

## Publications

### Research Articles in Refereed Journals

- (1) B. Karapetrovic, J. Mashreghi. Hadamard products in weighted Bergman spaces. *J. Math. Anal. Appl.*, submitted.
- (2) L. Bouthat, J. Mashreghi. L-matrices with lacunary coefficients. *Oper. Matrices*, submitted.
- (3) J. Mashreghi, P.O. Parisé, T. Ransford. Failure of approximation of odd functions by odd polynomials. *Constr. Approx.*, submitted.
- (4) L. Bouthat, J. Mashreghi. The norm of an infinite L-Matrix. *Oper. Matrices*, accepted.
- (5) B. Karapetrovic, J. Mashreghi. Hadamard convolution and area integral means in Bergman spaces. *Results Math.*, accepted.
- (6) J. Mashreghi. A note on Schwarz's lemma. *Complex Anal. Synergies*, accepted.
- (7) J. Mashreghi, T. Ransford. Hadamard multipliers on weighted Dirichlet spaces. *Integral Equ. Oper. Theory*, accepted.
- (8) J. Mashreghi, T. Ransford. Polynomial approximation in weighted Dirichlet spaces. *Complex Anal. Synergies*, accepted.
- (9) E. Fricain, J. Mashreghi, R. Rupam. Backward shift invariant subspaces in reproducing kernel Hilbert spaces. *Math. Scand.*, 126(1):142–160, 2020.
- (10) A. Bourhim, J. Mashreghi. Jordan maps and Pseudospectrum in  $C^*$ -algebras. *J. Operat. Theor.*, 83(2):299–319, 2020.
- (11) E. Fricain, M. Karaki, J. Mashreghi. Composition operators on de Branges–Rovnyak spaces *Results Math.*, 74(1):61, 2019.
- (12) R. Cheng, J. Mashreghi, W. Ross. Inner functions and zero sets for  $L^p_A$ . *Trans. Amer. Math. Soc.*, 372(3):2045–2072, 2019.
- (13) J. Mashreghi, T. Ransford. Linear polynomial approximation schemes in Banach holomorphic function spaces. *Anal. Math. Phys.*, 9:899–905, 2019.
- (14) G. Bao, J. Mashreghi, S. Pouliasis, H. Wulan. Möbius invariant function spaces and Dirichlet spaces with superharmonic weights. *J. Aust. Math. Soc.*, 106(1):1–8, 2019.
- (15) J. Mashreghi, T. Ransford. Linear Maps preserving inner functions. *Studia Math.*, 244:99–107, 2019.
- (16) R. Cheng, J. Mashreghi, W. Ross. Optimal Weak Parallelogram Constants for  $L^p$  Spaces. *Math. Inequal. Appl.*, 21(4):1047–1058, 2018.
- (17) J. Mashreghi, J. Ransford, T. Ransford. A Gleason–Kahan–Zelazko theorem for the Dirichlet space. *J. Func. Anal.*, 274(11):3254–3262, 2018.
- (18) J. Mashreghi, T. Ransford. Gleason–Kahan–Zelazko theorems in function spaces. *Acta Sci. Math.*, 84:227–238, 2018.

