

CURRICULUM VITAE

ANDRÁS NÉMETHI

Educational History

<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

Professional Experience

<u>Institution</u>	<u>Dates</u>
Nat. Inst. for Sc. and Tech. Research, Bucharest (Researcher)	1985 – 1990
OSU, Columbus, Ohio (Instructor)	1991 – 1995
OSU, Columbus, Ohio (Assistant Professor)	1995 – 1998
OSU, Columbus, Ohio (Associate Professor)	1998 – 2002
OSU, Columbus, Ohio (Professor)	2002 – 2007
Rényi Institute of Math., Budapest, Hungary	1999 – 2001
Rényi Institute of Math., Budapest, Hungary	2004–
Eötvös University, Budapest, Hungary (Professor)	2008–

External Scientific Member

Basque Center for Applied Mathematics, Bilbao, Spain

Reserach Visiting Positions

Math. Inst. of the Hungarian Academy of Sciences	March 1990–May, 1990
Universities of Utrecht and Nijmegen, Netherlands	Sept. 1990–Dec. 1990
University of Toronto, Canada	July 01–31, 1991
MSRI, Berkeley	May 01–31, 1993
University of Nice, France	July 01–31, 1993
University of Nijmegen, The Netherlands	Sept. 1993–June, 1994
École Polytechnique, Palaiseau, France	Oct. 01–Dec. 31, 1996
University of Nice, France	June 15–July 15, 1997
University of Nantes, France	June 01–30, 1998
University of Bordeaux, France	Nov 01–30, 1999
Rényi Institute of Math., Budapest, Hungary	July 1999- June 2000
University of Hannover, Germany	Oct. 01–30, 2005
University of Nice, France	May 01–30, 2007
University Méditerranée, Marseille, France	Sept. 01–30, 2007
University of Yamagata, Yamagata, Japan	Sept. 01–30, 2010
University of Princeton, Princeton NJ, USA	2013 2 nd semester

Research Areas

Singularity theory, algebraic geometry and (low-dimensional) topology.

Grants, memberships in research projects

International Grants.

- National Science Foundation Grant (USA) 1992–1994, 1996-1998, 2000-2003, 2003-2007.
- Netherlands Organization for the Advancement of Scientific Research Grant 1993-1994.
- Ohio State University Seed Grant (Columbus, USA) 1995-1996.
- National Security Agency Grant (USA) 2000-2001.
- PI of a Marie Curie Intra European Fellowship 2004-2006.
- Team member, Marie Curie Host Fellowship for Transfer of Knowledge, Rényi Institute, 2004-2008.
- Host Scientist at Rényi Institute of two Marie Curie Intra European Fellowships, A. Kuronya as PI, 2006-2007; and R. Rimányi as PI, 2009-2010.
- Hungarian Science and Technology Foundation Grant, bilateral scientific cooperations supported by Hungarian and a foreign Ministry of Education (TÉT); 3 independent grants with Austria, France and Spain, 2007-2009.
- Team member of the Spanish research grant MTM2010-21740-C02-01 of Ministerio de Ciencia e Investigacion (Singularities in algebra, cryptography, geometry and topology, PI A. Melle Hernández), 2011-2013.
- Co-investigator in two Japanese reserach grants, Grants-in-Aid for Scientific Research (C), Japan Society for the Promotion of Science; PI: T. Okuma from Yamagata Univ. Japan; Co-investigators: A. Némethi (Rényi) and T. Tomaru (Gunma Univ. Japan): Grant No. 20540060 2008-2011, and Grant No. 23540068 2011-2014.
- PI of the JSPS Invitation Fellowship Program for Research in Japan, ID No. S-10020, Japan Society for the Promotion of Science, September 2010. (Host researcher: T. Okuma, Yamagata University.)
- ‘International partner’ of the Research Grant of University of Leuven OT/11/069 (PI: W. Veys), 2011-2015.

Hungarian grants of Hungarian National Science Fundation (OTKA)

- PI in 2007–2011, 2012–2016 and 2015-2019.
- Since 2003 co-investigator in 4 different research projects in algebraic geometry or differentiable topology.
- Host of the postdoc B. Skublics supported by a grant of the Hung. Acad. of Sciences.

Member of the Hungarian Academy of Sciences, 2019.

Prizes

Rényi Prize of the Rényi Institute of Mathematics, 2007.
Prize of the Hungarian Academy of Sciences, 2010.
Széchenyi Prize, 2017.

