

## PUBLICATIONS

ANDRÁS NÉMETHI

### Dissertations

<u>Degrees</u>	<u>Institution</u>	<u>Dates Awarded</u>
BS	University of Bucharest, Romania	June 1983
MS	University of Bucharest, Romania	June 1984
Doctor in Math.	Institute of Math. of Romanian Academy Bucharest, Romania	July 1990
PhD	The Ohio State University Columbus, Ohio, USA	August 1991
ScD	Hungarian Academy of Sciences	2001
Habilitation	Eötvös University, Budapest, Hungary	2008

### Books

- [1] Milnor fiber boundary of a non-isolated surface singularity, (joint book with Á. Szilárd), *Lecture Notes in Math.* **2037**, Springer 2012.
- [2] Normal Surface Singularities, *Ergebnisse der Mathematik und ihrer Grenzgebiete*, Springer, 2022 (preparation of the last revised version before printing, 650 pages).

### Edited books/volumes

- [1] Proceedings of the Deformation Theory Conference, Budapest, 2008; (coeditor Á. Szilárd), *Bolyai Society Mathematical Studies* 23, Springer-Verlag, 2013.
- [2] Singularities. Abstracts from the workshop held 20-26 September 2009; Organized by A. Némethi, D. van Straten and V.A. Vassiliev; *Oberwolfach Reports* 6 (2009), no. 3, 2405-2469.
- [3] Singularities. Abstracts from the workshop held 23-29 September 2012; Organized by A. Némethi, D. van Straten and V.A. Vassiliev; *Oberwolfach Reports* 9 (2012), no. 3, 2799-2866.
- [4] Singularities. Abstracts from the workshop held 25 September - 1 October 2016; Organized by F. Loeser, A. Némethi, and D. van Straten; *Oberwolfach Reports* 13 (2016), no. 3, 2625-2691.
- [5] Proceedings of the 15th International Workshop on Real and Complex Singularities, 22–28 July 2018, ICMC–USP San Carlos (coeditors G. Feliciani Barbosa, J. L. Cisneros Molina, N. De Góes Grulha Júnior); *Journal of Singularities* 22 (2020).

### Articles in journals and proceedings, book chapters

- [1] Asupra geometriilor euclidiană si neeuclidiene plane, *St. Cerc. Mat.*, **Tom. 35, Nr.1**, 1983.

- [2] The link of the sum of the holomorphic functions, *Proc. of the National Conference*, Tîrgoviște, Romania, 1986.
- [3] Théorie de Lefschetz pour les variétés algébriques affines, *C. R. Acad. Sc. Paris*, t.303, Serie I., **Nr. 12**, 1986.
- [4] On the fundamental group of the complement of certain plane curves, *Math. Proc. Cambridge Phil. Soc.*, **Vol. 102**, 3, 1987.
- [5] Lefschetz Theory for Complex Affine Varieties, *Rev. Roumaine Math. Pures Appl.*, **33**, 3, 233-250, 1988.
- [6] Shape theory and (connective) K-theory, (joint paper with M. Dădărlat), *J. Operator Theory*, **23**, 207-291, 1990.
- [7] On the bifurcation set of a polynomial function and Newton boundary, (joint paper with A. Zaharia), *Publ. RIMS. Kyoto Univ.*, **26**, 681-689, 1990.
- [8] The Milnor fiber and the zeta function of the singularities of type  $f = P(h, g)$ , *Compositio Math.*, **79**, 63-97, 1991.
- [9] Global Sebastiani-Thom theorem for polynomial maps, *J. Math. Soc. Japan*, **Vol. 43**, No 2, 213-218, 1991.
- [10] Generalized local and global Sebastiani-Thom type theorems, *Compositio Mathematica*, **80**, 1-14, 1991.
- [11] Reduction of the Topological Stable Rank in Inductive Limits of  $C^*$ -algebras, (joint paper with M. Dădărlat, G. Nagy, and C. Pasnicu) *Pacific Journal of Math.*, **Vol. 153**, No. 2, 267-276, 1992.
- [12] Réduction du rang stable topologique dans  $C^*$ -algèbres limites inductives, (joint paper with M. Dădărlat, G. Nagy, and C. Pasnicu) *C. R. Acad. Sc. Paris*, **t.312**, Serie I, 107-108, 1991.
- [13] Milnor fibration at infinity, (joint paper with A. Zaharia), *Indag. Mathem.*, N.S. **3** (3), 323-335, 1992.
- [14] The zeta function of singularities, *Journal of Algebraic Geometry*, **2**, 1-23, 1993.
- [15] Algebraic torsion, zeta function and Dirichlet series for graph links in homology 3-spheres, *Ergodic Theory and Dynamical Systems*, **13**, 131-142, 1993.
- [16] Injective analytic maps, *Duke Math. Journal.*, **Vol. 69**, No. 2, 335-347, February 1993.
- [17] The semi-ring structure and the spectral pairs of sesqui-linear forms, *Algebra Colloquium*, **1:1**, 1994, 85-95.
- [18] The real Seifert form and the spectral pairs of isolated hypersurface singularities, *Compositio Mathematica*, **98**, 1995, 23-41.