- (19) J. Mashreghi, T. Ransford Outer functions and uniform integrability. *Ann. Acad. Sci. Fenn-M*, 43:1–4, 2018.
- (20) J. Mashreghi, T. Ransford. Outer functions and divergence in de Branges–Rovnyak spaces. *Complex Anal. Oper. Theory*, 12(4):987–995, 2018.
- (21) R. Cheng, J. Mashreghi, W. Ross. Multipliers of sequence spaces. *Concrete Operators*, 4(1):76–108, 2017.
- (22) G. Rouget, B. Majidi, D. Picard, G. Gauvin, D. Ziegler, J. Mashreghi, H. Alamdari. Electrical Resistivity Measurement of Petroleum Coke Powder by Means of Four-Probe Method. *Metall. Mater. Trans. B.*, 48(5):2543–2550, 2017.
- (23) R. Cheng, J. Mashreghi, W. Ross. Birkhoff-James orthogonality and the zeros of an analytic function. *Comput. Methods Funct. Theory*, 17(3):499–523, 2017.
- (24) H. Klaja, J. Mashreghi, T. Ransford. Spectral sets for numerical range. *Oper. Matrices*, 11(3):749–757, 2017.
- (25) J. Mashreghi. An inequality for Cauchy products. *Proc. Amer. Math. Soc.*, 145:3013–3016, 2017.
- (26) A. Bourhim, T. Jari, J. Mashreghi. Peripheral local spectrum preservers and maps increasing the local spectral radius. *Oper. Matrices*, 10(1):189–208, 2016.
- (27) A. Bourhim, J. Mashreghi, A. Stepanyan. Maps between Banach algebras preserving the spectrum. *Arch. Math.*, 107(6):609–621, 2016.
- (28) J. Mashreghi, A. Stepanyan. Nonlinear maps preserving the reduced minimum modulus of operators. *Linear Algebra Appl.*, 493:426–432, 2016.
- (29) O. El-Fallah, E. Fricain, K. Kellay, J. Mashreghi, T. Ransford. Constructive approximation in de Branges–Rovnyak spaces. *Constr. Approx.*, 44(2):269–281, 2016.
- (30) O. El-Fallah, K. Kellay, H. Klaja, J. Mashreghi, T. Ransford. Dirichlet spaces with superharmonic weights and de Branges–Rovnyak spaces. *Complex Anal. Oper. Theory*, 10:97–107, 2016.
- (31) H. Klaja, J. Mashreghi, T. Ransford. On mapping theorems for numerical range. *Proc. Amer. Math. Soc.*, 144:3009–3018, 2016.
- (32) E. Frician, M. Karaki, J. Mashreghi. A group structure on  $\mathbb{D}$  and its application for composition operators. *Ann. Funct. Anal.*, Special issue in honor of A. To-Ming Lau, 7(1):76–95, 2015.
- (33) O. El-Fallah, K. Kellay, J. Mashreghi, T. Ransford. One-box conditions for Carleson measures for the Dirichlet space. *Proc. Amer. Math. Soc.*, 143:679–684, 2015.
- (34) J. Mashreghi, T. Ransford. A Gleason–Kahane–Żelazko theorem for modules and applications to holomorphic function spaces. *Bull. Lond. Math. Soc.*, 47 (6):1014–1020, 2015.
- (35) A. Bourhim, J. Mashreghi. Maps preserving the local spectrum of product of operators. *Glasg. Math. J.*, 57(3):709–7018, 2015.