Invitation to ICM 2018, Rio de Janeiro (Section 4: Algebraic and Complex Geometry, and Section 6: Topology)

Member of the Editorial Board

Journal, Bulletin and Transaction of the London Math. Soc.
Journal of Singularities (e-journal),
Periodica Math. Hungarica,
Studia Univ. Babeş-Bolyai, Math.

Organizational activities

- Member of the Organizing Committee of the Summer school on Lie algebras, Iasi, Romania, 1988 (organized by the Institute of the Romanian Academy).
- Member of the Organizing Committee of the summer school on Lie groups, Mangalia, Romania, 1989 (organized by the Institute of the Romanian Academy).
- Member of the Organizing Committee of the Workshop on Topology of hypersurface singularities, Cluj–Napoca, Romania, 1989 (organized by the Institute of the Romanian Academy and University of Cluj–Napoca).
- Organizer of the International Workshop on characteristic classes, Sovata, Romania, 1994 (supported by the Soros Foundation)
- Member of the Organizing Committee of the International Summer school on Algebraic Geometry, Eger, Hungary, 1996 (as a satellite of the European Mathematical Congress).
- Member of the Organizing Committee of the International Summer school on Low-dimensional Geometry, Hungary, 1998.
- The organizer of the ‘Conference on Singularity Theory’, Ohio State University, 1998.
- Co-organizer of the AMS Special Session ‘Algebraic Geometry and Singularity Theory’, University of Notre Dame, 2000.
- Member of the Organizing Committee of the AMS meeting 2001 September, organized by the Ohio State University, Dept. of Mathematics.
- Member of the Organizing Committee of the international program ‘Higher dimensional varieties and rational points’ at Budapest, Hungary, 2001.
- Organizer of the ‘Spanish-Hungarian’ Workshop on Singularities, Budapest, Hungary, 2005 Summer.
- Organizer of the Summer School ‘Characteristic classes of singular varieties’, Budapest, Hungary, 2006 Summer.
- Organizer of the Conference ‘Deformation of surfaces’, Budapest, Hungary, 2008 October.
- Co-organizer (with D. van Straten and V. Vasiliev) of the ‘Singularities’ Conference at Oberwolfach Math. Inst., Germany; Sept. 2009.
- Organizer of the ‘Workshop on Quivers’, Rényi Institute, Budapest, Hungary, 2009.
- Organizer of the one-day meeting ‘New directions in Geometry’, Budapest, Math. Section of the Hungarian Academy of Sciences, 2010 May.

- Coorganizer of the ‘Non–Euclidean Geometry and its applications — 7-th Bolyai-Gauss-Lobachevsky Conference’ Cluj–Napoca, Romania, July 2010.
- Member of the Scientific Committee of the ‘5th World Conference on 21st Century Mathematics 2011’, February 9–13, 2011, Lahore, Pakistan.
- Coorganizer (with J. Bryan, D. Maulik, J. Schürmann, B. Szendrői and Á. Szilárd) of ‘Motivic Donaldson-Thomas theory and singularity theory’ May 7 to May 11, 2012, Rényi Inst., Budapest; sponsored by American Inst. of Math. and National Sc. Foundation (USA).
- Co-organizer (with D. van Straten and V. Vasiliev) of the ‘Singularities’ Conference at Oberwolfach Math. Inst., Germany; Sept. 2012.
- Scientific Committee member of the Conf. ‘Experimental and Theoretical methods in Algebra, Geometry and Topology’ (in honor of A. Dimca and S. Papadima), Eforie Nord, Romania, June 21–24, 2013.
- Scientific Committee member of the Summer School 2014 of the IRTG ‘Moduli and Automorphic Forms’, August 2014, Rényi Institute of Mathematics, Budapest, Hungary.
- Scientific Committee member of the Conf. ‘Géométrie des espaces et morphismes singuliers’, CIRM Marseilles, France, February 2th – March 6th, 2015.
- Scientific Committee member of the ‘14th Workshop on Real and Complex Singularities’, ICMC–USP Sao Carlos, Brasil, 2016 July.
- Co-organizer (with D. van Straten and F. Loeser) the ‘Singularities’ Conference at Oberwolfach Math. Inst., Germany; Sept. 2016.
- Co-organizer (with G. Farkas, R. Pandharipande, A. Stipsicz) of ‘Moduli in Budapest’ Conference, Alfréd Rényi Institute of Mathematics, April 2019.
- Co-organizer (with D. van Straten, F. Loeser and J. de Bobadilla) the ‘Singularities’ Conference at Oberwolfach Math. Inst., Germany; Sept. 2021.
- Scientific Committee member, Research School, Sept. 2021, CIRM (Marseille) Luminy, France.

