

Ren Guangbin (任广斌)

Professor of Department of Mathematics, University of Science and Technology of China

Researcher of Department of Mathematics, University of Aveiro, Portugal

Academic Qualifications

- Ph.D. in Mathematics (Several Complex Variables), University of Science and Technology of China (USTC) (1997)
- Master's degree, Nankai Institute of Mathematics (1988)
- Bachelor's degree, Anhui University (1985)

Working Experience

- 2008—present Researcher, University of Aveiro, Portugal
- 2004—present Professor, University of Science and Technology of China
- 2001—2004 Associate Professor, USTC
- 2000—2001 Research Fellow, University of Joensuu, Finland
- 1988—1999 Associate Professor, Senior Lecture, Lecture, USTC.

Teaching

B.Sc. Courses

- Complex Analysis
- Linear Algebra
- Calculus
- Mathematical Analysis
- Functional Analysis
- Real Analysis

M.Sc. Courses

- Real Analysis and Complex Analysis
- Several Complex Variables
- Function Theory in the Unit Ball

Research

Research Interests

- Multi-dimensional Complex Analysis
- Clifford Analysis
- Theory of Function Spaces and Operators
- Harmonic Analysis in Euclidean Spaces

Academic Visiting and Grant

- 2009 Grant from FCT, Portugal, for participating the ISSAC conference in London, *England*.
- 2009 Grant from Charles University, *Czech Republic*. Research Stay for Professor two weeks with full living and travel support
- 2008 Grant from University of Ghent, *Belgium*. Research Stay for Professor two months with full living and travel support
- 2008 Grant from University of Ghent, Belgium, for participating the ICNAAM conference in Kos, *Greece*
- 2002 Grant from University of Aveiro, Portugal, for participating the Clifford Algebra conference in Cookeville, *USA*.
- 2002 Grant from University of Aveiro, Portugal, for participating the Clifford Algebra conference in *Macao*, China
- 2000—2001 Grant from Chinese Academy of Science. Visiting professor in the University of Joensuu, *Finland*, for one year.

Research Grants Recipient

- 2008—2010, Chinese Natural Science Foundation, 10771201, Dunkl-Clifford Analysis
- 2005—2007, Chinese Natural Science Foundation, 10471134, Theory of Function Spaces in Clifford Analysis
- 2001—2003, Chinese Natural Science Foundation, 10001030, Operator Theory of Function Spaces in Several Complex Variables

Award

- 2005 Ministry of Education, China, Enrolled in the *Program for New Century Excellent Talents in University*
- 1997 Chinese Academy of Science President Outstanding *Award for Doctoral research*

Selected Publications

Book Chapters

1. *Bergman projection in Clifford analysis*, by G. B. Ren and H. Malonek, Clifford Algebra, **Progress. in Math. Phy.** Vol 34, **Birkhauser**, (2004), 125-139, Proceedings of the Clifford Analysis Conference, Cookeville, USA, May 2002, Edited by R. Ablamowicz.
2. *Almansi decomposition for Dunkl-Helmholtz operators*, G. B. Ren and H. Malonek, the book series in **Applied and Numerical Harmonic Analysis**, **Springer**, 2007 (Editors: T. Qian, V.M. I and Y-S. Xu).

3. *Holomorphic Function Spaces of Several Complex Variables*, by J. H. Shi, G. B. Ren, and L. Luo, **Several Complex Variables in China**, edited by Qikeng Lu, Chinese Science Press, 2009, 174-195. (Chinese)

Conference Proceedings

4. *Berezin transform in Clifford analysis*, by G. B. Ren and L. Liu,, **Numerical Analysis and Applied Mathematics**, International Conference, Kos, Greece, Edited by T. E. Simons, G. Psihoyios, and Ch. Tsitouras, 2008, 651-653.

Journal papers (Being marked with "*" means that the paper is in the SCIE list.)

