

## PUBLICATIONS

Laurian Suciu

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### Doctoral Thesis :

*Structure, ergodicity and applications of  $A$ -contractions*, University Claude Bernard Lyon 1, France, 1-182, 2006.

### Habilitation Thesis :

*Ergodic and asymptotic behaviours of linear operators, similarity to contractions and Harnack analysis*, Technical University of Cluj-Napoca, Romania, 1-233, 2016.

### Research activity :

1) Catalin Badea, Vladimir Muller, and **Laurian Suciu**, *High order isometric liftings and dilations*, pp. 1-14, [arXiv:2003.12741v2](https://arxiv.org/abs/2003.12741v2) [**math.FA**], 2020, to appear in *Studia Mathematica*.

2) **Laurian Suciu**, *Liftings and extensions of operators in Brownian setting*, pp. 1-18, 2020, *Linear and Multilinear Algebra*.  
<https://doi.org/10.1080/03081087.2020.1819948>

3) **Laurian Suciu**, *On operators with two-isometric liftings*, *Complex Analysis and Operator Theory*, 14:5, 1-16, 2020. <https://doi.org/10.1007/s11785-019-00960-9>

4) Witold Majdak and **Laurian Suciu**, *Brownian type parts of operators in Hilbert spaces*, *Results in Mathematics*, 75:5, 1-23, 2020.  
<https://doi.org/10.1007/s00025-019-1130-8>

5) Witold Majdak and **Laurian Suciu**, *Brownian isometric parts of concave operators*, *New York J. Math.* 25, 1067–1090, 2019.  
<http://nyjm.albany.edu/j/2019/25-46.html>

6) Catalin Badea and **Laurian Suciu**, *Similarity problems, Folner sets and isometric representations of amenable semigroups*, Mediterranean Journal of Mathematics 16: 5, 2019. <https://doi.org/10.1007/s00009-018-1294-6>

7) Catalin Badea and **Laurian Suciu**, *The Cauchy dual and 2-isometric liftings of concave operators*, Journal of Math. Anal. and Appl. 472, 1458-1474, 2019.

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8) Catalin Badea and **Laurian Suciu**, *Harnack and Shmul'yan preorder relations for Hilbert space contractions*, Indagationes Mathematicae 28 (4), 892-912, 2017.

<https://doi.org/10.1016/j.indag.2017.06.012>

9) **Laurian Suciu**, *Estimations of the operator resolvent by higher order Cesaro means*, Results in Mathematics 69(3), pp. 457-475, 2016.

<https://doi.org/10.1007/s00025-016-0533-z>

10) Witold Majdak, Mostafa Mbekhta, and **Laurian Suciu**, *Operators intertwining with isometries and Brownian parts of 2-isometries*, Linear Algebra and its Applications 509 (15), 168-190, 2016. <https://doi.org/10.1016/j.laa.2016.07.014>

11) Michael Lin, David Shoikhet, and **Laurian Suciu**, *Remarks on uniform ergodic theorems*, Acta Sci. Math. (Szeged) Vol. 81, pp. 251-283, 2015.

**DOI:** [10.14232/actasm-012-307-4](https://doi.org/10.14232/actasm-012-307-4)

12) **Laurian Suciu** and Jaroslav Zemánek, *Growth conditions on Cesaro means of higher order*, Acta Sci. Math. (Szeged) Vol. 79, no 3-4, pp. 545-581, 2013.

13) Mostafa Mbekhta and **Laurian Suciu**, *Generalized inverses and similarity to partial isometries*, Journal of Mathematical Analysis and Applications vol. 372, issue 2, pp. 559-564, 2010. <https://doi.org/10.1016/j.jmaa.2010.06.022>

14) Mostafa Mbekhta and **Laurian Suciu**, *Classes of operators similar to partial isometries*, Integral Equations and Operator Theory Volume 63, Number 4, pp. 571-590, 2009. <https://doi.org/10.1007/s00020-009-1671-4>

15) **Laurian Suciu**, *Contractions généralisées et applications* : Prépublications de l'Institut Girard Desargues, Université Claude Bernard Lyon I, UMR 5028, 7, pp. 1-64, 2003.

