

CURRICULUM VITAE

PERSONAL INFORMATION

Full name: **THE ANH BUI**
DOB: 19 Aug 1980
Nationality: Vietnamese
Residential address: 51 Wenke Crescent, Yagoona NSW 2199
Work address: Department of Mathematics
Macquarie University
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FACULTY POSITION

2002-2015 Lecturer
Department of Mathematics
University of Pedagogy
Ho Chi Minh city, Vietnam

2007-20015 Associate Lecturer
Department of Mathematics
Ton Duc Thang University
Ho Chi Minh city, Vietnam

2013-present ARC Research Fellow
Department of Mathematics
Macquarie University
Sydney, Australia

EDUCATION

2009-2013 Ph.D. in Mathematics, Macquarie University, Australia
Dissertation Topic: Singular integrals and function spaces
Advisor: Professor Xuan Thinh Duong

2004-2006 M.S in Mathematics, University of Pedagogy, Ho Chi Minh city, Vietnam
Dissertation Topic: Some problems on the stability of linear dynamic systems
Advisor: Professor Khoa Son Nguyen

1998-2002 Bachelor degree with double majors in Mathematics and Education, Univer-
sity of Pedagogy, Ho Chi Minh city, Vietnam

HONOURS AND AWARDS

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| 2009-2012 | awarded Macquarie Research Excellent PhD scholarship at Macquarie University, Australia |
| 2013 | awarded the Vice-Chancellor's Commendation for a PhD thesis entitled "Singular integrals and function spaces" |

TEACHING EXPERIENCE

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| 2002-2008 | Lecturer at University of Pedagogy, Ho Chi Minh city, Vietnam
My undergraduate Teaching: <ul style="list-style-type: none">• Linear Algebra and Calculus• Functional Analysis for undergraduate students• Linear Programming and Numerical Analysis <p><i>Notes: I maintained the teaching evaluation rating above 4.2/5 in each semester.</i></p> |
| 2007-2008 | Invited Lecturer at Ton Duc Thang University, Ho Chi Minh city, Vietnam
My undergraduate Teaching: <ul style="list-style-type: none">• Linear Algebra and Calculus <p><i>Notes: I received teaching evaluation rating of 4.3/5 in 2007 and also achieved the rating of 4.8/5 in 2008 which was the highest rating in Department of Mathematics, Ton Duc Thang University.</i></p> |
| 2009-2013 | Tutor at Macquarie University, Sydney, Australia
My Teaching: <ul style="list-style-type: none">• 1st year mathematics at basic and advanced levels• 2nd year Calculus and Algebra |

RESEARCH GRANTS

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| 2007-2008 | Project leader of the project "Robust stability of linear systems" sponsored by the University of Pedagogy of Ho Chi Minh city. |
| 2010 | Travel Grant for PhD students at Macquarie University (around \$5000). |
| 2012-2013 | Co-investigator of the National Foundation for Science and Technology Development (NAFOSTED) project "Some optimization and control problems for dynamical systems under uncertainties". |

RESEARCH INTERESTS

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| Harmonic Analysis: | singular integrals, function spaces
harmonic analysis, partial differential equations |
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REFEREED JOURNAL ARTICLES

1. with P. D'ancona, X. T Duong, J. Li and F. K. Ly, Weighted estimates for powers and smoothing estimates of Schrödinger operators with inverse-square potentials, accepted for publication in *Journal of Differential Equations*.
2. with Jose M. Conde-Alonso, Xuan Thinh Duong and Mahdi Hormozi, Weighted bounds for multilinear operators with non-smooth kernels, to appear in *Studia Mathematica*.
3. with J. Li and F. K. Ly, $T1$ criterions for generalised Calderón–Zygmund type operators on Hardy and BMO spaces associated to Schrödinger operators and applications, to appear in *Annali della Scuola normale superiore di Pisa, Classe di scienze* .
4. Global gradient estimates on generalized Lebesgue spaces for renormalized solutions of quasilinear equations with measure data on Reifenberg domains, to appear in *Advances in Nonlinear Analysis*.
5. with Xuan Thinh Duong, Inhomogeneous Besov spaces associated to operators with off-diagonal semigroup estimates, to appear in *Advances in Differential Equations*.
6. with Xuan Thinh Duong and Ji Li, VMO spaces associated to operators with Gaussian upper bounds on product domains, to appear in *Journal of Geometric Analysis*.
7. with Xuan Truong Le, $W^{1,p(\cdot)}$ regularity for quasilinear problems with irregular obstacles on Reifenberg domains, to appear in *Communications in Contemporary Mathematics*.
8. with Mahdi Hormozi, Weighted bounds for multilinear square functions, to appear in *Potential Analysis*.
9. with Xuan Thinh Duong and Younghun Hong, Dispersive and Strichartz estimates for the three-dimensional wave equation with a scaling-critical class of potentials, *J. Funct. Anal.* **271** (2016), no. 8, 2215–2246.
10. with Xuan Thinh Duong and Xuan Truong Le, Regularity estimates for higher order elliptic systems on Reifenberg flat domains, *J. Differential Equations* **261** (2016), no. 10, 5637–5669.
11. with Xuan Thinh Duong, Weighted norm inequalities of spectral multipliers on graphs, *Potential Analysis* **44** (2016), no. 2, 263–293.
12. with Xuan Thinh Duong, Laguerre operator and its associated weighted Besov and Triebel-Lizorkin spaces, to appear in *Trans. Amer. Math. Soc.*
13. with Fu Ken Ly and Sibe Yang, Second-order Riesz transforms associated with magnetic Schrödinger operators, *J. Math. Anal. Appl.* **437** (2016), 1196–1218.
14. with Xuan Thinh Duong, Besov and Triebel-Lizorkin spaces associated to Hermite operators, *J. Fourier Anal. Appl.* **21** (2015), no. 2, 405–448.

