

Ji Li
Senior Lecturer
Department of Mathematics and Statistics
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Biography

Educational background:

B.A. 2000--2004 (Sun Yat-Sen University), Ph.D. 2004--2009 (Sun Yat-Sen University, Macquarie University, Cotutelle).

Faculty position:

Jan 2017---Present, Macquarie University, Senior Lecturer

Jan 2014--Dec 2016, Macquarie University, Lecturer

Jun 2012--Jan 2014, Sun Yat-Sen University, Associate Professor

Aug 2009--May 2012, Sun Yat-Sen University, Lecturer

Research Grants:

1. The ARC Discovery Project, Grant No. DP170101060, 2017--2019, Chief Investigator (with A/Prof. Zihua Guo (CI), Prof. Carlos Kenig (PI) , Prof. Kenji Nakanishi (PI)).
2. The ARC Discovery Project, Grant No. DP160100153, 2016--2018, Chief Investigator (with Prof. Xuan Duong (CI), A/Prof. Lesley Ward (CI) , Prof. Michael Lacey (PI), Prof. Jill Pipher (PI)).
3. Macquarie University Research Seeding Grant, 2018--2019.
4. Macquarie University New Staff Grants Scheme (MQNS), 2016.
5. The NNSF of China, Grant No. 11001275, 2011--2013, Sole investigator.
6. China Postdoctoral Science Foundation funded project, Grant No. 201104383, 2011--2013, Sole investigator.
7. The Fundamental Research Funds for the Central Universities, Grant No. 11lgpy56, 2011--2013, Sole investigator.

Research impact:

1. At this phase of my career, I have **79** publications with **23** are published in **A*** journals and **40** papers in **A** journals (based on journal ranking via the Australian Mathematical Society FoR 0101). I have 384 citations by 237 authors listed in MathSciNet (as of Jan 2021). Google Scholar: 725, h-index 15, i10-index 27;
2. Among all my publications, some of the papers are published in
Memoirs of the American Mathematical Society,
Journal de Mathematiques Pures et Appliquees,

Mathematische Annalen,
Advances in Mathematics,
Annales de l'Institut Fourier,
Indiana University Mathematics Journal,
Mathematische Zeitschrift,
Transaction of the American Mathematical Society.
These journals have long tradition and high reputation in the world.
Also, some other papers are published in

Analysis and PDE,
Applied and Computational Harmonic Analysis,
Journal d'Analyse Mathématique,
Journal of Functional analysis,
Journal of Differential Equations, and
Revista Matemática Iberoamericana.
These are top international journals in the field of analysis.

3. One of my paper published in Journal of Functional Analysis is one of the "most cited articles since 2011" of this journal.
It is cited 54 times up to 2020 as listed in MathSciNet.

4. In mathematics, invitations to speak at conferences are one of the main indicators of research quality and impact. Since 2009, I have been invited to give a total of over **60 presentations** in conferences, workshops and seminars in the USA, Europe and Asian countries, which covered various topics in analysis and PDE, demonstrating the impact of my research in the field. Among these, I would like to highlight that I was invited to give a talk in

(1) the International Mathematics Congress (ICM), Satellite Conference on Harmonic Analysis, August 2018, Brazil.

The International Congress of Mathematicians (ICM) is the largest conference for the topic of mathematics. It meets once every four years, hosted by the International Mathematical Union. The Fields Medals, the Nevanlinna Prize, the Gauss Prize, and the Chern Medal are awarded during the congress's opening ceremony. Satellite Conferences are the most important scientific activities surrounding the celebration of every ICM.

(2) "Interpolation in Spaces of Analytic Functions", CIRM, Marseille (France), 18–22 November 2019;

(3) the 7th East Asian Conference in Harmonic Analysis & Applications, Aug, 2019, South Korea;

(4) IWOTA (International Workshop of Operator Theory and Application), Jul, 2016, Washington University at St. Louis;

(5) The American Mathematical Society Western Spring Sectional Meeting at University of New Mexico, Albuquerque, NM, US, April 4–6, 2014;

(6) The Calderon–Zygmund analysis seminar, University of Chicago, Dec 2018;

(7) The Analysis Seminar in Brown University, July 2016,

(8) The Analysis Seminar in Washington University at St. Louis, July 2016.

