Short C.V. André Leroy

Date of birth: 7th May 1955
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Degrees

Ph.D. Dérivations algébriques, Université de Mons, Hainaut (Belgique), 1985
Habilitation à diriger des recherches: Structure et arithmétique des extensions de Ore, Valenciennes (France), 1992.

Positions held

- Assistant Université de Mons 1978-1985.
- Maître de conférences Université de Mons, 1985-1988.
- ATER Université de Lille, 1988-1989.
- Maître de conférences, Université de Valencinnes, 1989-1994.
- Professeur des universités, Université d'Artois, 1994-2022
- Professeur émérite des universités, Université d'Artois 20022-

Stays in foreign universities (stays that cumulating more than six months each)

- Post doc at Berkeley University, USA and different stays in this university from 1986 till 2002.
- Warsaw University, Poland (Many stays from 1984 latest stay in March 2017).
- Ohio University, USA (Many stays from 1995, latest stay in May 2022).

Shorter Stays in foreign universities from 2015-2020

Usually attending a conference and working with a local mathematician. I am adding the title of the talk given during the stay.

- Continuant polynomials, December 2014, Manipal, India
- Decomposition of singular matrices into product of idempotent matrices, Montevideo.
- Decompostion of ingular nonnegative matrices matrices into product of nonnegative idempotent matrices, Warsaw, March 2017.
- Quasi Euclidean rings Porto, April 2017.
- Decomposition of nonnegative singular matrices... and mORE (skew) codes Ubatuba (Sao Paulo, Brazil) July 2017.
- Aurangabad University May 2018 (India).
- Manipal University May 2018 (India).
- Remarks on the Jacobson radical NTRM June 2018 Gebze University (Turkey).

- Coding and Ore extensions Tehran January 2019 PDF Singular matrices as product of idempotent matrices. International Conference on Recent Achievements in Mathematical Science, Yazd University (Iran), January 2019
- Commutatively closed sets in Rings Qauntum 19, Montevideo 2019).
- Some distances in noncommutative rings, (XXXV Ohio State - Denison Mathematics Conference, 13-15 May 2022).
- Stay in Sao Paulo University, 27 January-28 February 2023. During this stay I gave 4 talks and and attended an national algebra meeting in Curitiba where I gave a talk.

Main talks since 2012

(1) Racines de polynômes gauches et transformations pseudo-linéaires, Limoges Janvier 2012
(2) Coding theory and noncommutative rings, Warsaw March 2012
(3) Idempotents in rings extensions, Jeddah April 2012
(4) McCoy and strongly McCoy rings, Jeddah April 2012
(5) Factorizations in Ore extensions, Columbus May 2012
(6) Factorizations in Ore extensions, Alger Juin 2012
(7) McCoy and strongly McCoy rings, Bialystok (Poland), Juin 2012
(8) Singular matrices as products of idempotents matrices, Akron (USA) October 2O12
(9) Idempotents in Ring Extensions, Sheffield (B.M.C.), March 2013. Decompositions of singular matrices in Products of idempotents, Bedlewo, Poland July 2013
(10) PLT, coding and factorizations in Ore extensions, Saint Louis October 2013
(11) Euclidean pairs Euclidean rings and continuant polynomials, July 2014, Ubatuba, Brasil.
(12) Continuant polynomials, December 2014, Manipal, India.
(13) Euclidean pairs, decomposition into idempotents and related topics, Montevideo 2015.
(14) Decomposition into products of idempotents and related topics, Alger Octobre 2015.
(15) Quasi permutation matrices and product of idempotents, Denison Conference Columbus (Ohio), May 2016.
(16) Decomposition of nonnegative singular matrices into products of nonnegative idempotents, Warsaw March 2017.
(17) Quasi-Euclidean rings, Porto April 2017.
(18) Decomposition of singular matrices, Manipal (India) May 2018.
(19) Commutatively closed sets, Aurangabad (India) May 2018.
(20) Generalization of the Jacobson radical, Conference, New trends in rings theory Istanbul, Juin 2018 (Turkey)
(21) Product of idempotent matrices, Porto September 2018.
(22) Decomposition of singular matrices, Conference in Yazd (Iran) January
(23) Noncommutative rings in coding theory, Tehran (Iran) January
(24) Online talks in 2020 and 2021 that I remember : Haifa, Saint-Louis, Warsaw, Ohio...