Advisor of PhD students

Á. Szilárd	graduated at Ohio State University, USA, 1999,
R. Mendris	graduated at Ohio State University, USA, 2003,
I. Sigray	graduated at Eötvös University (ELTE), Budapest, 2008,
T. László	graduated at Central European University (CEU), Budapest, 2013,
B. Sigurdsson	graduated at Central European University (CEU), Budapest, 2015,
J. Bodnár	graduated at Eötvös University (ELTE), Budapest, 2016,
Á. Gyenge	graduated at Eötvös University (ELTE), Budapest, 2016,
G. Pintér	graduated at Eötvös University (ELTE), Budapest, 2018,
J. Nagy	graduated at Central European University (CEU), Budapest, 2020.

In present: T. Ágoston, N. Hasan, L. Koltai, A. Kubasch, G. Scheffler (ELTE), A. Sándor (CEU).

Advisor of MS students

M. Juhász	Eötvös University (ELTE), Budapest, 2009,
G. Pintér	Eötvös University (ELTE), Budapest, 2010,
B. Sigurdsson	Central European University, Budapest, 2010,
J. Nagy	Eötvös University (ELTE), Budapest, 2015,
Z. Sárai	Eötvös University (ELTE), Budapest, 2015,
Á. Kaposi	Eötvös University (ELTE), Budapest, 2017,
M. Kiss	Eötvös University (ELTE), Budapest, 2017,
T. Ágoston	Eötvös University (ELTE), Budapest, 2017,
A. Ramanantoanina	Central European University, Budapest, 2019,
J. M. Menjanahary	Central European University, Budapest, 2020,
G. Scheffler	Eötvös University (ELTE), Budapest, 2021,
A. Kubasch	Eötvös University (ELTE), Budapest, 2021.

Advisor of BS students

Z. Sárai	Eötvös University (ELTE), Budapest, 2013,
M. Kiss	Eötvös University (ELTE), Budapest, 2015,
Á. Kaposi	Eötvös University (ELTE), Budapest, 2015,
Zs. Fehér	Eötvös University (ELTE), Budapest, 2018,
A. Kubasch	Eötvös University (ELTE), Budapest, 2019,
G. Scheffler	Eötvös University (ELTE), Budapest, 2019,
Á. Schweitzer	Eötvös University (ELTE), Budapest, 2021.

Invited speaker at the following conferences

- [1] Summer school on Lie algebras, Iași, Romania, 1988.
- [2] Conference on Algebraic Geometry, Bucharest, Romania, 1988.
- [3] Summer school on Lie groups, Mangalia, Romania, 1989.
- [4] Workshop on Topology of hypersurface singularities, Cluj–Napoca, Romania, 1989 (series of lectures).
- [5] Workshop on Singularities, Nijmegen, The Netherlands, November, 1990.
- [6] JAMI Algebraic and Complex Geometry Conference, The John Hopkins University, Baltimore, USA, April, 1991.
- [7] Conference on Singularity Theory, Oberwolfach, Germany, June, 1992.
- [8] Conference on Singularity Theory, S. Banach Center, Warsaw, Poland, September, 1993.
- [9] National Conference of Mathematics, Leiden, The Netherlands, April, 1994.
- [10] Conference on Singularity Theory, Konstanz, Germany, July, 1994.
- [11] Summer Research Institute in Algebraic Geometry, organized by AMS at the University of California, Santa Cruz, July 9–29, 1995.
- [12] Workshop on Singularities, Oberwolfach, Germany, July, 1996.
- [13] Plenary lecture at the C.T.C. Wall’s 60th birthday meeting on Real and Complex Singularities, Liverpool, England, August 1996.
- [14] Five plenary lectures during the EMS–Summer School, Eger (Hungary), July–August 1996.
- [15] Workshop on Singularities, Angers, France, December 1996 (two lectures).

