

October 6, 2021

**PERSONAL DATA**

**Birth date:** October 5, 1973  
**Citizenship:** Canadian  
**Languages:** English, French (reading only)  
**Present Position:** Professor  
**Address:** Department of Pure Mathematics  
 University of Waterloo  
 Waterloo, Ontario, N2L 3G1, Canada  
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**DEGREES**

Degree	Institution	Period	Area
BSc (Honours)	Alberta	1991/09-1995/04	Mathematics
MMath	Waterloo	1995/09-1997/04	Pure Mathematics
PhD	Waterloo	1997/05-2002/05	Pure Mathematics

**PAST POSITIONS**

Position	Institution	Period
Visiting Assitant Prof.	Texas A&M (College Station)	2002/09–2004/05
Assistant Professor	Waterloo	2004/07–2009/06
Associate Professor	Waterloo	2009/07–2015/06

**SHORT-TERM VISITING POSITIONS**

Institution	Period
Chalmers (Göteborg, Sweden)	2001/04
Lakehead (Thunder Bay, Canada)	2001/11
Leeds (United Kingdom)	2008/03-04
Paul Verlaine (Metz, France)	2008/07, 2009/06
Leeds (United Kingdom)	2010/06
Seoul National (Korea)	2014/09-12

**SELECTED FELLOWSHIPS AND AWARDS**

- NSERC Post-Doctoral Fellowship, 2002/09-2004/08.
- University of Waterloo Alumni Gold Medal, 2002/10.
- Canadian Mathematical Society Doctoral Prize, 2004/12.

**GRANT RECORD**

<b>Agency</b>	<b>Grant</b>	<b>Period</b>	<b>Amount</b>
U. of Waterloo	Start-up	2004/07-2006/06	\$20000
NSERC	Discovery Grant	2005/07-2009/06	\$65000
			(\$13000/yr)
London Math. Soc.	Scheme 2	2008/03-04	GBP1200
U. of Metz	Professeur Invité	2008/07 & 2009/06	EUR2800
MITACS	Accelerate	2010/05-2010/12	\$15000
NSERC	Discovery Grant	2010/07-2015/06	\$120000
			(\$24000/yr)
Korean Fed. Sci. Tech. Soc.	Brain Pool	2014/09-12	KRW19500000
NSERC	Discovery Grant	2015/07-2020/06	\$70000
			(\$14000/yr)
NSERC	Discovery Grant	2020/07-2025/06	\$135000
			(\$27000/yr)

**PUBLICATIONS**

## ARTICLES IN REFEREED JOURNALS

- [1] (with P. J. Wood) Diagonal type conditions on group  $C^*$ -algebras. *Proc. Amer. Math. Soc.* 129 (2001), no. 2, 609–616.
- [2] Operator weak amenability of the Fourier algebra. *Proc. Amer. Math. Soc.* 130 (2002), no. 12, 3609–3617
- [3] (with L. Turowska) Spectral synthesis and operator synthesis for compact groups. *J. London Math. Soc.* 66 (2002), no. 2, 361–376.
- [4] (with B.E. Forrest, E. Kaniuth and A.T.-M. Lau) Ideals with bounded approximate identities in Fourier algebras. *J. Funct. Anal.* 203 (2003), no. 1, 286–304.
- [5] (with O. Yu. Aristov and V. Runde) Operator biflatness of the Fourier algebra and approximate indicators for subgroups. *J. Funct. Anal.* 209 (2004), no. 2, 367–387.
- [6] (with V. Runde) Operator amenability of Fourier-Stieltjes algebras. *Math. Proc. Cambridge Phil. Soc.* 136 (2004), no. 3, 675–686.
- [6'] (with V. Runde and Z. Tanko) Corrigendum: Operator biflatness of the Fourier algebra and approximate indicators for subgroups, *J. Funct. Anal.* 270 (2016), no. 6, 2381–2382.
- [7] Measurable Schur multipliers and completely bounded multipliers of the Fourier algebras. *Proc. London Math. Soc.* 89 (2004), no. 1, 161–192.
- [8] (with R.R. Smith) Representations of group algebras in spaces of completely bounded maps. *Indiana Univ. Math. J.* 54 (2005), no. 3, 873–896.
- [9] (with M. Ilie) Completely bounded homomorphisms of the Fourier algebras. *J. Funct. Anal.* 225 (2005), no. 2, 480–499.
- [10] (with B.E. Forrest) Best bounds for approximate identities in ideals of the Fourier algebra vanishing on subgroups. *Proc. Amer. Math. Soc.* 134 (2006), no. 1, 111–116.
- [11] (with V. Runde) Operator amenability of the Fourier-Stieltjes algebras, II. *Bull. London Math. Soc.* 39 (2007), no. 2, 194–202.
- [12] (with B.E. Forrest and P. J. Wood) Operator Segal algebras in Fourier algebras. *Studia Math.* 179 (2007), no. 3, 277–295.
- [13] (with M. Ilie) The spine of a Fourier-Stieltjes algebra. *Proc. London Math. Soc.* (3) 94 (2007), no. 2, 273–301.
- [13'] (with M. Ilie) Corrigendum: The spine of a Fourier-Stieltjes algebra. *Proc. Lond. Math. Soc.* (3) 104 (2012), no. 4, 859–863.
- [14] Operator space structure on Feichtinger's Segal algebras. *J. Funct. Anal.* 248 (2007), no. 1, 152–174.
- [15] (with B.E. Forrest and V. Runde) Operator amenability of the Fourier algebra in the  $cb$ -multiplier norm. *Canad. J. Math.* 59 (2007), no. 5, 966–980.