5. Two of my papers have been cited by **Professor Elias M. Stein** (Wolf prize 1999, Steele Prize 1984 and 2002, Schock Prize 1993, one of the most influential mathematicians in the past 40 year) in his recent paper (Memo. Amer. Math. Soc. 2018, \ \ <http://arxiv.org/abs/1511.05702>).

6. One of my papers were cited by Prof. **Sergei Treil** (Salem prize 1993) and **Alexander Volberg** (Salem prize 1988) in their recent two papers for reviewing the literature.

Papers accepted for publication:

1. Y. Han, M.Y. Lee, J. Li and B.D. Wick, Maximal function, Littlewood-Paley theory, Riesz transform and atomic decomposition in the multi-parameter flag setting, accepted in Apr 2019 by *Memoirs of the American Mathematical Society*.
2. X. Duong, M. Lacey, J. Li, B.D. Wick and Q.Y. Wu, Commutators of Cauchy Type Integrals For Domains in \mathbb{C}^n with Minimal Smoothness, accepted on 23 Jul 2019 by *Indiana University Mathematics Journal*.
3. D.-C. Chang, X. Duong, J. Li, W. Wang and Q.Y. Wu, An explicit formula of Cauchy-Szegő kernel for quaternionic Siegel upper half space and applications, accepted by *Indiana University Mathematics Journal* on 15th Dec 2019.

Research mentorship and supervision

I have successfully embedded my research into mentorship and supervision to maintain the group of harmonic analysis at Macquarie highly productive and in the frontier of research over the world. My mentorship and supervision led to 12 papers in A* and A journals in the past 6 years, which is beneficial to attract excellent PhD candidates and young researchers to join Macquarie in the future.

Supervision of PhD students:

1. Principal Supervisor, Usman Ghani (Provisional Offer from MQ 2020, starting in 2021).
2. Associate Supervisor, George Nader (MQ, 2020--2023, Supervisor: Xuan Duong).
3. Associate Supervisor, Zhijie Fan (Sun Yat-sen Uni., Supervisor: Lixin Yan, visiting MQ in 2020).

Completions of PhD students:

1. Associate Supervisor, Hong Chuong Doan (MQ, 2017--2020, Supervisor: Xuan Duong).
2. Associate Supervisor, Trang Nguyen (UniSA, 2016--2020, Supervisor: Lesley Ward).

Research supervisor (DP170101060) for:

1. Lixin Yan (Research Fellow in 2019 for 6 months),
2. Trang Nguyen (Research Assistant in 2020 for 9 months).

Research Mentor (supported by CSC visiting scholar) for:

1. Dongyong Yang,
2. Qingyan Wu,
3. Ruming Gong,
4. Guilian Gao.

Service:

Editorial service:

1. Associated Editor for *Journal of the Australian Mathematical Society* (since 2021),
2. Associated Editor for *Bulletin of the Australian Mathematical Society* (since 2020),
3. Associated Editor of *AIMS Mathematics*, ISSN (Online): 2473-6988, (indexed in SCIE (Science Citation Index Expanded), 2019 Impact Factor: 0.882). <https://www.aimspress.com/news/203.html>

Service to discipline:

1. Main organiser of the international workshop "Harmonic Analysis and PDE" on 10 February 2020 at Macquarie University.

<https://www.mq.edu.au/about/about-the-university/faculties-and-departments/faculty-of-science-and-engineering/departments-and-centres/department-of-mathematics-and-statistics/news-and-events/events/events/workshop-in-harmonic-analysis-and-pde-10-february-2020-at-macquarie-university2>

2. Organiser of the Harmonic Analysis Session of 64th Annual Meeting of the Australian Mathematical Society, 8--11 Dec, 2020, at University of New England.

<https://staging.austms.org.au/meetings/annual-conferences/2020-austms-meeting/#special-sessions>

3. Co-organiser of the international workshop "Harmonic Analysis and Dispersive PDEs: Problems and Progress" 3--7 February 2020 in MATRIX, Melbourne.

<https://www.matrix-inst.org.au/events/harmonic-analysis-and-dispersive-pdes-problems-and-progress/>

4. Co-organiser of the Harmonic Analysis Session of 62nd Annual Meeting of the Australian Mathematical Society, 4--7 Dec, 2018, at the University of Adelaide.

5. Main organiser of the international workshop "Harmonic analysis and PDE" in Macquarie University in 17--21, July 2017.