- [16] Conference on Geometry and Complexity (during the Singularity Theory and Geometry program, Toronto, January-June 1997), Fields Institute, Toronto, May 1997.
- [17] Conference on “The fundamental group in geometry”, Oberwolfach, Germany, May 1998.
- [18] Five plenary lectures during the Summer School “*Low Dimensional Topology*”, August 2–15, 1998, Budapest, Hungary.
- [19] AMS Special Session on Singularities in Algebraic Geometry and Analytic Geometry, San Antonio, Texas, January 1999.
- [20] Conference on “Polynomial maps and Toric geometry”, Muenster, Germany, 2000 February.
- [21] Invited address at the AMS central section meeting, University of Notre Dame, 2000 April.
- [22] Conference in “Affine Algebraic Geometry”, Oberwolfach, Germany, May 2000.
- [23] Algebraic Geometry Conference (In Memory of Ruth Michler), Annapolis, October 2001.
- [24] Conference “Casson invariant: 17 years on”, UQAM Montréal, Canada, April 2002.
- [25] Plenary talk at the “7th International Workshop on Real and Complex Singularities”, ICMC-USP, São Carlos-SP, Brazil, August 2002.
- [26] Conference on “Fundamental Groups in Geometry”, Oberwolfach, Germany, September 2002.
- [27] AMS Special Session on Arrangements in Topology and Algebraic Geometry, Baton Rouge, Louisiana, March 2003.
- [28] AMS Special Session on Topological Aspects of Complex Singularities, New York, April 2003.
- [29] Workshop on Singularity Theory, ICMS, Edinburgh, May 2003.
- [30] Conference in “Low Dimensional Topology”, Rényi Institute, Budapest, Hungary, June 2003.
- [31] Singularity Conference, Oberwolfach, Germany, September 2003.
- [32] Workshop on Floer homology of 3-manifolds, Banff, Canada, November 2003.
- [33] Geometry/Topology of manifolds, McMaster University, Hamilton, Canada, May 2004.
- [34] CMI Summer School on Floer Homology, Gauge Theory and Low Dimensional Topology, Budapest June 2004.
- [35] Sao Carlos Workshop on Singularities (at CIRM Luminy), 2004, France.
- [36] Conference in Singularities, CIRM, Luminy, France, 2005 February.
- [37] Singularity Conference, University of Leuven, 2005.
- [38] Singularity conference and Summer School “Advances School and Workshop on Singularities in Geometry and Topology”, Trieste, Italy, 2005 Summer.
- [39] (“Spanish-Hungarian”) Workshop on Singularities, Budapest, Hungary, 2005 Summer.
- [40] Singularity Conference (B. Teissier is 60), Luminy, France, 2005.
- [41] Conference on “Knots, contact structures and foliations”, Budapest, Hungary, November 2005.
- [42] Workshop on “The Topology of Hyperkahler Manifolds”, Budapest, Hungary, Nov. 2005.
- [43] “Singularity Day at Luminy”, France, 2006 May.
- [44] Four plenary lecture at CIMPA School “New trends in singularity theory”, Madrid, 2006 August.
- [45] Singularity Conference, Oberwolfach, Germany, September 2006.
- [46] Five plenary advanced lecture courses at School on “The Geometry and Topology of

