximum principle for linear elliptic equations, (with N. Trudinger), Indiana Univ. Math. J. 56(2007), . 2439—2452.
- 13 On the maximum principle for linear parabolic equations (with N. Trudinger). J. Global Optim. 40(2008),495-500.
14. On the Krylov maximum principle for discrete parabolic schemes (with N. Trudinger), Tamkang Journal of Mathematics, 40, No. 4(2009), 437-450. (invited paper for 60th anniversary of Tamkang U.)

15. Higher dimensional B-splines and their applications (with Hsiu-Ju Chien, Chia-Ting Wang), *Matimyas Matematika*, Vol.34, Nos1-2(2011), 27-38.
16. On some general type Monge-Ampère equations (with Sheng-Fu Hsu) *Matimyas Matematika*, Vol.34, Nos1-2(2011), 63-73, .
17. New solvers for high dimensional Poisson equations by reduced B-splines (with Wen-Wei Lin, Chia-Ting Wang), Vol.30(2014) No.2, p.393-405.
18. Proceedings : 10th Taiwan-Philippines Symposium on Analysis, editor-in-chief. Electronic volume, GPN : 4710400197, ISBN :978-986-04-3843-7, DOI:10.6140/AP.9789860438437.
19. Proceedings : 10th Taiwan-Philippines Symposium on Analysis, revised. Paper volume, ISBN : 978-986-5663-58-2, DOI : 10.6140/AP.9789865663582.
20. The discrete Green's identities on higher dimensional polar domains. Proceedings : 10th Taiwan-Philippines Symposium on Analysis, revised. Paper volume, 293-310(2015). DOI : 10.6140/AP.9789860438437.32.
21. Super-high speed solvers for 3D Poisson equations, (with N. Trudinger, in preparation).