- [16] (with M. Ilie) The algebra generated by idempotents in a Fourier-Stieltjes algebra. *Houston J. Math.* 33 (2006), no. 4, 1131–1145.
- [17] (with M. Neufang and Z.-J. Ruan) Completely isometric representations of  $M_{cb}A(G)$  and  $UCB(\hat{G})^*$ . *Trans. Amer. Math. Soc.* 360 (2008), no. 3, 1133–1161.
- [18] (with A. Azimifard and E. Samei) Amenability properties of the centres of group algebras. *J. Funct. Anal.* 256 (2008), no. 5, 1544–1564.
- [19] (with B.E. Forrest and E. Samei) Weak amenability of Fourier algebras on compact groups. *Indiana Univ. Math. J.* 59 (2009), no. 3, 1379–1394.
- [20] (with M. Ghandehari and H. Hatami) Amenability constants for semi-lattice algebras. *Semigroup Forum* 79 (2009), no. 2, 279–297.
- [21] (with B.E. Forrest and E. Samei) Convolutions on compact groups and Fourier algebras of coset spaces. *Studia Math.* 196 (2010), no. 3, 223–249.
- [22] (with E. Samei and R. Stokke) Biflatness and pseudo-amenability of Segal algebras. *Canad. J. Math.* 62 (2010), no. 4, 845–869.
- [23] (with G.A. Bagheri-Bardi and A.R. Medghalchi) Operator-valued convolution algebras. *Houston J. Math.* 36 (2010), no. 4, 1023–1036.
- [24] (with J. Ludwig and L. Turowska) Beurling-Fourier algebras on compact groups: spectral theory. *J. Funct. Anal.* 262 (2012), no. 2, 463–499.
- [25] (with S. Ztop and V. Runde) Beurling-Figà-Talamanca-Herz algebras. *Studia Math.* 210 (2012), no. 2, 117–135.
- [26] (with Y.-H. Cheng and B.E. Forrest) On the subalgebra of a Fourier-Stieltjes algebra generated by pure positive definite functions. *Monatsh. Math.* 171 (2013), no. 3–4, 305–314.
- [27] (with R. Stokke) Matrix coefficients of unitary representations and associated compactifications. *Indiana Univ. Math. J.* 62 (2013), no. 6, 99–148.
- [28] (with S. Öztop) On Minimal and Maximal  $p$ -operator Space Structures. *Canad. Math. Bull.* 57 (2014), no. 1, 166–177.
- [29] (with M. Neufang, P. Salmi and A. Skalski.) Contractive idempotents on locally compact quantum groups. *Indiana Univ. Math. J.* 62 (2013), no. 6, 1983–2002.
- [30] (with H.H. Lee and E. Samei) Some weighted group algebras are operator algebras. *Proc. Edinburgh Math. Soc.* (2) 58 (2015), no. 2, 499–519.
- [31] (with S. Öztop)  $p$ -Operator space structure on Feichtinger-Figà-Talamanca-Herz Segal algebras. *J. Operator Theory* 74 (2015), no. 1, 45–74.
- [32] (with M. Ghandehari, H.H. Lee and E. Samei) Some Beurling-Fourier algebras on compact groups are operator algebras. *Trans. Amer. Math. Soc.* 367 (2015), no. 10, 7029–7059.