- Singularities”, Cuernavaca, Mexico, January 2007.
- [47] Workshop on “The Geometry and Topology of Singularities” (Lê Dũng Tráng is 60), Cuernavaca, Mexico, January 2007.
 - [48] Journée de Géométrie Algébrique Nice-Gênes 2007, Nice, May 2007.
 - [49] Geometry Days (J. Steenbrink is 60), Nijmegen, The Netherlands, May 2007.
 - [50] Singularity Days, Nijmegen, The Netherlands, June 2007,
 - [51] Singularity Conference, CTC Wall is 70, Liverpool, England, July 2007.
 - [52] Five plenary advanced lecture courses at the School and Conference “Geometry and Topology of Singularities”, Angers, France, September 2007.
 - [53] Conference on Affine Geometry, Number Theory and Singularities (in honor of Pierrette Cassou-Noguès), Castro Urdiales, Spain, June 2008.
 - [54] Three plenary advanced lecture courses at the Conference “Geometry of Singularities and Manifolds”, Kusatsu, Japan, September 2008.
 - [55] Special plenary talk at the meeting of the Japan Mathematical Society, Tokyo, Japan, September 2008.
 - [56] Conference on “Différents points de vue sur les cycles évanescents”, Nice, France, November 2008.
 - [57] Topology of Algebraic Varieties, A Conference in Honor of the 60th Birthday of A. Libgober, Jaca, Spain, June 2009.
 - [58] Noncommutative Geometric Methods in Global Analysis, Conference in honor of Henri Moscovici, Hausdorff Center for Mathematics, University Bonn, Germany, July 2009.
 - [59] Singularities, Oberwolfach, Germany, September 2009.
 - [60] ‘Geometry at Large’, Conference at Vienna, Austria, April 2010.
 - [61] ‘Second International Workshop on Zeta Functions in Algebra and Geometry’, Palma de Mallorca, Spain, May 2010.
 - [62] ‘Új irányzatok a geometriában’, meeting of the Hungarian Academy of Sciences, May 2010.
 - [63] Two plenary talks at the ‘Geometry Conference’, Yamagata University, Japan, September 2010.
 - [64] ‘Conference on Singularities, Geometry and Topology’ (S. Gusein-Zade’s 60th birthday meeting), El Escorial, Madrid, Spain, October 2010.
 - [65] Geometry Workshop in Honour of V. Brînzănescu, Bucharest, Romania, November 2010.
 - [66] Three lectures on Autumn School: ”Topology of Singularities”, Mainz, Germany, 2011 September.
 - [67] Informal talk, at the meeting ‘Algebraic versus Analytic Geometry’, Vienna, 2011 November.
 - [68] ‘Singularities and differential equations in algebraic geometry’, Luminy, France, June 2012.
 - [69] ‘Singularity Theory, its Applications and Future Prospects’, (Bill Bruce 60 and Terry Wall 75), Liverpool, June 2012.
 - [70] Singularities, Oberwolfach, Germany, September 2012.
 - [71] Geometry and topology of smooth 4-manifolds, Max Planck Institute for Mathematics, Bonn, June 2013.
 - [72] Géométrie et topologie des singularités complexes, CIRM Luminy, France, June 2013.
 - [73] Experimental and Theoretical Methods in Algebra, Geometry and Topology, Eforie

Nord, Romania, June 2013.

- [74] Singularities in Generic Geometry and Applications, Edinburgh, September 2013.
- [75] Algebra and Geometry and Topology of Singularities (On the occasion of the 60th birthday of I.Luengo), Miraflores (Madrid), September 2013.
- [76] Sixth Iberoamerican Congress on Geometry 2014, New York, May 2014.
- [77] ‘Géométrie des espaces et morphismes singuliers’, CIRM Luminy, France, March 2015.
- [78] ‘Singularities and Computer Algebra’, G.-M. Greuel’s 70th Birthday Conference, Lambrecht, Germany, June 2015.
- [79] ‘International Conference on Singularity Theory — in honor of Henry Laufer’s 70th Birthday’, Sanya, China, Dec. 2015.
- [80] Panorama on Singular Varieties, Conference to Celebrate Lê Dũng Tráng 70th birthday, Sevilla, Spain, February 2017.
- [81] ‘Interactions between Low-dimensional Topology and Complex Algebraic Geometry’, three talks, Oberwolfach Math. Institute, Germany, October 2017.
- [82] A Magyar Tudomány Ünnepe, Kolozsvár, Románia, November 2017.
- [83] Topology and Geometry: A conference in memory of Ștefan Papadima (1953-2018), Bucharest, Romania, May 2018.
- [84] 15th International Workshop on Real and Complex Singularities, Sao Carlos, Brasil, July 2018.
- [85] ICM 2018, Rio de Janeiro, Brasil, (invited lecture for the sections ‘Algebraic and Complex geometry’ and ‘Topology’).
- [86] Moduli in Budapest, Budapest, April 2019.
- [87] IMAR70, Bucharest, October 2019.
- [88] Two lectures at ‘Brill-Noether theory: geometric, tropical and singularity theory aspects’, Berlin, Germany, November 2019.
- [89] Low-Dimensional Topology, University of Oxford, January 2020.