(25) Distances in Noncommutative rings, Denison conferences in Columbus, Ohio state University (conference dedicated to A. Leroy).

(26) Noncommutative evaluations, Curitiba (Brazil) 14 February 2023.

(27) Product of idempotents and separativity; Commutatively closed sets; Sao Paulo February 2023.

Ph.D. Students

(1) N'kanza Mfundu, University of Mons, Centralisateurs de l'indéterminée, 1987 (Cotutelle).

(2) Adem Ozturk, University of Mons, Contributions to the Arithmetic of 2-firs (2003).

(3) Jonathan Delenclos, Noncommutative symmetric Functions and Wedderburn polynmials, Université d'Artois (2008).

(4) Dilshad Alghazzawi, Commutatively and symetrically closed subsets in Rings, Université d'Artois.

(5) Ahmed Bouzidi (co-responsible with A. Chechem in USTHB)

(6) Guanglin Ma, Nankin (China) One year from March 2023 till March 2024 (stage doctoral, co-responsible with Y. Wang Nanjin, China).

Post doc

Here is the list of the postdoctral stays (more than 6 months) that I was responsible for these last 5 years.

(1) Arda Kor, Gebze University, Turkey (2017-2018), 6 months.

(2) Mona Abdi, Shahrood University of Technology, Iran (2018-2019), 9 months.

(3) Mehdieh Ebrahimpour, Vali-e-asr Rajsanjan University, Iran (2018-2019), 9 months.

(4) Ahmed Djamel Bouzidi, (2018-2019) USTHB Alger 9 months).

(5) Mehrdad Nasernejad, Iran Nine months, ends in July 2022. We are trying to extend the visa and his stay till 2024.

Scentifical responsabilities

1) Editor

- Journal of Algebra and its Applications.
- North-Western European Journal of Mathematics.
- Proceedings of the NCRA, III (Contemp. Math. 637) , Proceedings of the NCRA IV (Jacodemath) and Proceedings of NCRA VI (Contemp. Math 727) and Proceedings pf NCRA VII and QFRC.

2) Member of the National committee of the universities (CNU),ended in 2020.

3) Referee for many journals and reviewer for the Mathscinet.

4) Member of the Jury of many thesis the latest ones: Bouzidi Djamel (Alger, 2021); Dyksha Mukhija (Lens, 2021); Xavier Mary (Thèse d'habilitation, Nanterre Juin 2022) Mehrdad Nasernejad (Thèse d'Habiliattaion Université d'Artois, Novembre 2023).

Languages: French, English, Polish, Spanish, Dutch (in decreasing order)

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Publications

(1) Un corps de caractéristique nulle, algébrique sur son centre, muni d'une involution S et d'une S-dérivation algébrique et non interne, Compte-rendu de l'académie des sciences Paris, 293 (1981), pp. 235-236

(2) Anneaux simples différentiels, actes du VIème Congrès du groupement des mathématiciens d'expression latine, pp. 247-250

(3) Sur les anneaux simples différentiels, en collaboration avec J.P. Tignol et P. Van Praag, Communications in algebra, (10), n° 12, pp. 1307-1314

(4) Dérivations algébriques sur les corps gauches, Bull. Soc. Math. de Belgique, fascicule 1, série B, 1984, pp. 91-103

(5) Dérivées logarithmiques pour une S-dérivation algébrique, Communications in algebra, (13) 1985, pp. 85-99

(6) Quelques remarques à propos des S-dérivations, en collaboration avec J. Matczuk, Communications in algebra, (13) 1985, pp. 1229-1244

(7) Dérivations algébriques, thèse, Université de l'Etat á Mons, 1985 Dérivations et automorphismes d'anneaux premiers, en collaboration avec J. MATCZUK. Communications in algebra, (13), 1985, pp. 1245-1266

(8) Ensembles algébriques dans les corps gauches et dérivées logarithmiques, Actes du VIIème Congrès du groupement des mathématiciens d'expression latine, Coimbra, 1985