- [33] (with M. Rostami) Convolutions on the Haagerup tensor products of Fourier Algebras. *Houston J. Math.* 42 (2016), no. 2, 597–611.
- [34] Commuting contractive idempotents in measure algebras. *Ann. Funct. Anal.* 7 (2016), no. 1, 136–149.
- [35] (with H.H. Lee, J. Ludwig and E. Samei) Weak amenability of Fourier algebras and local synthesis of the anti-diagonal. *Adv. Math.* 292 (2016), 11–41.
- [36] (with H.H. Lee and E. Samei) Similarity degree of Fourier algebras. *J. Funct. Anal.* 271 (2016), no. 3, 593–609.
- [36'] (with H.H. Lee and E. Samei) Corrigendum: Similarity degree of Fourier algebras. *J. Funct. Anal.* 277 (2019), no. 3, 958–964.
- [37] (with M. Alaghmandan, M. Ghandehari and K. F. Taylor) Projections in  $L^1(G)$ ; the unimodular case, *Proc. Amer. Math. Soc.* 144 (2016), no. 11, 4929–4921.
- [38] (with R.H. Levene, I.G. Todorov and L. Turowska) Schur multipliers of Cartan Pairs. *Proc. Edinburgh Math. Soc. (2)* 60 (2017), no. 2, 413–440.
- [39] (with M. Alaghmandan) Amenability properties of the central Fourier algebra of a compact group. *Illinois J. Math.* 60 (2016), no. 2, 505–527.
- [40] (with H.H. Lee and E. Samei)  $p$ -Fourier algebras on compact groups. *Rev. Mat. Iberoam.* 34 (2018), no. 4, 1469–1514
- [41] (with M. Daws) On convoluters on  $L^p$ -spaces. *Studia Math.* 245 (2019), no. 1, 15–31.
- [42] On operator amenability of Fourier-Stieltjes algebras. *Bull. Sci. Math.* 158 (2020), 102823, 16 pp.

## ARTICLES IN REFEREED CONFERENCE PROCEEDINGS

- [1] Representations of multiplier algebras in spaces of completely bounded maps. *Banach Algebras and Their Applications*, Edmonton 2003 Contemp. Math. 363 (2004), 335–343.
- [2] Amenability properties of Fourier algebras and Fourier-Stieltjes algebras: a survey. *Banach Algebras 2009*, 365–383, Banach Center Publications, Vol. 91, IMPAN, Warsaw, 2010.

## ARTICLES ACCEPTED IN REFEREED JOURNALS

- [1] (with M. Neufang, P. Salmi and A. Skalski.) Fixed points and convolution powers of contractive quantum measures, *Indiana Univ. Math. J.*, 39 pages.
- [2] Weakly almost periodic topologies, idempotents and ideals, *Indiana Univ. Math. J.*, 31 pages.
- [3] (with M. Ghandehari, H. H. Lee, J. Ludwig and L. Turowska) Beurling-Fourier algebras on Lie groups and their spectra, *Adv. Math.*, 88 pages.

**HIGHLY QUALIFIED PERSONNEL SUPERVISION**

at University of Waterloo

## GRADUATE STUDENTS

<b>Student</b>	<b>Program</b>	<b>Terms</b>	<b>Notes</b>
Mahya Ghandehari	PhD	Fall 05-present	*
Aaron Tikuisis	MMath Th	Spring 06-Spring 07	*
Michael Brannan	MMath Th	Fall 06-Spring 08	*
Laura Marti Perez	PhD	Fall 06-Winter 12	*
Cameron Zwarich	MMath Th	Fall 06-Spring 08	*
Elcim Elgun	PhD	Fall 07-Fall 12	*
Michael Sgambelluri	MMath	Fall 07-Spring 09	*
Matthew Weirsmma	MMath	Fall 11-Spring 12	*
Matthew Weirsmma	PhD	Fall 12-Spring 16	*
Cameron Williams	MMath	Fall 13-Spring 14	*
Kamyar Moshksar	MMath	Fall 14-Fall 16	*
Serina Camungol	MMath	Fall 15-Spring 16	*
Mitchel Haselhurst	MMath	Fall 15-Spring 16	*
Bahaa Khaddaj	MMath	Winter 16-Fall 16	**
Aasaimani Thamizhazhagan	PhD	Fall 16-Spring 20	*
Kerry Cerqueira	MMath	Fall 16-Fall 17	*
Benjamin Anderson-Sackenay	MMath	Fall 17-Spring 18	*
John Sawatzky	MMath	Fall 17-Spring 18	*
Benjamin Anderson-Sackenay	PhD	Fall 18-present	*
John Sawatzky	PhD	Fall 18-present	*
Nicolas Manor	PhD	Fall 18-present	**
Juan Felipe Ariza Mejia	Fall 19-Spring 20	MMath	
Zhihao Zhang	Fall 19-Spring 20	MMath	
Annie Li	MMath	Fall 20-Spring 21	*
Aleksa Vujicic	PhD	Fall 20-present	
Zhihao Zhang	PhD	Fall 20-present	