Other invited talks

- [1] University of Gdansk, Poland, August, 1989.
- [2] Algebra seminar, Math. Inst. of the Hungarian Academy of Sciences, Budapest, Hungary, March, 1990.
- [3] Singularity seminar, University of Utrecht, The Netherlands, November, 1990.
- [4] Singularity seminar, University of Toronto, Canada, July, 1991 (a series of lectures).
- [5] Singularity seminar, University of Toronto, Canada, November, 1991.
- [6] Singularity seminar, University of Toronto, Canada, March, 1993.
- [7] MSRI Berkeley, USA, May, 1993 (two lectures).
- [8] Algebraic geometry seminar, University of Utah, Salt Lake City, USA, June, 1993.
- [9] Algebraic geometry seminar, University of Nice, France, July, 1993.
- [10] Geometry seminar, Eötvös Loránd University, Budapest, Hungary, September, 1993.
- [11] Complex analysis seminar, University of Angers, France, March, 1994 (two lectures).
- [12] Algebraic geometry seminar, University of Warwick, Great Britain, June, 1994.
- [13] Colloquium Talk, Math. Institute, Bonn, Germany, June, 1994.
- [14] Algebraic geometry seminar, University of Utah, Salt Lake City, USA, December, 1994.
- [15] Colloquium Talk, University of Toronto, Canada, February, 1995.

- [16] Algebraic geometry seminar, Northeastern University, Boston, USA, April 1996.
- [17] Topology Seminar, Eötvös Loránd University, Budapest, Hungary, September 1996.
- [18] Colloquium Talk, Math. Inst. of the Hungarian Academy of Sciences, Budapest, Hungary, September 1996.
- [19] Colloquium Talk, Purdue University, West Lafayette, USA, March 1997.
- [20] Algebraic Geometry Seminar, University of Marseille, France, June 1997.
- [21] Singularity Seminar, University of Nice, France, June-July 1997 (four lectures for graduate students).
- [22] Algebraic Geometry and Algebraic Topology Seminar, University of Nantes, France, June 1998.
- [23] Algebraic Geometry Seminar, University of Chicago, USA, May 1999.
- [24] Geometry Seminar, University of Bordeaux, France, November 1999.
- [25] Singularity Seminar, University of Bordeaux, France, November 1999, (three talks).
- [26] National Geometry Seminar, Institute of Hungarian Academy of Science, Budapest, February 2000.
- [27] Algebraic Geometry Seminar, Institute of Hungarian Academy of Science, Budapest, Sept. 1999- March 2000 (at least ten talks).
- [28] Colloquium Talk, Institute of Hungarian Academy of Science, Budapest, March 2000.
- [29] Topology Seminar, Princeton University, Princeton, April, 2001.
- [30] Colloquium Talk, University of Notre Dame, November 2002.
- [31] Colloquium Talk, University of Illinois at Chicago, April 2003.
- [32] Geometry-Topology Seminar, University of Wisconsin, Madison, October 2003.
- [33] Colloquium Talk, University of North Carolina, Chapel Hill, January, 2004.
- [34] University of Michigan/Ohio State University Weekend Algebraic Geometry Seminar, March , 2004.
- [35] Seminar of Singularity Theory of Jussieu Institute (Paris 7), Paris, November 2004.
- [36] Seminar of Algebraic geometry of University of Utrecht, Utrecht December 2004.
- [37] Three invited talks at the Algebraic Geometry Seminar of University of Hannover, 2005 October.
- [38] “Kerékjartó Béla” Geometry Seminar, University of Szeged, November 2005.
- [39] Geometry Seminar, Babeş-Bolyai University, Cluj-Napoca, November 2006.
- [40] Singularity Seminar, University of Nice, May 2007.
- [41] Topology Seminar, Université de Provence, Marseille, France, September 2007.
- [42] Singularity Seminar, two extended lectures, Université de la Méditerranée, Luminy (Marseille), France, September 2007.
- [43] Talk at University of Kyoto, Japan, September, 2008.
- [44] Singularity Seminar (Oka’s seminar), University of Tokyo, Japan, September 2008.
- [45] A short talk at the meeting “About the Spidron in the language of Science and Art”, Rényi institute, Budapest, November 2008.
- [46] Geometry Seminar, Madrid, Spain, December 2009.
- [47] Singularity Seminar (Oka’s seminar), University of Tokyo, Japan, September 2010.
- [48] Topology Seminar, University of Edinburgh, March 2012.
- [49] Topology Seminar, University of Glasgow, March 2012.
- [50] Algebraic Geometry Seminar, Freie Universität Berlin, January 2014.
- [51] Algebraic Geometry Seminar, University of Princeton, February 2014.