- *5 *Bergman type operator on mixed norm spaces with applications*, by G. B. Ren and J. H. Shi,, **Chin. Ann. Math.** Ser. B 18 (1997), 265--276.
- 6 *Inequalities of Hardy-Littlewood type and their application*,. by G. B. Ren and J. H. Shi, **Chinese J. Contemp. Math.** 18 (1997), 219--231.
- *7 *Growth theorem for starlike mappings on bounded starlike circular domains*, by T. S. Liu and G. B. Ren, **Chin. Ann. Math.** Ser. B 19 (1998), 401-408.
- *8 *Growth theorem for convex mappings on bounded convex circular domains*, by T. S. Liu and G. B. Ren, **Science in China** Ser. A. 41 (1998), 123-130.
- *9 *The boundedness of Cesaro operator on mixed norm spaces*, by J. H. Shi and G. B. Ren, **Proc. Amer. Math. Soc.** 126 (1998), 3553-3560.
- *10 *Gleason's problem in weighted Bergman spaces on egg domains*, by G. B. Ren and J. H. Shi, **Science in China** Ser. A. 41 (1998), 123-130..
- *11 *Decomposition theorem of normalized biholomorphic convex mappings*, by T. S. Liu and G. B. Ren, **J. Reine Angew. Math.** 496(1998),225-231.
- *12 *Forelli-Rudin type theorem in pluriharmonic Bergman spaces with small index*, by G. B. Ren and J. H. Shi, **Science in China** Ser. A 42 (1999), 1-6.
- 13 *Diagonal mappings on Bounded symmetric domains*, by G. B. Ren and C. W. Liu, **Chinese J. Contemp. Math.** 22 (2001),11-22.
- 14 *Duality for harmonic mixed norm spaces in the unit ball of C_n* , by C. W. Liu, J. H. Shi and G. B. Ren, **Ann. Sci. Math. Quebec** 25 (2001),179-197.
- 15 *Harmonic Bergman spaces with small exponents in the unit ball*, G. B. Ren, **Collect Math.** .53(2002), 83-96.
- *16 *Sharp estimates for functions in Bergman and Besov spaces*, by G. B. Ren and J. H. Shi, **Acta Math. Sin**, (Engl. Ser.) 18 (2002),499-504.
- *17 *Almansi type theorems in Clifford Analysis*, by H. Malonek and G. B. Ren, **Math. Meth. Appl. Sci.** 25 (2002),499-502.
- *18 *Weighted Holder continuity of hyperbolic harmonic Bloch functions*, by G. B. Ren and U. Kahler, **Z. Anal. Anwendungen** 21(2002),599-610.
- *19 *Radial derivatives on bounded symmetric domains*, by G. B. Ren and U. Kahler, **Studia Math.** 157(2003), 57-70.
- 20 *Weighted Bloch spaces and Gleason's problem*, by G. B. Ren and U. Kahler, **Complex Variables** 48 (2003),235-245.
- *21 *The diagonal mapping in mixed norm spaces*, by G. B. Ren and J. H. Shi, **Studia Math.** 163 (2004), 103-117
- *22 *Bloch space in the unit ball of C_n* , by G. B. Ren and C. F. Tu, **Proc. Amer. Math. Soc.** 133 (2005), 719-726.
- *23 *Boundary behavior of Gleason's problem in hyperbolic harmonic Bergman spaces*, by G. B. Ren and U. Kahler, **Science in China**, Ser. A 8 (2005), 145-154.