\* Co-advised with B.E. Forrest; \*\* co-advised with M. Kennedy.

## POST-DOCTORAL FELLOWS

<b>Fellow</b>	<b>Funding</b>	<b>Period</b>
Ebrahim Samei	NSERC PDF	01/07-05/08
Hun Hee Lee	Fields <sup>†</sup>	09/07-05/09
Pekka Salmi	NSERC DG *	09/11-08/11
Yin-Hei (Michael) Chen	NSERC DG <sup>‡</sup>	10/01-08/11
Mahmood Alaghmandan	Fields <sup>†</sup>	14/01-15/08
Mahya Ghandehari	Fields <sup>†</sup>	14/01-15/08
Matthew Mazowita	Fields <sup>†</sup>	14/01-15/08

<sup>†</sup> Fields funding matched, in part, by funding from my grant, and the grant of B.E. Forest. <sup>‡</sup> Funding from my Discovery Grant with help from B.E. Forrest. \* Funding from my Discovery Grant with help from M. Neufang (Carleton).

**PROFESSIONAL ACTIVITIES**

## CONFERENCE ORGANISING

<b>Conference</b>	<b>Location</b>	<b>Date</b>	<b>Role</b>
Great Plains Operator Symposium	Texas A&M	2004/05	1,2
Canadian Operator Symposium	Waterloo	2004/05	1,2
Canadian Math Society Summer Meeting Operator algebras, operator spaces and harmonic analysis	Waterloo	2005/06	1
Banach Algebras 2009	Waterloo	2011/08	3
Fields Institute Thematic Program Abstract Harmonic Analysis, Banach and Operator Algebras	Toronto	2014/04	4

Notes: 1 member of organising committee; 2 liason between Texas and Waterloo meetings; 3 primary organiser; 4 member of organising committee for section Banach and Operator Algebras over Groups.

## SOCIETY MEMBERSHIPS

<b>Society</b>	<b>Period</b>	<b>Status</b>
Canadian Mathematical Society	2005/01-2006/12	Honorary member
American Mathematical Society	2005/01-present	Regular member
Canadian Mathematical Society	2007/01-present	Lifetime member



**TEACHING** (at University of Waterloo)

<b>Course</b>	<b>Descriptive Title</b>	<b>Times</b>
MATH 137	Calculus I	4
MATH 138	Calculus II	1
MATH 148	Calculus II (Advanced Section)	1
MATH 237	Calculus III	3*
MATH 247	Calculus III (Advanced Section)	4
PMATH 331	Applied Real Analysis	1
PMATH 352	Complex Analysis	1
PMATH 450/650 <sup>†</sup>	Lebesgue Integration and Fourier Analysis	7
PMATH 451/651	Measure Theory	4
PMATH 753 <sup>†</sup>	Functional Analysis	4
PMATH 765	Lie Theory	2
PMATH 810	Banach Algebras	1
PMATH 822	Operator Spaces	2
PMATH 822	Quantum Groups	1
PMATH 833	Representation theory of the unimodular $2 \times 2$ matrix group	1
PMATH 833 <sup>†</sup>	Introduction to Harmonic Analysis	2

\* served as course captain, once; † these courses have been renumbered: 450/650 used to be 354, 753 used to be 453/653, labelled offering of 833 was taught as 950 and this number is no longer used for special topics.

**DEPARTMENTAL SERVICE** (at University of Waterloo)

## COMMITTEES

Scholarship, Curriculum, Graduate, Chair Search, Library, Hiring, Tenure & Promotion

## ADMINISTRATIVE POSITIONS

Associate Chair, Graduate Studies, 12/07–13/06, 15/07–19/06