- (36) J. Mashrehi, S. Pouliaxis. Condenser capacity, exponential Blaschke products and universal covering maps. *Proc. Amer. Math. Soc.*, 143(8):3547–3559, 2015.
- (37) A. Bourhim, J. Mashreghi. Maps preserving the local spectrum of triple product of operators. *Linear Multilinear Algebra*, 63(4):765–773, 2015.
- (38) A. Bourhim, J. Mashreghi, A. Stepanyan. Nonlinear maps preserving the minimum and surjectivity moduli. *Linear Algebra Appl.*, 463:171–189, 2014.
- (39) E. Fricain, J. Mashreghi, D. Seco. Cyclicity in reproducing kernel Hilbert spaces of analytic functions. *Comput. Methods Funct. Theory*, 14(4):665–680, 2014.
- (40) J. Mashreghi, D. Timotin. Nonextreme de Branges–Rovnyak spaces as models for contractions. *Integral Equ. Oper. Theory*, 80(1):137–152, 2014.
- (41) J. Mashreghi, M. Shabankhah. Composition of inner functions. *Canad. J. Math.*, 66(2):387–399, 2014.
- (42) E. Fricain, J. Mashreghi. On a characterization of finite Blaschke products. *Complex Var. Elliptic Equ.*, 59(3):362–368, 2014.
- (43) A. Bourhim, J. Mashreghi. Local spectral radius preservers. *Integral Equ. Oper. Theory*, 76(1):95–104, 2013.
- (44) D. Drissi, J. Mashreghi. Resolvent spaces for algebraic operators and applications. *J. Math. Anal. Appl.*, 402(1):179–184, 2013.
- (45) J. Mashreghi, M. Shabankhah. Composition operators on finite rank model subspaces. *Glasg. Math. J.*, 55(1):69–83, 2013.
- (46) K. Kellay, J. Mashreghi. On zero sets in the Dirichlet space. *J. Geom. Anal.*, 22(4):1055–1070, 2012.
- (47) J. Mashreghi, M. Nasri. A proximal augmented Lagrangian method for equilibrium problems. *Appl. Anal.*, 91(1):157–172, 2012.
- (48) J. Mashreghi, M. Nasri. Hybrid Lagrange multiplier approaches for solving infinite dimensional equilibrium problems with cone constraints. *J. Nonlinear Convex Anal.*, 13(2):331–349, 2012.
- (49) J. Mashreghi, M. Shabankhah. Admissible functions for the Dirichlet space. *Studia Math.*, 198(2):147–156, 2010.
- (50) A. Baranov, I. Chalendar, E. Fricain, J. Mashreghi, D. Timotin. Bounded symbols and reproducing kernel thesis for truncated Toeplitz operators. *J. Funct. Anal.*, 259(10):2673–2701, 2010.
- (51) J. Mashreghi, M. Nasri. Strong convergence of an inexact proximal point algorithm for equilibrium problems in Banach spaces. *Numer. Funct. Anal. Optim.*, 31(7-9):1053–1071, 2010.
- (52) A. Baranov, E. Fricain, J. Mashreghi. Weighted norm inequalities for de Branges–Rovnyak spaces and their applications. *Amer. J. Math.*, 132(1):125–155, 2010.

- (53) J. Mashreghi, M. Nasri. Forcing strong convergence of Korpelevich's method in Banach spaces with its applications in game theory. *Nonlinear Anal.*, 72(3-4):2086–2099, 2010.
- (54) J. Mashreghi, M. Shabankhah. Zero sets and uniqueness sets with one cluster point for the Dirichlet space. *J. Math. Anal. Appl.*, 357(2):498–503, 2009.
- (55) J. Mashreghi. The rate of increase of mean values of functions in Hardy spaces, *J. Aust. Math. Soc.*, 86(2):199–204, 2009.
- (56) J. Mashreghi, M. Shabankhah. Integral means of the logarithmic derivative of Blaschke products. *Comput. Methods Funct. Theory*, 9(2):421–433, 2009.
- (57) E. Fricain, J. Mashreghi. Integral representations of the  $n$ -th derivative in de Branges-Rovnyak spaces and the norm convergence of its reproducing kernel. *Ann. Inst. Fourier (Grenoble)*, 58(6):2113–2135, 2008.
- (58) E. Fricain, J. Mashreghi. Integral means of the derivatives of Blaschke products. *Glasg. Math. J.*, 50(2):233–249, 2008.
- (59) M. Jaber, M. Dehghan, J. Mashreghi. Dynamics of the Difference Equation  $x_{n+1} = \frac{x_n + p x_{n-k}}{x_n + q}$ . *Comput. Math. Appl.*, 56(1):186–198, 2008.
- (60) M. Jaber, J. Mashreghi. On the population model of the non-autonomous logistic equation of second order with period-two parameters. *J. Difference Equ. Appl.*, 14(3):231–257, 2008.
- (61) E. Fricain, J. Mashreghi. Boundary behavior of functions in the de Branges-Rovnyak spaces. *Complex Anal. Oper. Theory*, 2(1):87–97, 2008.
- (62) E. Fricain, J. Mashreghi. Exceptional sets for the derivatives of Blaschke products. *Proc. St. Petersburg Math. Soc.*, AMS Translation Series 2, 222, 13:163–170, 2008.
- (63) J. Mashreghi, M. Pouryayevali. Argument of outer functions on the real line. *Illinois J. Math.*, 51(2):499–511, 2007.
- (64) J. Mashreghi, R. Rivard. On a conjecture about the eigenvalues of doubly stochastic matrices. *Linear Multilinear Algebra*, 55(5):491–498, 2007.
- (65) E. Fricain, J. Mashreghi. Exceptional sets for the derivatives of Blaschke products. *Trudy Sankt Peterburgskogo Matematicheskogo Obshchestva*, (Russian), 13:203–212, 2007.
- (66) V. Havin, J. Mashreghi, F. Nazarov. The Beurling–Malliavin multiplier theorem, the seventh proof. *St. Petersburg Math. J.*, AMS Translations, 17(5):699–744, 2006.
- (67) V. Havin, J. Mashreghi, F. Nazarov. The Beurling–Malliavin multiplier theorem, the seventh proof. *Algebra i analiz*, (Russian), 17(5):3–68, 2005.
- (68) J. Mashreghi. Generalized Lipschitz functions. *Comput. Methods Funct. Theory*, 5(2):431–444, 2005.
- (69) J. Mashreghi, M. Pouryayevali. On the regularity of S-differential metric. *Canad. Math. Bull.*, 48(4):601–606, 2005.