15. New class of multiple weights and new weighted inequalities for multilinear operators, *Forum Mathematicum* **27** (2015), no. 2, 995–1023.
16. Weighted Hardy spaces associated to discrete Laplacians on graphs and applications, *Potential Analysis* **41** (2014), no. 3, 817–848. .
17. Boundedness of variation operators and oscillation operators for certain semigroups, *Non-linear Anal.* **106** (2014), 124–137.
18. Functions of vanishing mean oscillation associated to non-negative self-adjoint operators satisfying Davies-Gaffney estimates, *Tohoku Math. J.* **66** (2014), 269–287.
19. Weighted estimates for commutators of some singular integrals related to Schrödinger operators, *Bull. Sci. Math.* **138** (2014), 270–292.
20. with Xuan Thinh Duong, Hardy spaces associated to the discrete Laplacians on graphs and boundedness of singular integrals, *Trans. Amer. Math. Soc.* **366** (2014), 3451–3485.
21. with Xuan Thinh Duong, Weighted estimates of some singular integrals and their commutators with BMO functions, *Journal of Geometric Analysis* **24** (2014), no. 3, 1368–1397.
22. with Xuan Thinh Duong, Boundedness of singular integrals and their commutators with BMO functions on Hardy spaces, *Adv. Diff. Eq.* **18** (2013), 459–494.
23. with Xuan Thinh Duong, Weighted norm inequalities for multilinear operators and applications to multilinear Fourier multipliers, *Bulletin des Sciences Mathématiques* **137** (2013), 63–75.
24. with Jun Cao, Dang Ky Luong, Dachun Yang and Sibeï Yang, Weighted hardy spaces associated with operators satisfying reinforced off-diagonal estimates, *Taiwanese Journal of Mathematics* **17** (2013), 1127–1166.
25. with Jun Cao, Dang Ky Luong, Dachun Yang and Sibeï Yang, Musielak-Orlicz-Hardy spaces associated with operators satisfying reinforced off-diagonal estimates, *Analysis and Geometry in Metric Spaces* **1** (2013), 69–129.
26. with Xuan Thinh Duong, Hardy spaces, Regularized BMO spaces and the boundedness of Calderón-Zygmund operators on non-homogeneous spaces, *J. Geom. Anal.* **23** (2013), 895–932.
27. Commutators of BMO functions with spectral multiplier operators, *J. Math. Soc. Japan* **64** (2012), 885–902.
28. Notes on boundedness of spectral multipliers on hardy spaces associated to operators, *Nagoya Mathematical Journal* **203** (2011), 109–122.
29. with J. Li, Orlicz-Hardy spaces associated to operators satisfying bounded H^∞ functional calculus and Davies-Gaffney estimates, *J. Math. Anal. Appl.* **373** (2011), 485–501.

30. with Xuan Thinh Duong, On commutators of vector BMO functions and multilinear singular integrals with non-smooth kernels. *J. Math. Anal. Appl.* **371** (2010), 80–94.
31. The Weighted norm inequalities for Riesz transforms of magnetic Schrödinger operators, *Differential Integral Equations* **23** (2010), 811–826.

Journals such as *Transactions of the American Mathematical Society*, *Journal of Functional Analysis*, *Journal of Differential Equations*, *Journal of Fourier Analysis and Applications*, *Annali della Scuola normale superiore di Pisa, Classe di scienze*, *Journal of Geometric Analysis*, and *Advances in Differential Equations* are very high ranked journals in the field of harmonic analysis and PDEs. Journals such as *Transactions of the American Mathematical Society*, *Journal of Functional Analysis* and *Journal of Differential Equations* are A* journals in ERA journal ranking 2010.

PAPERS SUBMITTED

1. with Trong Nguyen, The boundedness of Riesz transforms related to degenerate Schrödinger operators, submitted in 2014.
2. with Xuan Thinh Duong, Global Lorentz estimates for nonlinear parabolic equations on nonsmooth domains, submitted in 2016.
3. Weighted global Calderón-Zygmund type estimates for nonlinear $p(x)$ -Laplacian type equations on quasiconvex domains, submitted in 2016.
4. with Xuan Thinh Duong, Global Marcinkiewicz estimates for nonlinear parabolic equations with nonsmooth coefficients, submitted in 2016.
5. with Piero D’Ancona and Fabio Nicola, On Schrödinger semigroups on the spaces of homogeneous type, in preparation.