<https://www.mq.edu.au/about/about-the-university/faculties-and-departments/faculty-of-science-and-engineering/departments-and-centres/department-of-mathematics-and-statistics/news-and-events/2017-harmonic-analysis-and-pde-workshop>

6. Member of the local organising committee, Organiser of the Harmonic Analysis Session of 61st Annual Meeting of the Australian Mathematical Society, 12--15 Dec, 2017, at Macquarie University.

<https://www.mq.edu.au/about/about-the-university/faculties-and-departments/faculty-of-science-and-engineering/departments-and-centres/department-of-mathematics-and-statistics/news-and-events/austms-annual-meeting-2017>

7. Co-organizer of the joint seminar "Analysis and PDE meeting":

This is a joint seminar begins from 2014, first named "WOMASY--Geometric and Harmonic Analysis meets PDE", among the geometric analysis group at the University of Wollongong, the harmonic analysis group at Macquarie UNIVERSITY AND the nonlinear analysis group at the University of Sydney:

(1). 1st October 2014 at University of Sydney. <http://www.maths.usyd.edu.au/u/PDESeminar/womasy/index-2014-10.html>

(2). 17th February 2015 at Macquarie University. <http://www.maths.usyd.edu.au/u/PDESeminar/womasy/>

From July 2015, the joint seminar "WOMASY--Geometric and Harmonic Analysis meets PDE" has changed as "Analysis and PDE meeting". I continue to serve as a Co-organiser of this joint seminar "Analysis and PDE meeting": joint with University of Wollongong, MACquarie University, The University of Sydney, UNSW, ANU, University of New Castle.

(3). Monday 20 July 2015 at University of Wollongong. <http://www.maths.usyd.edu.au/u/PDESeminar/analysis-and-pde/2015/07/>

(4). 10 Feb 2016 at ANU. <http://www.maths.usyd.edu.au/u/PDESeminar/analysis-and-pde/2016/02/>

(5). 19th Jul 2016 at UNSW. <http://www.maths.usyd.edu.au/u/PDESeminar/analysis-and-pde/2016/07/>

(6). 25th May 2018 at UoW. <http://www.maths.usyd.edu.au/u/PDESeminar/analysis-and-pde/2018/05/>

(7). 15--16 April 2019 at the University of Newcastle.
<http://www.maths.usyd.edu.au/u/PDESeminar/analysis-and-pde/2019/04/>

(8). 20 February 2020 at the University of Sydney
<http://www.maths.usyd.edu.au/u/PDESeminar/analysis-and-pde/2020/02/>

8. ARC DP Assessor (2016, 2017, 2018, 2020).

Service to department:

1. Leader of the team of Sesisonal Teaching Review (with 6 team members) from Nov 2020 to Jan 2022.
2. Colloquium Convenor, Department of Mathematics (2016--2017)

<http://www.mq.edu.au/about/about-the-university/faculties-and-departments/faculty-of-science-and-engineering/departments-and-centres/department-of-mathematics/news-and-events/Colloquium>

2. Member of the outreach committee (2018).
3. Member of the research committee (2020).

Qualifications

Pure Math, PhD (Cotutelle), Macquarie University
1 Aug 2008 → 30 Nov 2009
Award Date: 30 Nov 2009

Pure Math, PhD, Zhongshan University
1 Sep 2004 → 30 Jun 2009
Award Date: 30 Jun 2009

30 Jun 2020 HDR30: HDR Supervision Orientation 2020-2023, HDR31

Employment

Senior Lecturer

Senior Lecturer
Department of Mathematics and Statistics
Macquarie University
1 Jan 2019 → present

Research outputs

Characterizations of product Hardy spaces in Bessel setting

Duong, X. T., Li, J., Wick, B. D. & Yang, D., Apr 2021, In: Journal of Fourier Analysis and Applications. 27, 2, p. 1-65 65 p., 24.

Weighted embeddings for function spaces associated with Hermite expansions

Bui, T. A., Li, J. & Ly, F. K., Apr 2021, In: Journal of Approximation Theory. 264, p. 1-25 25 p., 105534.

BMO spaces associated to operators with generalised Poisson bounds on non-doubling manifolds with ends

Chen, P., Duong, X. T., Li, J., Song, L. & Yan, L., 5 Jan 2021, In: Journal of Differential Equations. 270, p. 114-184 71 p.

Two weight commutators on spaces of homogeneous type and applications

Duong, X. T., Gong, R., Kuffner, M-J. S., Li, J., Wick, B. D. & Yang, D., Jan 2021, In: Journal of Geometric Analysis. 31, 1, p. 980-1038 59 p.

