

PUBLICATIONS of A.R.P. van den Essen

1. Reduction of singularities of the differential equations $Ady = Bdx$, Springer Lecture Notes 712, p.44-59 (1979).
2. Regular singularities along normal crossings, Springer Lecture Notes 712, p.87-130 (1979).
3. On the definition of quasi-Fuchsian modules, Report 7723, Math. Inst. KUN (1977).
4. Torsion-free quasi-Fuchsian modules over rings of universal differential operators with general base ring, Report 8805, Math. Inst., KUN (1978).
5. Le Noyau de l'opérateur d/dx_n agissant sur un D_n -module, C.R. Acad. Sci. Paris, t288, Ser. A, 687 (1979).
6. Fuchsian modules, Thesis, University of Nijmegen (1979).
7. Systèmes fuchsiens d'équations aux dérivées partielles associés aux fonctions de classes de Nilsson et application aux intégrales de Feynman, C.R. Acad. Sci. Paris, Ser. A, 103 (1979).
8. (with A.H.M. Levelt) Irregular singularities in several variables, Memoir of the AMS, Vol. 40, No 270 (1982).
9. Fuchsian systems of linear differential equations associated to Nilsson class functions and an application to Feynman integrals, Lecture Notes in Physics, 126, Proceedings Les Houches (1979).
10. The kernel and cokernel of a differential operator in several variables, Proceedings of the Koninklijke Academie van Wetenschappen, Ser. A, Vol. 86 (1), 1983.
11. Un D -module holonome tel que le conoyau de l'opérateur d/dx_n soit non-holonomique, C.R. Acad. Sci. Paris, t.295, p. 455-457 (1982).
12. Explicit formulas for Bernsteins fundamental equation for a polynomial in one variable, Report 8223, Univ. of Nijmegen (1992).
13. (with N.H. Rexwinkel) A counter-example to a conjecture on a Jordan form for fuchsian modules, Report 8224, Univ. of Nijmegen (1982).
14. Le conoyau de l'opérateur d/dx_n agissant sur un D_n -module holonome, C.R. Acad. Sci. Paris, t.296, 903-906 (1983).

15. A study of the torsion-free part of the cokernel of the operator d/dx_n acting on a D_n -module, Springer Lecture Notes 1029, p. 99-119 (1983).
16. A remark on a theorem of Gabber, Report 8230, Univ. of Nijmegen (1982).
17. The cokernel of the operator d/dx_n acting on a D_n -module II, Compositio Math. 56 (1985), 159-269.
18. The kernel and cokernel of a differential operator in several variables II, Indag. Math., Vol. 45, Fasc. 4 (1983).
19. A Nullstellensatz for curves, preprint 313, Univ. of Utrecht (1983).
20. Algebraic micro-localization, Comm. in Algebra, 1416 (1986), 971-1000.
21. Modules with regular singularities over filtered rings, Publ. of the R.I.M.S., Kyoto, Vol. 22, 5 (1986), 849-887.
22. (with M.G.M. van Doorn) D_n -modules with support on a curve, Publ. of the R.I.M.S., Kyoto, Vol. 23, 6 (1987), 937-953.
23. Une construction de filtrations réduites pour les modules réguliers sur un anneau filtree, C.R. Acad. Sc., Paris, t303 (1986), 741-743.
24. Modules with regular singularities over filtered rings and algebraic micro-localization, L.N.M. 1296, p. 125-157, Sém. d'Algèbre P. Dubreil et M.-P. Malliavin, Paris 1986.
25. A criterion to decide if a polynomial map is invertible and to compute the inverse, Comm. in Algebra 18 (10) (1990), 3183-3186.
26. Magic squares and linear algebra, Am. Math. Monthly, vol. 97, 1 (1990), 60-62.
27. Modules with regular singularities on a curve, Journal of the London Math. Soc. (2), 40 (1989), 193-205.
28. A remark on the invariants of Gerard-Levelt for holonomic D_1 -modules, Report 8826, Univ.of Nijmegen.
29. Holonomic modules with irregular singularities on a singular curve, Report 8827, Univ.of Nijmegen.
30. (with K. Adjama) A differential criterion and formula for the inversion of a polynomial map in several variables, Journal of Pure and Appl. Algebra 65 (1990), 97-100.