(9) S-dérivations algébriques sur les anneaux premiers Springer lectures notes in mathematics, vol. (1197), 1986, pp. 114-120

(10) S-dérivations algébriques sur les corps gauches et sur les anneaux premiers, Communications in algebra, (14), 1986, pp. 1473-1479

(11) Les octaves de Cayley ont l'élimination linéaire 2, Bull. Soc. Math. De Belgique, vol.(39), Fasc. 2, série B, 1987, pp. 237-241

(12) Sur le centralisateur de l'indéterminée dans le corps des fractions des anneaux de polynômes gauches, en collaboration avec N'Kanza Mfundu, Bull. de l'école des Sciences de l'Académie Royale de Belgique, vol. 73, 1987, pp. 84-86

(13) Algebraic conjugacy classes and skew polynomial rings, in collaboration with T.Y. LAM, perspectives in ring theory, proceedings of the 1987 NATO workshop in Antwerp, Reidel, 1988, 50 pages

(14) On the Gelfand-Kirillov dimension of normal localization and twisted polynomial rings, in collaboration with J. Matczuk and J. Okninski, perspectives in ring theory proceedings of the NATO workshop in Antwerp, Reidel, 1988, 205-214

(15) Vandermonde and Wronskian matrices over division rings, in collaboration with T.Y. Lam, Bull. Soc. Math. de Belgique, vol. 40 , série A, 1988, pp. 281-286

(16) Vandermonde and Wronskian matrices over division rings, with T.Y. Lam Journal of algebra, vol.119, n° 2, décembre 1988, pp. 308-336

(17) Invariant and semi-invariant polynomials in skew polynomial rings, in collaboration with T.Y. Lam, K.H.Leung, J. Matczuk, in "ring theory 1989" (in honour of S.A. Amitsur), ed. L. Rowen, Israel Mathematical conference proceedings, pp. 153-203, Kluwer Academic Publishers.

(18) Gelfand-Kirillov dimension of certain localizations, with J. MATCZUK. Archi. der Math. Vol. 53 , 439-447 (1989)

(19) Prime ideals of Ore extensions, with J. Matczuk. Communications in algebra, 19(7), 1893-1907 (1991)

(20) Homomorphisms between Ore extensions, with T.Y. LAM. Contemporary Mathematics Vol. 124 , 83-110 (1992)

(21) The extended centroid and X-inner automorphism of Ore extensions, with J.Matczuk. Journal of algebra, vol. 145 , 143-177, n° 1, January 1992

(22) Hilbert 90 theorems over division rings, with T.Y. Lam Transactions of the American Mathematical Society, vol. 345, 595-622, n° 2, October 1994 Normes et theorems 90 d'Hilbert paru dans "note di informatica I fisica" CERFIM LOCARNO, vol. 7 , décembre 1994, pp. 197-200

(23) Structure et arithmétique des extensions de Ore , mémoire présenté en vue d'obtenir l'habilitation à diriger des recherches.

(24) Pseudo linear transformation and evaluation in Ore extensions Bull. Soc. Math. Belg. Vol. 2, n° 3, May 1995, 321-347

(25) Primitivity of skew polynomial and skew Laurent polynomial rings, with J. Matczuk Communications in Algebra, 24(7), 1996, pp. 2271-2284

(26) Recognition and Computations of Matrix Rings, with T.Y. Lam Israel Journal of Mathematics 96, 1996, pp. 379-397

(27) Primeness, semi-primeness and prime radical of Ore extensions, with T.Y. Lam and J. Matczuk Communications in Algebra, 25 (8), 1997, pp. 2459-2506

(28) On uniform dimensions of ideals in right non-singular rings, with S.K. Jain and T.Y. Lam Journal of Pure and Applied Algebra, décembre 1998

(29) Principal One-sided Ideals in Ore Polynomial Rings, with T.Y. Lam, Contemporary Math., 259, 2000,pp. 333-352

(30) Artinian property of constants of algebraic q-skew derivations, with P. Grzeszczuk and J. Matczuk Israel journal of mathematics 121 (2001), 265-284

(31) Wedderburn polynomials over division rings, I, with T.Y.LAM Journal of Pure and Applied Algebra, 186 (2004) 43-76. 26

(32) F-indépendence and factorizations in 2-firs, with Adem Ozturk Communications in Algebra, Vol. 32 (5) (2004), 1763-1792.