- (70) J. Mashreghi, T. Ransford. Binomial sums and functions of exponential type. *Bull. Lond. Math. Soc.*, 37(1):15–24, 2005.
- (71) V. Havin, J. Mashreghi. Admissible majorants for model subspaces of  $H^2(\mathbb{R})$ , Part II, fast winding of the generating inner function. *Canad. J. Math.*, 55(6):1264–1301, 2003.
- (72) V. Havin, J. Mashreghi. Admissible majorants for model subspaces of  $H^2(\mathbb{R})$ , Part I, slow winding of the generating inner function. *Canad. J. Math.*, 55(6):1231–1263, 2003.
- (73) J. Mashreghi. Hilbert transform of  $\log |f|$ . *Proc. Amer. Math. Soc.*, 130(3):683–688, 2002.
- (74) J. Mashreghi. Expanding a finite Blaschke product. *Complex Var. Theory Appl.*, 47(3):255–258, 2002.
- (75) J. Mashreghi. A new proof of Levy's theorem. *Ital. J. Pure Appl. Math.*, 12:113–117, 2002.

Articles in Conference Proceedings, Expository Articles, etc.

- (76) R. Cheng, J. Mashreghi, W. Ross. Inner vectors for Toeplitz operators. *Complex Analysis and Spectral Theory*, CRM Proc. Lecture Notes, Amer. Math. Soc., Providence, RI, accepted.
- (77) R. Cheng, J. Mashreghi, W. Ross. Inner functions in reproducing kernel spaces. *Analysis of operators on function spaces*, A conference dedicated to the mathematics of Serguei Shimorin, Mittag-Leffler, June 2018, accepted.
- (78) A. Bourhim, J. Mashreghi. The Bohr Radius. *The First NEAM (North-Eastern Analysis Meeting)*, Conference Proceedings, Brockport 2016, Theta Series in Advanced Mathematics, TSAM 22:19–38, 2018.
- (79) J. Mashreghi, T. Ransford. Approximation in the unit ball. *New Trends in approximation Theory, in memory of André Boivin*, Fields Inst. Commun., Springer, New York, 81:89–129, 2018.
- (80) S. Garcia, J. Mashreghi, W. Ross. Finite Blaschke products, a survey. *Harmonic Analysis, Function Theory, Operator Theory and their Applications*, Conference Proceedings, Bordeaux, June 1–4, 2015, Theta Series in Advanced Mathematics, TSAM 18:133–158, 2017.
- (81) S. Garcia, J. Mashreghi, W. Ross. Real complex functions. *Recent Progress on Operator Theory and Approximation in Spaces of Analytic Functions*, Conference on Completeness Problems, Carleson Measures, and Spaces of Analytic Functions June 29 - July 3, 2015, Institut Mittag-Leffler, Djursholm, Sweden, Contemporary Mathematics, 679:91–128, 2016.
- (82) J. Mashreghi. Polynomial approximation in analytic function spaces. *CMS Notes*, 47(6):12–13, 2015.
- (83) A. Bourhim, J. Mashreghi. A survey on preservers of spectra and local spectra. *Invariant subspaces of the shift operator*, Contemporary Mathematics, 638:45–98, 2015.
- (84) E. Fricain, J. Mashreghi. Integral representations of the derivatives in  $\mathcal{H}(b)$  spaces. *Invariant subspaces of the shift operator*, Contemporary Mathematics, 638:137–178, 2015.