**Scientific contribution :**

**16) Laurian Suciu**, *Ergodic behaviors of the regular operator means*, Banach Journal of Mathematical Analysis, Vol. 11, No. 2, 239-265, 2017. doi:10.1215/17358787-3796878

**17) Catalin Badea, Laurian Suciu**, and Dan Timotin, *Classes of contractions and Harnack domination*, Revista Matematica Iberoamericana, 33 (2), 469-488, 2017.

DOI: 10.4171/RMI/945

**18) Alexandru Aleman and Laurian Suciu**, *On ergodic operator means in Banach spaces*, Integral Equations and Operator Theory, vol. 85 pp. 259-287, 2016.  
<https://doi.org/10.1007/s00020-016-2298-x>

**19) Mostafa Mbekhta and Laurian Suciu**, *Partial isometries and the conjecture of C. K. Fong and S. K. Tsui*, Journal of Mathematical Analysis and Applications Vol. 437, pp. 431-444, 2016. <https://doi.org/10.1016/j.jmaa.2015.12.057>

**20) Michael Lin and Laurian Suciu**, *Poisson's equation for mean ergodic operators*, Contemporary Mathematics Vol. 636, pp. 141-148, 2015.

**21) Mostafa Mbekhta and Laurian Suciu**, *Quasi-isometries associated to A-contractions*, Linear Algebra and its Applications Vol. 459, pp. 430-453, 2014.  
<https://doi.org/10.1016/j.laa.2014.07.016>

**22) Laurian Suciu and Nicolae Suciu**, *Borel-Carathéodory and Fan Type Inequalities for Hilbert space bicontractions*, Complex Analysis and Operator Theory Vol. 8, Issue 1, pp. 227-241, 2014. <https://doi.org/10.1007/s11785-013-0291-9>

**23) Laurian Suciu**, *Saturation for Cesaro means of higher order*, Operators and Matrices Vol. 7, no. 3, pp. 557-572, 2013. dx.doi.org/10.7153/oam-07-30

**24) Witold Majdak, Nicolae Adrian Secelean, and Laurian Suciu**, *Ergodic properties for operators in semi-Hilbertian spaces*, Linear and Multilinear Algebra Volume 61, Issue 2, pp. 139-159, 2013. <https://doi.org/10.1080/03081087.2012.667094>

**25) Marek Kosiek and Laurian Suciu**, *Decompositions and asymptotic limit for bicontractions*, Annales Polonici Mathematici 105.1, pp. 43-64, 2012. DOI: 10.4064/ap105-1-5