(33) On induced Modules over Ore extensions, with J. Matczuk Communications in Algebra, 32 (2004), 2743-2766

(34) Goldie conditions for Ore extensions over semiprime rings, with J. Matczuk, Algebras and Representation Theory, 8, (2005), 679-688.

(35) Ore Extensions Satisfying a Polynomial Identity, en collaboration avec J. Matczuk Journal of Algebra and Its Applications, 5, (3) (2006), 287-306.

(36) Noncommutative symmetric functions and Wedderburn polynomials, en collaboration avec Jonathan Delenclos Journal of Algebra and its Applications, 6 (5) (2007), 815-837

(37) Wedderburn polynomials over division rings, II, collaboration avec T.Y. Lam and A. Ozturk Proceedings of a conference held in Chennai at the Ramanujan Institute (Indes) Contemporary mathematics (456) 2008, pp. 73-98

(38) Quasi duo skew polynomial rings, en collaboration avec J. Matczuk et E. Puczylowski. Journal of Pure and Applied Algebra; Volume 212, Issue 8, August 2008, Pages 1951-1959

(39) Ore extensions and V-domains, with S.K. Jain et T.Y.Lam Proceedings of a conference in honour of C. Faith, B. Osofsky, Contemporary Mathematics 480, 2009, pp 249-262

(40) A description of Quasi duos Z graded rings, en collaboration avec J.Matczuk et E. Puczylowski Communications in Algebra, Volume 38, Issue 4, 2010, Pages 1319 – 1324.

(41) Rings over which Cyclics are direct sums of projective and CS or noetherian en collaboration avec S.K. Jain et C. Holston, Glasgow Mathematical Journal Vol 52, 2010, pp 103-110.

(42) On q-skew Ore extensions satisfying a Polynomial Identity, With J. Matczuk journal of Algebra and its Applications Volume: 10, Issue: 4(2011) pp. 771-781

(43) ADS modules, with Adel Alahmadi et S.K. Jain, Journal of Algebra (2012) Volume 352, Issue 1, pp 25-222.

(44) Noncommutative polynomial maps, Journal of Algebra and its Applications. vol. 11 (4), (2012)

(45) Endomorphisms with large images, with J. Matczuk, in Glasgow mathematical Journal Volume 55, Issue 02, May 2013, pp 381-390 with J. Matczuk.

(46) Idempotents in extensions of rings, J. Algebra Volume 389, 1 September 2013, Pages 128–136, en collaboration avec P. Kanwar et J. Matczuk.

(47) Decomposition of Singular Matrices into Idempotents, Linear And Multilinear Algebra, 2013, with Adel Alahmadi and S.K. Jain.

(48) (Sigma, Delta) codes, Advances in Mathematics communications, Volume 7, Issue 4, 2013 Pages 463-474, En collaboration avec M'Hammed Boulagouaz.

(49) Strongly McCoy rings, Contemporary Mathematics 609, 233-244 (2014), with J. Matczuk.

(50) Euclidean pairs and quasi euclidean rings, with A. Alahmadi, S.K. Jain and T.Y. Lam J. of Algebra (2014)

(51) Zip property of certain ring extensions : Journal of pure and applied algebra, ISSN 0022-4049, Vol. 220, Nº 1 (January 2016), 2016, págs. 335-345 with J. Matczuk.

(52) Clean elements in polynomial rings, with J. Matczuk and P. Kanwar Contemporary math. vol. 634 (2015)

(53) Chains of prime ideals and primitivity of $\mathbb{Z}$-graded algebras, with B. Greenfeld A. Smoktunowicz and M. Ziembowski.

(54) Leapfrog Constructions: From Continuant Polynomials to Permanents of Matrices, The Electronic Journal of Combinatorics Volume 22, Issue 1 (2015) with Alberto Facchini, 2015.

(55) Decomposition into products of idempotents en collaboration avec S.K. Jain, A. Alahmadi et A. Satahaye, Electronic Journal of linear algebra, Vol. 29, 2015.