- [19] The equivariant signature of hypersurface singularities and eta-invariant, *Topology* **Vol. 34**, No. 2, 243-259, 1995.
- [20] The mixed Hodge structure of a complete intersection with isolated singularity, *C. R. Acad. Sc. Paris*, t. **321**, Série I, 1995, 447-452.
- The mixed Hodge structure of an ICIS, I., unpublished preprint. (41 pages)
- [21] Spectral pairs, mixed Hodge modules and series of plane curve singularities, (joint paper with J. Steenbrink), *New York Journal of Mathematics*, August 16, 1995.  
(e-journal: <http://nyjm.albany.edu:8000/j/v1/Nemethi-Steenbrink.html>)
- [22] The eta-invariant of variation structures. I., *Topology and its Appl.*, **67**, 95-111, 1995
- [23] Extending Hodge bundles for Abelian Variations, (joint paper with J. Steenbrink), *Annals of Mathematics*, **143**, 131-148, 1996.
- [24] Variation structures: results and open problems, *Singularities and Differential Equations*, *Banach Center Publications*, vol. **33**, 245-257, 1996.
- [25] On the monodromy at infinity of a polynomial map, (joint paper with R. García López), *Compositio Mathematica*, **100**, 205-231, 1996.
- [26] On the monodromy of curve singularities, (joint paper with J. Steenbrink), *Math. Zeitschrift*, **223**, 587-593, 1996.
- [27] Generalized Weil's Reciprocity Law and Multiplicativity Theorems, *Trans. Amer. Math. Soc.*, **349**, 2687-2697 (1997).
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- [29] On the Birkhoff normal form of a completely integrable Hamiltonian system near a fixed point with resonance (joint paper with T. Kappeler and Y. Kodama), *Ann. Scuola Norm. Sup. Pisa Cl. Sci.*, (4) **26**, no. 4, 623-661 (1998).
- [30] Dedekind sums and the signature of  $f(x, y) + z^N$ , *Selecta Mathematica*, New series, **4**, 361-376 (1998).
- [31] The signature of  $f(x, y) + z^n$ , *Proceedings of Real and Complex Singularities*, (C.T.C Wall's 60th birthday meeting), Liverpool (England), August 1996; *London Math. Soc. Lecture Note Series*, **263**, 131-149 (1999).
- [32] On the Seifert form at infinity associated with polynomial maps, *Journal of the Math. Soc. of Japan*, **51**, no.1, 63-70 (1999).
- [33] On the monodromy at infinity of a polynomial map, II. (joint paper with R. García López), *Compositio Math.*, **115**, 1-20, 1999.
- [34] "Weakly" Elliptic Gorenstein singularities of surfaces, *Inventiones math.*, **137**, 145-167 (1999).