31. (with K. Adjagbo) A resultant criterion and formula for the inversion of a polynomial map in two variables, *Journal of Pure and Appl. Algebra* 64 (1990), 1-6.
32. Meromorphic differential equations having all monomials as solutions, *Archiv der Math.*, Vol. 59 (1992), 42-49.
33. (with K. Adjagbo) Eulerian systems of partial differential equations and the Jacobian conjecture, *Journal of Pure and Appl. Algebra* 74 (1991), 1-15.
34. (with K. Adjagbo) A new inversion formula for a polynomial map in two variables, *Journal of Pure and Appl. Algebra*, 76 (1991), 119-120.
35. A note on Meisters and Olech's proof of the global asymptotic stability Jacobian conjecture, *Pacific Journal of Math.*, Vol. 151, No 2 (1991), 351-356.
36. Polynomial maps and the Jacobian conjecture, in *Computational Aspects of Lie Group Representations and Related Topics*, Proc. of the 1990 Computational Algebra Seminar, pp. 29-44 in *CWI Tract 84* (1991).
37. Locally finite and locally nilpotent derivations with applications to polynomial flows and polynomial morphisms, Proc. of the A.M.S., Vol. 116, no.3, 861-871.
38. (with A.H.M. Levelt) An explicit description of all simple D_1 -modules, Warfield memorial volume, *Contemporary Mathematics*, Vol. 130 (1992), 121-131.
39. (with M. Kwiecinski) On the reconstruction of polynomial automorphisms from their face polynomials, *Journal of Pure and Appl. Algebra*, 80 (1992), 327-336.
40. Eulerian operators and the Jacobian conjecture, in Proc. of the A.M.S., Vol. 118, no.2 (1993), 373-378.
41. D -modules and the Jacobian conjecture, to appear in Proc. of the Intern. conference "D-modules and microlocal geometry", Lisbon, Portugal, october 1990.
42. (with K. Adjagbo) Eulerian operators and the Jacobian conjecture III, *Journ. of Pure and Appl. Algebra* 81 (1992), 111-116.
43. (with T. Parthasarathy) Polynomal maps and a conjecture of Samuelson, *Linear Algebra and its Applications* 177 (1992), 191-1995.
44. An algorithm to compute the invariant ring of a G_a -action on an affine variety, *Journal of Symbolic Computation* (1993), 16, 551-555.
45. The exotic world of invertible polynomial maps, In *Nieuw Archief voor Wiskunde*, Vol. 11, No. 1, March 1993, pp. 21-31.

46. Locally finite and locally nilpotent derivations with applications to polynomial flows, morphisms and G_a -actions, II, Proc. of the A.M.S, Vol. 121, no. 3 (1994), 667-678.
47. (with K. Adjamagbo, H. Derksen), On polynomial maps in positive characteristic and the Jacobian Conjecture, Report 9208, Univ. of Nijmegen. To appear in Proc. of the A.M.S.
48. (with J. Yu) The D -resultant, Singularities and the degree of Unfaithfulness, Proc. A.M.S.Vol 125 (1997), 689-695.
49. (with H. Tutaj) A remark on the two-dimensional Jacobian Conjecture, Journal of Pure and Appl. Algebra, 96 (1994), 19-22.
50. (with G. Meisters) A computational approach to the Jacobian Conjecture, Report 9318, Univ. of Nijmegen.
51. Locally nilpotent derivations and their applications III, Journ.Pure, and Appl.Algebra 98 (1995), 15-23.
52. Conjectures and problems surrounding the Jacobian Conjecture, Proc. of the Workshop "Recent results on the global asymptotic stability Jacobian conjecture", September 1993, Trento Italy. Ed. M. Sabatini.
53. (with L.A. Campbell), Jacobian pairs, D -resultants, and automorphisms of the plane, J.P.A.A.,104,(1995), 9-18.
54. (with C. Eggermont), A class of derivations having a slice, Journ. Pure and Appl. Algebra 114 (1997), 209-215.
55. A counterexample to a conjecture of Drużkowski and Rusek, Annales Polonici Mathematici.LXII.2(1995), pp 173-176.
56. A counterexample to a conjecture of Meisters, pp.231-233 in [57], 1995.
57. (ed.) Automorphisms of Affine spaces, Proceedings of the International Conference "Invertible Polynomial Maps" held at Curacao, July 4-8,1994, Kluwer Academic Publishers, 1995.
58. Seven lectures on polynomial automorphisms, pp.3-39 in [57], 1995.
59. (with E. Hubbers), Polynomial maps with strongly nilpotent Jacobian matrix and the Jacobian conjecture, Linear Algebra and its Applications, 247 (1996), 121-132.
60. (with E. Hubbers), A new class of invertible polynomial maps, J. of Algebra, 187 (1997), 214-226.