(56) Exponents of skew polynomial rings, en collaboration avec Ahmed Cherchem, Finite Fields and their Applications, Vol.37, 2016.

(57) Long module skew codes are good, en collaboration avec Alahmadi et Sole, Discrete Mathematics, Vol. 339, 2016.

(58) Self dual codes over noncommutative Frobenius rings, en collaboration avec S. Dougherty, Applicable Algebra in Engineering, Communication and Computing, 2016.

(59) Elementary matrices and products of idempotents, with Alberto Facchini, Linear and multilinear algebra, 2016.

(60) On the duality and the direction of polycyclic codes, with A. Alahmadi and P. Solé Advances in Mathematics of Communications, Vol. 10, 2016.

(61) Quasi-permutation singular matrices are products of idempotents, With A. Alahmadi and S.K. Jain, Linear Algebra and its Application Vol 496, 2016.

(62) When are nonnegative matrices products of nonnegative idempotents? with A. Alhmadi and S.K. Jain, Linear and Multilinear Algebra, May 2017.

(63) Rings whose proper images are almost self-injective. in Rings, modules and codes, 1–5, Contemp. Math., 727, Amer. Math. Soc., Providence, RI, (2019) with A. Alahmadi, S.K. Jain.

(64) Remarks on the Jacobson radical, collaboration with J. Matczuk Contemp. Math. series vol. 727, 2019

(65) S. Dougherty, A. Kor, A. Leroy Generating characters of noncommutative Frobenius noncommutative rings. Rings, modules and codes, 83–92, Contemp. Math., 727, Amer. Math. Soc., Providence, RI, (2019)

(66) On UJ-rings, with J. Matczuk, K.Tamer, Communications in Algebra Comm. Algebra 46 (2018).

(67) On the Jacobson radicals, with J. Matczuk, Remarks on the Jacobson radical. Rings, modules and codes, 269–276, Contemp. Math., 727, Amer. Math. Soc., Providence, RI, (2019)

(68) Commutatively closed sets in rings, with Dilshad Alghazzawi Comm. Algebra 47 (2019), no. 4, 1629–1641.

(69) Regular elements determined by generalized inverses, with A. Alahamadi and S.K. Jain, . J. Algebra Appl. 18 (2019), no. 7.

(70) Decomposition of singular elements of an algebra into product of idempotents, a survey, Contributions in algebra and algebraic geometry, 57–74, Contemp. Math., 738, Amer. Math. Soc., Providence, RI, (2019)

(71) Invariance and Parallel sums, IN Bulletin of Mathematical sciences, 2020 (DOI: 10.1142/S1664360720500010) (2020) With A. Alahmadi and S.K. Jain.

(72) Exponents of skew polynomials over periodic rings,(with A. cherchem and A. Bouzidi) in communication in Alebra,Volume 49, 2021 - Issue 4, 2021 .

(73) Graphs of Commutatively closed sets, (with M. Abdi), Linear and multilinear algebra,Published online: 20 Sep 2021.

(74) Evaluations in iterated Ore extensions and Reed-Muller codes, To appear in Contemp. Math. (AMS), in 2023.

(75) On matrix wreath products Algebras, with S.K. Jain, to appear in J. of Algebra (2023).

(76) Symmetric closure in modules and rings, André Leroy and Mehrdad Nasernejad, Communications in algebra, Published online: 17 Aug 2023.

(77) Iterated Ore polynomial maps, André Leroy and Mehrdad Nasernejad Journal of Algebra and Its Applications (online 26 Oct 2023).

(78) "Rings in which elements are a sum of a central and an element in the Jacobson radical, G. Ma, Y. Wang, A. Leroy, to appear in Czekoslovak Math. Journal.

Submitted or in preparation

(1) Skew sequences, en collaboration with A. Cherchem.
(2) Quasi-Euclidean rings and modules, with A. Kor
(3) Multvariate Ore extensions, with Mehrdad Nasenejad.
(4) Hopf Ore extensions with Walter Ferrer.
(5) Finitely generated ideals and the CCC prperty, with Y. Tooloei.
(6) Periodic and potent elements (collaboration with Mehrdad Nasernejad and Guanglin Ma)

André Leroy