- 26) Laurian Suciu** and Nicolae Suciu, *Inequalities for strict bicontractions*, Annals of the University of Bucharest LIX, pp. 3-15, 2010.  
[http://fmi.unibuc.ro/ro/anale/matematica/1\\_2010/suciu.pdf](http://fmi.unibuc.ro/ro/anale/matematica/1_2010/suciu.pdf)
- 27) Laurian Suciu**, *Quasi-isometries in semi-Hilbertian spaces*, Linear Algebra and its Applications Volume 430, Issues 8-9, pp. 2474-2487, 2009.  
<https://doi.org/10.1016/j.laa.2008.12.021>
- 28) Laurian Suciu** and Nicolae Suciu, *Asymptotic behaviours and generalized Toeplitz operators*, Journal of Mathematical Analysis and Applications vol. 349, issue 1, pp. 280-290, 2009. <https://doi.org/10.1016/j.jmaa.2008.08.028>
- 29) Laurian Suciu**, *Maximum  $A$ -isometric part of an  $A$ -contraction and applications*, Israel Journal of Mathematics vol. 174, pp. 419-442, 2009.  
<https://doi.org/10.1007/s11856-009-0121-y>
- 30) Laurian Suciu**, *Uniformly ergodic  $A$ -contractions on Hilbert spaces*, Studia Mathematica vol. 194, pp. 1-22, 2009. DOI: 10.4064/sm194-1-1
- 31) Laurian Suciu**, *Canonical decompositions induced by  $A$ -contractions*, Note di Matematica vol. 28, issue 2, pp. 187-202, 2008. DOI :10.1285/i15900932v28n2p187
- 32) Laurian Suciu** and Nicolae Suciu, *Ergodic conditions and spectral properties for  $A$ -contractions*, Opuscula Mathematica Vol. 28, No. 2, pp. 195 – 216, 2008.  
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- 33) Laurian Suciu**, *Maximum subspaces related to  $A$ -contractions and quasinormal operators*, Journal of the Korean Mathematical Society 45, No.1, pp. 205-219, 2008.
- 34) Laurian Suciu**, *Ergodic properties for regular  $A$ -contractions*, Integral Equations and Operator Theory 56, 2, pp. 285-299, 2006. <https://doi.org/10.1007/s00020-006-1417-5>
- 35) Laurian Suciu**, *Some invariant subspaces for  $A$ -contractions and applications*, Extracta Mathematicae 21 (3), pp. 221-247, 2006.  
<https://www.eweb.unex.es/eweb/extracta/Vol-21-3/21J3Suciu.pdf>
- 36) Laurian Suciu** and Nicolae Suciu, *Harnack domination for contractions and related intertwining operators*, Acta Sci. Math. (Szeged) 72, pp. 319-343, 2006.
- 37) Laurian Suciu**, *On the ergodic  $A$ -contractions*, Analele Univ. de Vest din Timișoara, Ser. Mat.-Inf. 2, pp. 115-136, 2004.

**38) Laurian Suciu**, *Orthogonal decomposition induced by generalized contractions*, Acta Sci. Math. (Szeged) 70, pp. 751-765, 2004.

### *Articles in Proceedings*

**39) Laurian Suciu** and Nicolae Suciu, *On the asymptotic limit of a bicontraction*, Theta Series in Advanced Mathematics, pp. 117-135, 2012.

**40) Laurian Suciu** and Nicolae Suciu, *Selection of semispectral measures for bicontractions*, Theta Series in Advanced Mathematics, pp. 1-21, 2010.

**41) Laurian Suciu** and Nicolae Suciu, *Harnack ordering for pairs of commuting contractions*, Proceedings of the 6th Congress of Romanian Mathematicians, Bucharest 2007, Editura Academiei Române, vol. 1, pp. 381-398, 2009.

**42) Gilles Cassier** and **Laurian Suciu**, *Mapping theorems and similarity to contractions for classes of  $A$ -contractions*, Theta Series in Advanced Mathematics, pp. 39-58, 2008.

**43) Laurian Suciu**, *Block representation for  $A$ -contractions*, Theta Series in Advanced Mathematics, pp. 201-216, 2008.

**44) Laurian Suciu**, *Ergodic properties and saturation for  $A$ -contractions*, Theta Series in Advanced Mathematics, pp. 225-242, 2006.

**45) Laurian Suciu**, *Invertible  $A$ -contractions and applications*, Proceedings of the 9th National Conference of the Romanian Mathematical Society, Lugoj 6-7 May 2005, Ed. UVT, pp. 272-290, 2005.

**46) Laurian Suciu**, *Sur les contractions quasi-normales*, Proceedings of the National Conf. of Math. Anal. and Appl., Timișoara 2000, pp. 395-404, 2000.

### *Preprints*

**47) Witold Majdak** and **Laurian Suciu**, *On ergodic operators on semi-Hilbert spaces*, pp. 1-25, 2019.

48) Sanne ter Horst, **Laurian Suciu**, and Marten Wortel, *Perturbations of the maximal function related to the intertwining expansion problem for contractions*, pp. 1-40, 2019.

49) Catalin Badea and **Laurian Suciu**, *Hilbert spaces operators with two isometric dilations*, pp. 1-29, arXiv:1903.01772v3 [math.FA] 26 Jan 2020.