Commutators of Hilbert transforms along monomial curves

Bongers, T., Guo, Z., Li, J. & Wick, B. D., 2021, In: Studia Mathematica. 257, 3, p. 295-311 17 p.

Geometric characterizations of embedding theorems: for Sobolev, Besov, and Triebel–Lizorkin spaces on spaces of homogeneous type - via orthonormal wavelets

Han, Y., Han, Y., He, Z., Li, J. & Pereyra, C., 24 Oct 2020, In: Journal of Geometric Analysis. 32 p.

Variation of CalderónZygmund operators with matrix weight

Duong, X. T., Li, J. & Yang, D., 24 Oct 2020, In: Communications in Contemporary Mathematics.

Sharp endpoint L^p estimates for Schrödinger groups

Chen, P., Duong, X. T., Li, J. & Yan, L., Oct 2020, In: Mathematische Annalen. 378, 1-2, p. 667-702 36 p.

The two-weight inequality for the Poisson operator in the Bessel setting

Li, J. & Wick, B. D., 15 Sep 2020, In: Journal of Mathematical Analysis and Applications. 489, 2, p. 1-15 15 p., 124178.

Conformal and CR mappings on Carnot groups

Cowling, M. G., Li, J., Ottazzi, A. & Wu, Q., 17 Jun 2020, In: Proceedings of the American Mathematical Society, Series B. 7, p. 67-81 15 p.

A boundedness criterion for singular integral operators of convolution type on the Fock space

Cao, G., Li, J., Shen, M., Wick, B. D. & Yan, L., 25 Mar 2020, In: Advances in Mathematics. 363, p. 1-33 33 p., 107001.

A note on weak factorization of a Meyer-type Hardy space via a Cauchy integral operator

Han, Y., Li, J., Pereyra, C. & Wick, B. D., 2020, In: Studia Mathematica. 253, 3, p. 307-327 21 p.

Commutators on weighted Morrey spaces on spaces of homogeneous type

Gong, R., Li, J., Pozzi, E. & Vempati, M. N., 2020, In: Analysis and Geometry in Metric Spaces. 8, 1, p. 305-334 30 p.

Functional calculus of operators with heat kernel bounds on non-doubling manifolds with ends

Bui, T. A., Duong, X. T., Li, J. & Wick, B. D., 2020, In: Indiana University Mathematics Journal. 69, 3, p. 713-747 35 p.

The Cauchy integral, bounded and compact commutators

Li, J., Nguyen, T. T. T., Ward, L. A. & Wick, B. D., 2020, In: Studia Mathematica. 250, 2, p. 193-216 24 p.

A complete real-variable theory of Hardy spaces on spaces of homogeneous type

He, Z., Han, Y., Li, J., Liu, L., Yang, D. & Yuan, W., Oct 2019, In: Journal of Fourier Analysis and Applications. 25, 5, p. 2197-2267 71 p.

A_p weights and quantitative estimates in the Schrödinger setting

Li, J., Rahm, R. & Wick, B. D., Oct 2019, In: Mathematische Zeitschrift. 293, 1-2, p. 259-283 25 p.

Compactness of Riesz transform commutator on stratified Lie groups

Chen, P., Duong, X. T., Li, J. & Wu, Q., 15 Sep 2019, In: Journal of Functional Analysis. 277, 6, p. 1639-1676 38 p.

Frame decomposition and radial maximal semigroup characterization of Hardy spaces associated to operators

Duong, X. T., Li, J., Song, L. & Yan, L., 1 Jul 2019, In: Journal of Approximation Theory. 243, p. 45-85 41 p.

Singular integrals associated with Zygmund dilations

Han, Y., Li, J., Lin, C-C. & Tan, C., Jul 2019, In: Journal of Geometric Analysis. 29, 3, p. 2410-2455 46 p.

Marcinkiewicz multipliers and Lipschitz spaces on Heisenberg groups

Han, Y., Han, Y., Li, J. & Tan, C., Jun 2019, In: Canadian Journal of Mathematics. 71, 3, p. 607-627 21 p.

Lower bound of Riesz transform kernels and commutator theorems on stratified nilpotent Lie groups

Duong, X. T., Li, H-Q., Li, J. & Wick, B. D., Apr 2019, In: Journal des Mathematiques Pures et Appliquees. 124, p. 273-299 27 p.