60. (with E.Hubbers), $D_n(A)$ for a class of Polynomial Automorphisms and Stably Tameness, J. of Algebra 192 (1997), 460-475.
61. Polynomial Automorphisms and the Jacobian Conjecture, *in: Algèbre non-commutative, groups quantiques et invariants, septième contact Franco-Belge*, Reims, Juin 1995, eds. J. Alev and G. Cauchon, Société Mathématiques de France, Paris 1997.
62. (with V.Shpilrain), Some combinatorial questions about polynomial mappings, Journ. Pure and Appl .Algebra 119 (1997), 47-52.
63. (with T.Janssen), Kernels of Elementary derivations, Report 9548, Univ.of Nijmegen, (1995).
64. (with E.Hubbers), Chaotic Polynomial Automorphisms; Counterexamples to several Conjectures, Advances in Applied Math. 18 (1997), 382-388.
65. (with Cima, Gasull, Hubbers, Manyosas), A polynomial Counterexample to the Markus-Yamabe Conjecture, Advances in Math. 131, No. 2 (1997), 453-457.
66. Algorithms for deciding finiteness and quasi-finiteness of morphisms between algebraic varieties and an application to flatness, Report 9559, Univ.of Nijmegen, (1995).
67. Algebraic Microlocalization and Modules with Regular Singularities over Filtered Rings, pp.813-840 in Handbook of Algebra, Vol.1 (Hazewinkel, ed.), Elsevier Science B.V. (1996).
68. Recent Progress in the study of Jacobian Conjectures, to appear in Proc. of the International Conference in Honor of Cheikh Anta Diop, Dakar, Senegal, Februari 26-March 2, 1996.
69. Nilpotent Jacobian Matrices with independent rows, Report 9603. Univ.of Nijmegen, (1996).
70. A criterion to decide if a polynomial has a Jacobian mate of bounded degree, Report 9625, Univ. of Nijmegen.
71. A counterexample to Meisters's cubic-linear linearization conjecture, Indagationes Math.,N.S., 9(3), 333-339, (1998).
72. A counterexample to a conjecture of Shpilrain and Yu, Report 9639, Univ. of Nijmegen.
73. (with C.Cheng), Endomorphisms of planes sending linear coordinates to coordinates. Proc. Amer. Math. Soc. 128 (2000), no.7, 1911-1915.

74. On a question of Drensky and Gupta, Prepublicacions Univ. Autonoma de Barcelona, Num. 7, March 1998.
75. Orthogonality in Pascal's triangle, Prepublicacions Univ. Autonoma de Barcelona, Num. 9, April 1998.
76. The exponential conjecture and the nilpotency subgroup of the automorphism group of a polynomial ring, Prepublicacions Univ. Autonoma de Barcelona, Num. 10, April 1998.
77. Dynamical Systems and the Jacobian Conjecture, Report 9819, Univ. of Nijmegen, Lectures delivered during the Advanced Course on Dynamical Systems, at the CRM, Bellaterra, Spain, September 1-10, 1998.
78. (with P. van Rossum), A class of counterexamples to the Cancellation Problem for arbitrary rings, Polynomial automorphisms and related topics (Krakow 1999), Ann. Polon. Math. 76 (2001), no. 1-2, 89-93.
79. (with J. Berson and S. Maubach), Derivations having divergence zero on $R[X, Y]$, Israel J. Math. 124 (2001), 115-124.
80. On Bass's inverse degree approach to the Jacobian Conjecture and exponential automorphisms, Combinatorial and computational algebra (Hong Kong, 1999), 207-214, Contemp. Math., 264, Amer. Math. Soc., Providence, RI, 2000.
81. (with P. van Rossum), A note on possible counterexamples to the Abhyankar-Sathaye Conjecture constructed by Shpilrain and Yu. Combinatorial and computational albegra (Hong Kong, 1999), 215-218, Contemp. Math., 264, Amer.Math. Soc., Providence, RI, 2000.
82. (with V. Drensky and D. Stefanov), New stably tame automorphisms of polynomial algebras. J. of Algebra, 226 (2000), no.1, 629-638.
83. (with P. van Rossum), Residual properties in the theory of polynomial maps, Report 9938, Univ. of Nijmegen, (1999).
84. The sixtieth anniversary of the Jacobian Conjecture: a new approach. Polynomial Automorphisms and related topics (Krakow, 1999). Ann. Polon. Math. 76 (2001), no. 1-2, 77-87.
85. (with Berson), An algorithm to find a coordinate's mate, J. of Symbolic Computation 36 (2003), 835-843.