- [52] Topology Seminar, University of Princeton, February 2014.
- [53] Colloquium Talk, University of Miami, April 2014.
- [54] Topology seminar, University of Princeton, April 2014.
- [55] Topology seminar, Ohio State University, Columbus, June 2014.
- [56] Geometry seminar, EPFL Lausanne, December 2014.
- [57] Colloquium Talk, Rényi Institute of Math., Budapest, February 2015.
- [58] Colloquium Talk, University ELTE, Budapest, February 2015.
- [59] Algebraic Geometry Seminar, Humbolt University, Berlin, Germany, June 2017.
- [60] Analysis Seminar, University ELTE, Budapest, November 2017.
- [61] Singularity Seminar, BCAM, Bilbao, Spain, December 2017.
- [62] Colloquium Talk, University of Bern, Switzerland, March 2018.
- [63] Algebraic Geometry Seminar, University of Leuven, September 2018.
- [64] Seminar of the Bolyai Math. Institute, Szeged, October 2018.
- [65] Math. Institute Seminar, Debrecen, November 2018.
- [66] Geometry Seminar, ELTE Budapest, November 2018.
- [67] Geometry Seminar, Cluj, Romania, January 2019.
- [68] KAB Talk, Cluj, Romania, January 2019.
- [69] Algebraic Geometry Seminar, Banach Center, Warsaw, March 2019.
- [70] Singularity Seminar, Université de la Méditerranée, Marseille, France, January 2021.
- [71] Geometry & Topology seminar, Glasgow, May 2021.

Publications of A. Némethi

Book

- [1] Milnor fiber boundary of a non-isolated surface singularity, (joint book with Á. Szilárd), *Lecture Notes in Math.* **2037**, Springer 2012.

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 și 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, *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).
- [28] On the spectrum of curve singularities, *Proceedings of the Singularity Conference, Oberwolfach*, July 1996; Progress in Mathematics, **Vol. 162**, 93-102, Birkhäuser 1998.
- [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).
- [40] Hypersurface singularities with 2–dimensional critical locus, *Journal of the London Math. Soc.*, Second Series, No **189**, Vol **59**, 922-938 (1999).
- [41] Casson invariant of cyclic coverings via eta–invariant and Dedekind sums, *Topology and its Applications*, Vol **102**, 2, 181-193 (2000).
- [42] Resolution graphs of some surface singularities, I. Cyclic coverings, Proc. of the AMS Conference, San Antonio, 1999; *Contemporary Mathematics* **266**, Singularities in Algebraic and Analytic Geometry, (C. G. Melles and R. I. Michler Eds.), 2000, 89-128.
- [43] Resolution graphs of some surface singularities, II. Generalized Iomdin series, (joint paper with Á. Szilárd), Proc. of the AMS Conference, San Antonio, 1999; *Contemporary Mathematics* **266**, Singularities in Algebraic and Analytic Geometry, (C. G. Melles and R. I. Michler Eds.), 2000, 129-164.
- [44] On the monodromy of complex polynomials, (joint paper with A. Dimca), *Duke Math. Journal*, **108** Number 2, 2001, 199-209.
- [45] The embedded resolution of $f(x, y) + z^2 : (\mathbf{C}^3, 0) \rightarrow (\mathbf{C}, 0)$, (joint paper with Chunsheng Ban and Lee McEwan), *Studia Sc. Math. Hungarica*, **38**, 2001, 51-71.
- [46] Thom-Sebastiani construction and monodromy of polynomials (joint paper with A. Dimca), *Proc. of the Steklov Inst. of Math.*, **238**, 2002, 1-18 (Monodromy in problems of algebraic geometry and differential equations, A.A. Bolibrukh and C. Sabbah Eds.).