- (85) E. Fricain, J. Mashreghi, D. Seco. Cyclicity in non-extreme de Branges-Rovnyak spaces. *Invariant subspaces of the shift operator*, Contemporary Mathematics, 638:131–136, 2015.
- (86) J. Mashreghi. Blaschke products as solutions of a functional equation. *Blaschke products and their applications*, Fields Inst. Commun., Springer, New York, 65:113–118, 2013.
- (87) J. Mashreghi. On a family of outer functions. *Complex Analysis and Potential Theory*, CRM Proc. Lecture Notes, Amer. Math. Soc., Providence, RI, 55:193–199, 2012.
- (88) O. El-Fallah, K. Kellay, J. Mashreghi, T. Ransford. A self-contained proof of the strong-type capacity inequality for the Dirichlet space. *Complex Analysis and Potential Theory*, CRM Proc. Lecture Notes, Amer. Math. Soc., Providence, RI, 55:1–20, 2012.
- (89) J. Mashreghi, T. Ransford and M. Shabankhah. Argument of the zero sets in the Dirichlet space. *Hilbert Spaces of Analytic Functions*, CRM Proc. Lecture Notes, Amer. Math. Soc., Providence, RI, 51:143–148, 2010.
- (90) J. Mashreghi. A formula for the logarithmic derivative and its applications. *Hilbert Spaces of Analytic Functions*, CRM Proc. Lecture Notes, Amer. Math. Soc., Providence, RI, 51:197–201, 2010.
- (91) J. Mashreghi, T. Ransford Using entire functions to analyse power growth. *Banach Algebras and Their Applications*, Contemp. Math., 363:235–240, 2004.
- (92) J. Mashreghi. On the convexity of the mean value of a subharmonic function on annular domains. *Int. Math. J.*, 2(4):373–377, 2002.
- (93) J. Mashreghi. Extending functions in the model subspaces of  $H^2(\mathbb{R})$  to  $\mathbb{C}$ . *Bull. Iranian Math. Soc.*, 28(1):43–55, 2002.
- (94) J. Mashreghi, Z. Mashreghi. On the closed form of power series. *Crux Math.*, 27:436–439, 2001.
- (95) J. Mashreghi. Improper integrals. *Crux Math.*, 27:188–190, 2001.
- (96) J. Mashreghi. Stability of functions with absolutely convergent Fourier sums subject to a holomorphic composition. *Far East J. Math. Sci.*, Special Volume for Functional Analysis and its Applications, Part I, 109–127, 2001.

### Proceedings

- (97) J. Mashreghi, L. Oubbi, Z. Abdelali and A. Bourhim. *Linear and Multilinear Algebra and Function Spaces*, Proceedings of the ICART 2018 Conference, Mohammed V, Rabat, July 2-5, 2018. Contemporary Mathematics. CRM Proceedings. American Mathematical Society, Providence, RI, to appear.
- (98) G. Dales, D. Khavinson, J. Mashreghi. *Complex Analysis and Spectral Theory*. Proceedings of the CRM Workshop held at Laval University, QC, May 21-25, 2018. Contemporary Mathematics. CRM Proceedings. American Mathematical Society, Providence, RI, to appear.