Weighted endpoint estimates for singular integral operators associated with Zygmund dilations

Han, Y., Li, J., Lin, C-C., Tan, C. & Wu, X., Apr 2019, In: Taiwanese Journal of Mathematics. 23, 2, p. 375-408 34 p.

Two weight commutators in the Dirichlet and Neumann Laplacian settings

Duong, X. T., Holmes, I., Li, J., Wick, B. D. & Yang, D., 15 Feb 2019, In: Journal of Functional Analysis. 276, 4, p. 1007-1060 54 p.

Commutators of multiparameter flag singular integrals and applications

Duong, X. T., Li, J., Ou, Y., Pipher, J. & Wick, B. D., 1 Jan 2019, In: Analysis and PDE. 12, 5, p. 1325-1355 31 p.

Equivalence of Littlewood–Paley square function and area function characterizations of weighted product Hardy spaces associated to operators

Duong, X. T., Hu, G. & Li, J., 1 Jan 2019, In: Journal of the Mathematical Society of Japan. 71, 1, p. 91-115 25 p.

Product Hardy, BMO spaces and iterated commutators associated with Bessel Schrödinger operators

Betancor, J. J., Duong, X. T., Li, J., Wick, B. D. & Yang, D., 2019, In: Indiana University Mathematics Journal. 68, 1, p. 247-289 43 p.

Product Hardy spaces associated with para-accretive functions and Tb theorem

Lee, M-Y., Li, J. & Lin, C-C., 2019, In: New York Journal of Mathematics. 25, p. 1438-1484 47 p.

On the boundary Strichartz estimates for wave and Schrödinger equations

Guo, Z., Li, J., Nakanishi, K. & Yan, L., 5 Dec 2018, In: Journal of Differential Equations. 265, 11, p. 5656-5675 20 p.

Hardy and Carleson measure spaces associated with operators on spaces of homogeneous type

Han, Y., Han, Y., Li, J. & Tan, C., 1 Aug 2018, In: Potential Analysis. 49, 2, p. 247-265 19 p.

Hardy space theory on spaces of homogeneous type via orthonormal wavelet bases

Han, Y., Li, J. & Ward, L. A., Jul 2018, In: Applied and Computational Harmonic Analysis. 45, 1, p. 120-169 50 p.

Product BMO, little bmo, and Riesz commutators in the Bessel setting

Duong, X. T., Li, J., Ou, Y., Wick, B. D. & Yang, D., Jul 2018, In: Journal of Geometric Analysis. 28, 3, p. 2558–2601 44 p.

Compactness of Riesz transform commutator associated with Bessel operators

Duong, X. T., Li, J., Mao, S., Wu, H. & Yang, D., 1 Jun 2018, In: Journal d'Analyse Mathematique. 135, 2, p. 639-673 35 p.

Boundedness of singular integrals on the flag Hardy spaces on Heisenberg group

Hu, G. & Li, J., 15 Apr 2018, In: Journal of Mathematical Analysis and Applications. 460, 2, p. 618-633 16 p.

Commutators, little bmo and weak factorization

Duong, X. T., Li, J., Wick, B. D. & Yang, D., 1 Jan 2018, In: Annales de l'Institut Fourier. 68, 1, p. 109-129 21 p.

T1 criteria for generalised Calderón-Zygmund type operators on Hardy and BMO spaces associated to Schrödinger operators and applications

Bui, T. A., Li, J. & Ly, F. K., 2018, In: Annali della scuola normale superiore di pisa, Classe di scienze. 18, 1, p. 203-239 37 p.

Carleson measures, BMO spaces and balayages associated to Schrödinger operators

Chen, P., Duong, X. T., Li, J., Song, L. & Yan, L., Nov 2017, In: Science China Mathematics. 60, 11, p. 2077–2092 16 p.

Geometry and Hardy spaces on spaces of homogeneous type in the sense of Coifman and Weiss

Han, Y., Han, Y. & Li, J., Nov 2017, In: Science China Mathematics. 60, 11, p. 2199–2218 20 p.

Weak factorizations of the hardy space $H^1(\mathbb{R}^n)$ in terms of multilinear riesz transforms

Li, J. & Wick, B. D., 1 Sep 2017, In: Canadian Mathematical Bulletin. 60, 3, p. 571-585 15 p.