- [35] Dedekind sums and the signature of  $f(x, y) + z^N$ , II., *Selecta Mathematica*, New series, **5**, 161-179 (1999).
- [36] Some topological invariants of isolated hypersurface singularities, Five lectures of the EMS–Summer School, Eger (Hungary) 1996, *Proc. of the Summer school*, Bolyai Society Mathematical Studies **8**, *Low Dimensional Topology*, 353-413 (1999).
- [37] Five lectures on normal surface singularities; lectures delivered at the Summer School in “Low dimensional topology”, Budapest, Hungary 1998; *Proc. of the Summer School*, Bolyai Society Mathematical Studies **8**, *Low Dimensional Topology*, 269-351 (1999).
- [38] Semicontinuity of the spectrum at infinity, (joint paper with C. Sabbah), *Abhandlungen aus dem Mathematischen Seminar der Universität Hamburg*, **69**, 25-35 (1999).
- [39] Hodge numbers attached to a polynomial map, (joint paper with R. García López), *Ann. Inst. Fourier, Grenoble*, **49**, 5, 1547-1579 (1999).
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- [52] Some conjectures about quasi-ordinary singularities, (joint paper with Lee McEwan), *Topics in Algebraic and Noncommutative Geometry*, Contemporary Math., 324 (2003), 185-193.
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- [54] Hypersurface complements. Alexander modules and monodromy, (joint paper with A. Dimca), Proc. of the Conference: *Real and Complex Singularities*, San Carlos, Brazil, August 2002; *Contemporary Mathematics*, 354, 2004, 19-43.
- [55] Invariants of normal surface singularities, Proc. of the Conference: *Real and Complex Singularities*, San Carlos, Brazil, Aug. 2002; *Contemporary Math.*, 354, 2004, 161-208.
- [56] Seiberg-Witten invariants and surface singularities II (singularities with good  $\mathbf{C}^*$ -action), (joint paper with L. I. Nicolaescu), *Journal of London Math. Soc.* (2) 69, 2004, 593-607.
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- Invariants of Newton non-degenerate surface singularities, Oberwolfach Reports 3/3, G-M. Greuel, European Mathematical Society, Zürich (2006), 2509-2511.
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- [90] Generalized monodromy conjecture in dimension two, (joint manuscript with W. Veys), *Geometry and Topology* **16**(1) (2012), 155–217.
- [91] Equivariant classes of matrix matroid varieties (joint paper with L.M. Fehér and R. Rimányi), *Commentarii Math. Helvetici* **87** (2012), 861–889.

- [92] Some meeting points of singularity theory and low dimensional topology, Proc. of the Deformation Theory Conference, Budapest, 2008. Bolyai Society Mathematical Studies **23**, Springer-Verlag (2013), 109–162.
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- [100] Links of singularities up to regular homotopy, (joint manuscript with A. Katanaga and A. Szücs), Proceedings of 12th International Workshop on Real and Complex Singularities, 2012 San Carlos, Brasil; *Journal of Singularities* **10** (1914), 174–182.
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- [122] The boundary of the Milnor fibre of certain non–isolated singularities (joint paper with G. Pintér), *Periodica Math. Hungarica.* **77** (1) (2018), 34–57.
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- [127] On the geometry of strongly flat semigroups and their generalizations (joint manuscript with T. László), in ‘A Panorama of Singularities’, *Contemporary Math.* **742** (2020), 109–136 (volume in honor of Lê Dung Tráng).
- [128] The Abel map for surface singularities II. Generic analytic structure. (joint manuscript with J. Nagy), *Adv. in Math.* **371** (2020).
- [129] On the topology of elliptic singularities, (joint manuscript with J. Nagy), *Pure and Applied Mathematics Quarterly* **16**, Nr 4, (2020), 1123–1146; special volume in honor of G.-M. Greuel’s 75th birthday.
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- [131] Delta invariant of curves on rational surfaces I. An analytic approach (joint manuscript with J. I. Cogolludo-Agustín, T. László, J. Martín-Morales), to appear in *Communications in Contemporary Mathematics*.
- [132] The Abel map for surface singularities III. Elliptic germs, (joint manuscript with J. Nagy), arXiv:1902.07493, to appear in *Math. Zeitschrift*.
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- [134] Local invariants of minimal generic curves on rational surfaces, (joint manuscript with J. I. Cogolludo-Agustín, T. László, J. Martín-Morales), to appear in the Proceedings of *Escuela de Matemáticas Lluís Santaló 2019: p-adic Analysis, Arithmetic and Singularities*, Contemporary Math.

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