- (99) A. Aldroubi, L. A. Caudillo-Mata, J. Chung, P. Gonzalez Casanova, J. Mashreghi. Proceedings of the session on Harmonic Analysis and Inverse Problems in "Mathematical Congress of the Americas", Montreal, QC, July 24–28, 2017. Special issue of *Sampling Theory in Signal and Image Processing*, 17(2):2018.
- (100) J. Mashreghi, G. Prajitura, R. Zhao. *The First Northeastern Analysis Meeting*. Proceedings of the conference held at SUNY, Brockport College, NY, USA, October 14–16, 2016. The Theta Foundation, TSAM 22, 2018.
- (101) M. Manolaki, J. Mashreghi, P. Gauthier. *New Trends in approximation Theory, in memory of André Boivin*. Proceedings of the conference held at the University of Toronto, Toronto, ON, July 25–29, 2016. Fields Inst. Commun. 81, Springer, New York, 2018.
- (102) E. Fricain, J. Mashreghi, W. Ross. *Invariant Subspaces of the Shift Operator*. Proceedings of the CRM Workshop held at the University of Montreal, QC, August 26–30, 2013. Contemporary Mathematics, 638. CRM Proceedings. American Mathematical Society, Providence, RI, viii+317 pp., 2015
- (103) E. Fricain, J. Mashreghi. *Blaschke products and Their Applications*. Proceedings of the conference held at the University of Toronto, Toronto, ON, July 25–29, 2011. Fields Institute Communications, 65. Springer, New York, x+319 pp., 2013.
- (104) A. Boivin, J. Mashreghi. *Complex Analysis and Potential Theory*. Proceedings of the International Conference held in the University of Montreal, QC, June 20–23, 2011, in honor of P. Gauthier and K. Gowrisankaran. CRM Proceedings & Lecture Notes, 55. American Mathematical Society, Providence, RI, xii+329 pp., 2012.
- (105) J. Mashreghi, T. Ransford, K. Seip. *Hilbert Spaces of Analytic Functions*. Papers from the workshop held in the University of Montreal, QC, December 8–12, 2008. CRM Proceedings & Lecture Notes, 51. American Mathematical Society, Providence, RI, xii+214 pp., 2010.

### Monographs

- (106) J. Mashreghi. *Amissible Majorants*. CRM monographs, preprint.
- (107) J. Mashreghi. *Derivatives of Inner Functions*. Fields Institute Monographs 31, Springer, New York, x+169 pp., 2013.

### Books

- (108) R. Cheng, J. Mashreghi, W. Ross. *Function Theory and  $\ell^p$  Spaces*. AMS University Lecture Series, accepted.
- (109) S. Garcia, J. Mashreghi, W. Ross. *Finite Blaschke Products and their Connections*. Springer Monograph Series, Springer, XIX+328 pp., 2018.
- (110) S. Garcia, J. Mashreghi, W. Ross. *Introduction to Model Spaces and their Operators*. Cambridge Studies in Advanced Mathematics 148, Cambridge University Press, Cambridge, xv+340 pp., 2016.

- (111) E. Fricain, J. Mashreghi. *Theory of  $\mathcal{H}(b)$  Spaces*, Volume II. New Monographs in Mathematics 21, Cambridge University Press, Cambridge, xv+640 pp., 2016.
- (112) E. Fricain, J. Mashreghi. *Theory of  $\mathcal{H}(b)$  Spaces*, Volume I. New Monographs in Mathematics 20, Cambridge University Press, Cambridge, xv+702 pp., 2016.
- (113) O. El-Fallah, K. Kellay, J. Mashreghi, T. Ransford. *A Primer on the Dirichlet Space*. Cambridge Tracts in Mathematics 203, Cambridge University Press, Cambridge, x+226 pp., 2014.
- (114) J. Mashreghi. *Representation Theorems in Hardy Spaces*. London Mathematical Society Student Text Series 74, Cambridge University Press, Cambridge, xii+372, 2009.
- (115) J. Mashreghi. *Structures algébriques*. Loze-Dion éditeur inc., Montréal, iv+205 pp., 2007.
- (116) J. Mashreghi. *Analyse abstraite*. Loze-Dion éditeur inc., Montréal, ix+296 pp., 2006.