Besov spaces via wavelets on metric spaces endowed with doubling measure, singular integral, and the T1 type theorem

Han, Y., Li, J. & Tan, C., 15 Jul 2017, In: Mathematical Methods in the Applied Sciences. 40, 10, p. 3580-3598 19 p.

Characterizations of $H^1_{\Delta N}(\mathbb{R}^n)$ and $BMO_{\Delta N}(\mathbb{R}^n)$ via weak factorizations and commutators

Li, J. & Wick, B. D., 2017, In: Journal of Functional Analysis. 272, 12, p. 5384-5416 33 p.

Factorization for hardy spaces and characterization for BMO spaces via commutators in the bessel setting

Duong, X. T., Li, J., Wick, B. D. & Yang, D., 2017, In: Indiana University Mathematics Journal. 66, 4, p. 1081-1106 26 p.

Marcinkiewicz-type spectral multipliers on hardy and Lebesgue spaces on product spaces of homogeneous type

Chen, P., Duong, X. T., Li, J., Ward, L. A. & Yan, L., 2017, In: Journal of Fourier Analysis and Applications. 23, 1, p. 21-64 44 p.

Some characterizations of upper doubling conditions on metric measure spaces

Tan, C. & Li, J., 2017, In: Mathematische Nachrichten. 290, 1, p. 142-158 17 p.

VMO spaces associated with operators with Gaussian upper bounds on product domains

Bui, T. A., Duong, X. T. & Li, J., 2017, In: Journal of Geometric Analysis. 27, 2, p. 1065-1085 21 p.

Weighted estimates for powers and smoothing estimates of Schrödinger operators with inverse-square potentials

Bui, T. A., D'Ancona, P., Duong, X. T., Li, J. & Ly, F. K., 2017, In: Journal of Differential Equations. 262, 3, p. 2771-2807 37 p.

Criterion of the boundedness of singular integrals on spaces of homogeneous type

Han, Y., Han, Y. & Li, J., 15 Dec 2016, In: Journal of Functional Analysis. 271, 12, p. 3423-3464 42 p.

Haar bases on quasi-metric measure spaces, and dyadic structure theorems for function spaces on product spaces of homogeneous type

Kairema, A., Li, J., Pereyra, M. C. & Ward, L. A., 1 Oct 2016, In: Journal of Functional Analysis. 271, 7, p. 1793-1843 51 p.

A Littlewood–Paley Type Decomposition and Weighted Hardy Spaces Associated with Operators

Duong, X. T., Li, J. & Yan, L., 1 Apr 2016, In: Journal of Geometric Analysis. 26, 2, p. 1617-1646 30 p.

Product Hardy spaces associated to operators with heat kernel bounds on spaces of homogeneous type

Chen, P., Duong, X. T., Li, J., Ward, L. A. & Yan, L., 1 Apr 2016, In: Mathematische Zeitschrift. 282, 3-4, p. 1033-1065 33 p.

Criterion of the L-2 boundedness and sharp endpoint estimates for singular integral operators on product spaces of homogeneous type

Han, Y., Li, J. & Lin, C-C., 2016, In: Annali della scuola normale superiore di pisa, Classe di scienze. 16, 3, p. 845-907 63 p.

On weak-star convergence in product Hardy spaces on spaces of homogeneous type

Lee, M. Y., Li, J. & Ward, L. A., 2016, In: Studia Mathematica. 235, 3, p. 251-267 17 p.

Littlewood-Paley theory on metric spaces with non doubling measures and its applications

Tan, C. Q. & Li, J., 1 May 2015, In: Science China Mathematics. 58, 5, p. 983-1004 22 p.

Dyadic structure theorems for multiparameter function spaces

Li, J., Pipher, J. & Ward, L. A., 2015, In: Revista Matematica Iberoamericana. 31, 3, p. 767-797 31 p.

Besov and hardy spaces associated with the schrödinger operator on the heisenberg group

Gong, R., Li, J. & Song, L., Jan 2014, In: Journal of Geometric Analysis. 24, 1, p. 144-168 25 p.

Some function spaces via orthonormal bases on spaces of homogeneous type

Chen, C., Li, J. & Liao, F., 2014, In: Abstract and Applied Analysis. 2014, p. 1-13 13 p., 265378.

BMO from dyadic BMO via expectations on product spaces of homogeneous type

Chen, P., Li, J. & Ward, L. A., 15 Nov 2013, In: Journal of Functional Analysis. 265, 10, p. 2420-2451 32 p.