- *24 *Weighted Lipschitz continuity, harmonic Bloch and Besov spaces in the real unit ball*, by G. B. Ren and U. Kahler, **Proc. Edinburgh Math. Soc.**, 48 (2005), 743-755.
- *25 *Hardy-Littlewood inequalities and Q_p -spaces*, by G. B. Ren and U. Kahler, **Z. Anal. Anwendungen** 24 (2005),375-388.
- *26 *Almansi decomposition for Dunkl operators*, G. B. Ren, **Science in China Ser. A.** 48 Supp.(2005), 333-342.
- *27 *Holomorphic Jackson's theorems in polydiscs*, by G. B. Ren and M. Z. Wang, **J. Approximation Theory**, 134 (2005), 175-198.
- 28 *Clifford analysis for finite reflection groups*, by P. Cerejeiras, U. Kahler and G. B. Ren, **Complex Var. Elliptic Equ.**, 51 (2006), 487--495.
- 29 *Holland-Walsh characterization for Besov spaces*, G. H. Wang and G. B. Ren, **J. of USTC**, 36 (2006), 727-731.
- *30 *Coefficient multipliers of mixed norm spaces in the ball*, by J. H. Shi and G. B. Ren, **Science in China**, Ser. A, 49 (2006), 1491-1503.
- *31 *Almansi decomposition for polyharmonic, polyheat, and polywave functions*, by G. B. Ren and U. Kahler, **Studia Math.**, 172 (2006) 1, 91-100.
- 32 *The growth and covering theorems for several mappings on the unit ball in complex Banach spaces*, by S. X. Feng, T. S. Liu and G. B. Ren, **Chinese J. Contemp. Math.** 28(2007),173-190.
- *33 *Jackson's theorem on bounded symmetric domains*, by M. Z. Wang and G. B. Ren, **Acta Math. Sin. (Engl. Ser.)**, 23 (2007), 1391-1404.
- *34 *A unified approach to decomposition of kernels of iterated operators*, G. B. Ren and H. Malonek, **Math. Meth. Appl. Sci.**, 30 (2007), 1037-1047.
- *35 *Cesaro operators on Hardy spaces in the unit ball*, by Q. X. Guo and G. B. Ren **J. Math. Anal. Appl.**, 339(2008), 1-9.
- 36 *Liouville Theorem for Dunkl Polyharmonic Functions*, by G. B. Ren and L. Liu, Special Issue on Dunkl Operators and Related Topics, Edited by C. Dunkl, P. Forrester, M. de Jeu, M. Rösler and Y. Xu, **Symmetry, Integrability and Geometry: Methods and Applications (SIGMA)**, 4 (2008), 076, 6 pages.
- *37 *Gradient estimates and Jackson's theorem in Q spaces related to measures*, by G. B. Ren and Y. W. Chen, **J. Approximation Theory** 155 (2008), 97-110.
- *38 *Almansi decomposition for poly-ultrahyperbolic functions*, by G. B. Ren and U. Kahler, **Acta. Math. Sin. (Engl. Ser.)** 25 (2009), 1561-1566.
- *39 *Jackson's Theorem in Q_p Spaces*, Y. W. Chen and G. B. Ren, **Science in China**, Series A. 53 (2010), no2, 367-372
- *40 *Normalized system for wave and Dunkl operators*, by L. Liu, and G. B. Ren accepted by **Taiwanese J. Math.**
- *41 *Decomposition of polyharmonic functions with respect to the complex Dunkl Laplacian*, by G. B. Ren and H. R. Malonek, accepted by **J. Inequal. Appl.**

Submitted Journal Papers

- 42 *Complex Dunkl operator*, by G. B. Ren and H. R. Malonek, http://arxiv.org/PS_cache/arxiv/pdf/0912/0912.5196v1.pdf
- 43 *Almansi Theorems in Umbral Clifford Analysis and the Quantum Harmonic Oscillator*, by G. B. Ren and N. Faustino, http://arxiv.org/PS_cache/arxiv/pdf/0901/0901.4691v1.pdf
- 44 *Mobius gyrogroups: a Clifford algebra approach*, by M. Ferreira and G. B. Ren, submitted.
- 45 *Discretized Carleson measures for weighted Besov spaces*, by D Chao and G. B. Ren, submitted
- 46 *Modulus Characterization of Bloch space*, by G. B. Ren and C. F. Tu, submitted.
- 47 *Polynomial approximation in starlike circular domains*, by G. B. Ren and Y. W. Chen, submitted.
- 48 *Approximation theorem in Q_p spaces*, by G. B. Ren and Y. W. Chen, submitted.

- 49 *Non-harmonic Fourier transforms generated by non-linear Fourier atoms*, by G. B. Ren, Q. H. Chen, P. Cerejeiras, and U. Kahler, submitted.
- 50 *Howe Duality in Dunkl superspace*, G.B. Ren, submitted.