PUBLICATIONS BEFORE ENTERING PHD PROGRAM

1. with Khoa Son Nguyen and The Quan Bui, Robust stability of positive linear systems under fractional perturbations in infinite dimensional spaces, *Dyn. Contin. Discrete Impuls. Syst. Ser. A Math. Anal.* **18** (2011), 429–441.
2. with Khoa Son Nguyen, Robust stability of a class of positive quasipolynomials in Banach spaces, *Mat. Zametki* **88** (2010), 651–661.
3. with Khoa Son Nguyen, Robust stability of positive linear systems in Banach spaces, *J. Difference Equ. Appl.* **16** (2010), 1447–1461.
4. with Khoa Son Nguyen, The robustness of strong stability of positive homogeneous difference systems under parameter perturbations, *Numer. Funct. Anal. Optim.* **31** (2010), 97–111.
5. with Hanh Nguyen Vo, Stability radii of positive higher order difference systems under fractional perturbations, *Positivity* **14** (2010), 285–300.
6. with Khoa Son Nguyen, Robust stability of delay difference systems under fractional perturbations in infinite-dimensional spaces, *Internat. J. Control* **83** (2010), 498–505.

7. On the exact rates of decay of solutions of positive linear Volterra equations with delays, *Positivity* **14** (2010), 181–189.
8. with Khoa Son Nguyen, Robust stability of Metzler operators under parameter perturbations, *Internat. J. Robust Nonlinear Control* **19** (2009), 1931–1939.
9. with Khoa Son Nguyen and Dang Xuan Thanh Duong, A Perron-Frobenius theorem for positive polynomial operators in Banach lattices, *Positivity* **13** (2009), 709–716.
10. with Khoa Son Nguyen, Stability radii of positive linear systems under fractional perturbations, *Internat. J. Robust Nonlinear Control* **19** (2009), 1267–1277.
11. with Khoa Son Nguyen and Dang Xuan Thanh Duong, Stability radii of positive linear time-delay systems under fractional perturbations, *Systems Control Lett.* **58** (2009), 155–159.
12. with Cong Khanh Do and Dang Xuan Thanh Duong, Distance from an exactly controllable system to not approximately controllable systems, *Vietnam J. Math.* **36** (2008), 463–472.
13. with Khoa Son Nguyen, Stability radii of positive linear systems under affine parameter perturbations in infinite dimensional spaces, *Positivity* **12** (2008), 677–690.
14. with Khoa Son Nguyen, Stability radii of positive higher order difference system in infinite dimensional spaces, *Systems Control Lett.* **57** (2008), 822–827.
15. with Dang Xuan Thanh Duong, The robustness of strong stability of positive homogeneous difference equations, *J. Appl. Math.* 2008, Art. ID 124269, 12 pp.
16. with Khoa Son Nguyen, Dang Xuan Thanh Duong, Stability radii of delay difference systems under affine parameter perturbations in infinite dimensional spaces, *Appl. Math. Comput.* **202** (2008), 562–570.
17. with Cong Khanh Do, Dang Xuan Thanh Duong, A remark on stability of a class of positive linear delay systems in Banach lattices, *Commun. Math. Anal.* **5** (2008), 26–37.
18. with Dang Xuan Thanh Duong, A Perron-Frobenius theorem for positive quasipolynomial matrices associated with homogeneous difference equations, *J. Appl. Math.* 2007, Art. ID 26075, 6 pp.
19. with Khoa Son Nguyen, Dang Xuan Thanh Duong, Robust stability of Metzler operator and delay equation in $L^p([h, 0]; X)$, *Vietnam J. Math.* **34** (2006), 357–368.

REFEREED CONFERENCE PROCEEDINGS

The Anh Bui, Boundedness of maximal operators and maximal commutators on nonhomogeneous spaces, *Proceedings of AMSI International Conference on Harmonic Analysis and Applications, Macquarie University, Australia* **45** (2013), 22–36.

INVITED TALKS

Hardy spaces, Regularized BMO spaces and the boundedness of Calderón-Zygmund operators on non-homogeneous spaces, AMSI International Conference on Harmonic Analysis and Applications, Macquarie University, Australia. (February 2010)

Weighted norm inequalities for spectral multipliers without Gaussian estimates, 22nd International Workshop on Operator Theory and its Applications (IWOTA 2011), University of Seville, Spain. (July 2011)

CONFERENCE TALKS

On dispersive and Strichartz estimates for the wave equations on \mathbb{R}^3 , the 59th Meeting of the Australian Mathematics Society. (Sept-Oct 2015)

REFeree SERVICES

Acta Mathematica Vietnamica
Science China Mathematics
Acta Mathematica Sinica, English Series
Frontiers of Mathematics in China
Taiwanese Journal of Mathematics
Potential Analysis
Mathematische Nachrichten

REFERENCES

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