86. Around the Abhyankar-Moh theorem, pp. 283-294 in the Proceedings Algebra, Arithmetic and Geometry with Applications, papers from Shreeram S. Abhyankar's 70th Birthday Conference, Purdue, July 20-26, 2000, Springer Verlag 2003.
87. (with P. van Rossum), Coordinates in two variables over a Q -algebra, Transactions of the A.M.S., Vol. 356, No. 5 (2004), 1691-1703..
88. On a problem of Adjamagbo, Report 0101, University of Nijmegen, (2001).
89. (with A. Nowicki) An algorithm concerning one dimensional rings of constants in polynomial rings, Report 0106, University of Nijmegen, 2001.
90. (with P. van Rossum), Triangular derivations related to problems on affine n -space, Proc. of the AMS, Vol 130, no. 5, 1311-1322 (2001).
91. (with J. Berson), Constructing and recognizing coordinates in four variables, Report 0107, University of Nijmegen, (2001).
92. (with H. Derksen and P. van Rossum), An extension of the Miyanishi-Sugie cancellation theorem to Dedekind rings, Report 0202, University of Nijmegen, (2002).
93. (with R. Peretz), Polynomial automorphisms and invariants, J. of Pure and Applied Algebra, 269 (2003), 317-328.
94. (with A. Nowicki and A. Tyc), Generalizations of a lemma of Freudenburg, J. of Pure and Applied Algebra, 177, (2003), 43-47.
95. (with S. Washburn), The symmetric Jacobian Conjecture for symmetric matrices, J. of Pure and Applied Algebra, 189 (1-3), (2004), 123-133.
96. (with D. Holtackers), On the recognition problem of quasi-homogeneous locally nilpotent derivations in dimension three, J. of Pure and Applied Algebra, 194 (2004), 273-279.
97. (with M. de Bondt), Nilpotent symmetric Jacobian matrices and the Jacobian Conjecture, J. of Pure and Applied Algebra, Vol. 193, no. 1-3, (2004), 61-70.
98. (with M. de Bondt), A reduction of the Jacobian Conjecture to the symmetric case, Proc. of the AMS 133 (2005), 2201-2205.
99. The solution of the tame generators problem according Shestakov and Umirbaev, Colloquium Mathematicum, Vol. 100, no. 2, (2004), 181-194.
100. (with M. de Bondt), Singular Hessians, J. of Algebra, 232 (2004), 195-204.

101. (with J. Berson and J. Bikker), Adapting coordinates, *J. of Pure and Applied Algebra*, 184 (2003), 165-174.
102. Rondom het Jacobi vermoeden, *Nieuw Archief voor Wiskunde* 5/5 nr. 1, maart 2004, 54-57.
103. (with M. de Bondt), Nilpotent symmetric Jacobian matrices and the Jacobian Conjecture II, *Journal of Pure and Applied Algebra*, Vol. 196, (2005), 135-148.
104. (with M. de Bondt), Hesse and the Jacobian Conjecture, *Contemporary Mathematics*, 369 (2005), 63-76.
105. (with M. de Bondt), Recent progress on the Jacobian Conjecture, Proc. of the Int. Conf. Singularity Theory in honour of S. Łojawiewicz, Cracow, 22-26 March 2004, in *Annales Polonici Mathematici*, Vol. 87 (2005), 1-11.
106. (with M. de Bondt), The Jacobian Conjecture for symmetric Drużkowski mappings, *Annales Polonici Mathematici* 86.1(2005), 43-46.
107. (with M. de Bondt), The Jacobian Conjecture: Linear triangularization for homogeneous polynomial maps in dimension three, *Journal of Algebra* 294 (2005), 294-306.
108. (with H. Derksen and C. Eggermont), Multimagic squares, *The American Mathematical Monthly*, October 2007.
109. (with L. Makar-Limanov and R. Willems), Remarks on Shestakov-Umirbaev, Report 0414, University of Nijmegen (2004).
110. (with M. Chamberland), Nilpotent Jacobians in dimension three, *Journal of Pure and Applied Algebra*, Vol. 205,(2006), 146-155.
111. The linear dependence problem for nilpotent Jacobians, Report 0504, Radboud University Nijmegen (March 2005).
- 112 Magische Vierkanten: van Lo-Shu tot Sudoku, Veen magazines, September 2006.
113. (with A. Nowicki and A. Zieliński), Rings of constants of the form $k[f]$, *Comm. in Algebra* 34 (2006), 387-418.
114. A Simple solution of Hilberts fourteenth problem in dimension five, *Colloquium Mathematicum*, Vol. 105 (2006), No.1, 167-170.
115. Perhaps the Jacobian Conjecture is simple, in Proc. of the International School and Workshop Polynomial Automorphisms and Related Topics, Hanoi, Vietnam, October 9-20, 2006.

116. Het HSA-vierkant, Euclides, nr 7, mei 2007, 255-257.
117. (with S. Maubach and S. Venereau, The Special Automorphism group of $R[t]/[X_1, \dots, X_n]$ and coordinates of a subring of $R[t][X_1, \dots, X_n]$, Journal of Pure and Applied Algebra 210 (2007), 141-146.
118. (with K. Adjagbo), A proof of the equivalence of the Dixmier, Jacobian and Poisson Conjectures, Acta Mathematica Vietnamica, Vol. 32, No.3 (2007), 15-23.
119. Het HSA-vierkant: De hype en zijn gevolgen, NAW 5/8, nr.3, September 2007.

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