Singular integrals on carleson measure spaces CMOp on product spaces of homogeneous type

Li, J. & Ward, L. A., Aug 2013, In: Proceedings of the American Mathematical Society. 141, 8, p. 2767-2782 16 p.

Hardy spaces associated to operators satisfying Davies-Gaffney estimates and bounded holomorphic functional calculus

Duong, X. T. & Li, J., 15 Mar 2013, In: Journal of Functional Analysis. 264, 6, p. 1409-1437 29 p.

A local version of Hardy spaces associated with operators on metric spaces

Gong, R. M., Li, J. & Yan, L. X., 2013, In: Science China Mathematics. 56, 2, p. 315-330 16 p.

Boundedness of maximal functions on non-doubling manifolds with ends

Duong, X. T., Li, J. & Sikora, A., 2013, In: AMSI International Conference in Harmonic Analysis and Applications. p. 37-47 11 p.

Multiparameter hardy space theory on carnot-carathéodory spaces and product spaces of homogeneous type

Han, Y., Li, J. & Lu, G., 2013, In: Transactions of the American Mathematical Society. 365, 1, p. 319-360 42 p.

Various characterizations of product hardy space

Li, J., Song, L. & Tan, C., Dec 2011, In: Proceedings of the American Mathematical Society. 139, 12, p. 4385-4400 16 p.

$H^p \rightarrow H^p$ boundedness implies $H^p \rightarrow L^p$ boundedness

Han, Y., Li, J., Lu, G. & Wang, P., Jul 2011, In: Forum Mathematicum. 23, 4, p. 729-756 28 p.

Hardy-Sobolev spaces on product domains and application

Gong, R. & Li, J., 1 May 2011, In: Journal of Mathematical Analysis and Applications. 377, 1, p. 296-302 7 p.

Multilinear commutators of BMO functions and multilinear singular integrals with non-smooth kernels

Lian, J. L., Li, J. & Wu, H. X., Mar 2011, In: Applied Mathematics. 26, 1, p. 109-120 12 p.

Orlicz-Hardy spaces associated to operators satisfying bounded H^∞ functional calculus and Davies-Gaffney estimates

Anh, B. T. & Li, J., Jan 2011, In: Journal of Mathematical Analysis and Applications. 373, 2, p. 485-501 17 p.

Atomic decomposition of weighted Triebel-Lizorkin spaces on spaces of homogeneous type

Li, J., Oct 2010, In: Journal of the Australian Mathematical Society. 89, 2, p. 255-275 21 p.

Duality of hardy space with bmo on the shilov boundary of the product domain in \mathbb{C}^2

Li, J., Feb 2010, In: Taiwanese Journal of Mathematics. 14, 1, p. 81-105 25 p.

Duality of multiparameter Hardy spaces H^p on spaces of homogeneous type

Han, Y., Li, J. & Lu, G., 2010, In: Annali della Scuola Normale - Classe di Scienze. 9, 4, p. 645-685 41 p.

Sharp maximal function estimates for multilinear singular integrals with non-smooth kernels

Gong, R. & Ji, L., Dec 2009, In: Analysis in Theory and Applications. 25, 4, p. 333-348 16 p.

Maximal operator for multilinear singular integrals with non-smooth kernels

Duong, X. T., Gong, R., Grafakos, L., Li, J. & Yan, L., 2009, In: Indiana University Mathematics Journal. 58, 6, p. 2517-2541 25 p.

Awards

Projects

Harmonic analysis and dispersive partial differential equations

Li, J., Guo, Z., Kenig, C. & Nakanishi, K.
31/01/17 → ...

Harmonic analysis and geometry: singular integrals related to heat diffusion equations on domains with variable dimensions and applications

Li, J. & Duong, X.
1/01/16 → 31/12/16

Harmonic analysis, complex analysis and differential operators

Duong, X., Li, J., Ward, L., Lacey, M., Pipher, J. & Wick, B.
1/01/20 → 31/12/22

ARC DP: Harmonic analysis: singular integrals and applications to differential equations modelled on heat diffusion phenomenon and on quantum mechanics

Li, J. & Duong, X.
1/01/18 → 31/12/19

Multiparameter Harmonic Analysis: Weighted Estimates for Singular Integrals

Duong, X., Ward, L., Li, J., Lacey, M., Pipher, J. & MQRES, M.
16/02/16 → 30/06/20