- [47] On the Milnor fiber of a quasi-ordinary surface singularity, (joint paper with Chunsheng Ban and Lee McEwan), *Canadian J. of Math.*, **54**, 2002, 55-70.
- [48] On the monodromy representation of polynomial maps in n variables, (joint paper with I. Sigray), *Studia Sc. Math. Hungarica*, **39** no. 3-4 (2002), 361-367.
- [49] On the weight filtration of the homology of algebraic varieties: the generalized Leray cycles (the published version of the preprint: ‘The topology of algebraic varieties, I – The generalized Leray cycles’), (joint paper with Fouad Elzein), *Annali della Scuola Norm. Sup. di Pisa*, vol. 1 (2002), 869-903.
- [50] Seiberg-Witten invariants and surface singularities, (joint paper with L. I. Nicolaescu), *Geometry and Topology*, Volume **6** (2002), 269-328.
- [51] The zeta-function of a quasi-ordinary singularity II, (joint paper with P. D. González Pérez and Lee J. McEwan), *Topics in Algebraic and Noncommutative Geometry*, Contemporary Math., **324** (2003), 109-122.
- [52] Some conjectures about quasi-ordinary singularities, (joint paper with Lee McEwan), *Topics in Algebraic and Noncommutative Geometry*, Contemporary Math., **324** (2003), 185-193.
- [53] The zeta-function of a quasi-ordinary singularity, (joint paper with Lee McEwan), *Compositio Math.* **140** (2004), 667-682.
- [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.
- [57] Seiberg-Witten invariants and surface singularities: Splicings and cyclic covers, (joint paper with L. I. Nicolaescu), *Selecta Mathematica*, New series, Vol. **11**, Nr. 3-4 (2005), 399-451.
- [58] The link of $\{f(x, y) + z^n = 0\}$ and Zariski’s Conjecture, (joint paper with R. Mendris), *Compositio Math.* **141**(2) (2005), 502-524.
- [59] Degeneracy of two and three forms, (joint paper with L.M. Fehér and R. Rimányi), *Canadian Math. Bulletin*, **48**(4) (2005), 547-560.
- [60] Links and analytic invariants of superisolated singularities, (joint paper with I. Luengo and A. Melle-Hernández), *Journal of Algebraic Geometry*, **14** (2005), 543-565.
- [61] The order of contact of a holomorphic ideal in \mathbf{C}^2 , (joint paper with J.D. McNeal), *Math. Zeitschrift* **250**(4) (2005), 873-883.

- [62] On the Ozsváth-Szabó invariant of negative definite plumbed 3-manifolds, *Geometry and Topology* **9** (2005), 991-1042.
- [63] On the Heegaard Floer homology of $S^3_{-d}(K)$ and unicuspidal rational plane curves, *Fields Institute Communications*, Vol. **47**, 2005, 219-234; “Geometry and Topology of Manifolds”, Eds: H.U. Boden, I. Hambleton, A.J. Nicas and B.D. Park, (Proc. of the Conference at McMaster University, May 2004).
- [64] On rational cuspidal projective plane curves, (joint paper with J. F. de Bobadilla, I. Luengo and A. Melle-Hernández), *Proc. of London Math. Soc.* **92** (3), (2006), 99-138.
- [65] Coincident root loci of binary forms, (joint paper with L.M. Fehér and R. Rimányi), *Michigan Math. J.* **54**(2), (2006), 375-392.
- [66] On the Milnor fiber on non-isolated singularities (joint paper with A. Horváth), *Studia Sc. Math. Hungarica*, **43** (1), (2006), 131-136.
- [67] Milnor open books and Milnor fillable contact 3-manifolds, (joint paper with C. Caubel and P. Popescu-Pampu), *Topology*, **45**(3), (2006), 673-689.
- [68] Classification of rational unicuspidal projective curves whose singularities have one Puiseux pair, (joint paper with J. F. de Bobadilla, I. Luengo and A. Melle-Hernández), Series *Trends in Mathematics*, Birkhäuser 2007, 31-46.
- [69] Graded roots and singularities, (contains also the preprint ‘On the Heegaard Floer homology of $S^3_{-p/q}(K)$ ’, math.GT/0410570); Proc. *Advanced School and Workshop on Singularities in Geometry and Topology* ICTP (Trieste, Italy), World Sci. Publ., Hackensack, NJ, 2007, 394-463.
- [70] On rational cuspidal curves, open surfaces and local singularities, (joint paper with J. F. de Bobadilla, I. Luengo and A. Melle-Hernández), *Singularity theory, Dedicated to Jean-Paul Brasselet on His 60th Birthday*, Proc. of the 2005 Marseille Singularity School and Conference, 2007, 411-442.
- [71] Invariants of Newton non-degenerate surface singularities, (joint paper with G. Braun), *Compos. Math.* **143** (2007), no. 4, 1003-1036.
- Invariants of Newton non-degenerate surface singularities, Oberwolfach Reports 3/3, G-M. Greuel, European Mathematical Society, Zürich (2006), 2509-2511.
- [72] Lattice cohomology of normal surface singularities (its second part contains parts of the unpublished preprint “Line bundles associated with normal surface singularities”, math.AG/0310084), *Publ. RIMS. Kyoto Univ.*, **44** (2008), 507-543.
- [73] The degree of the discriminant of irreducible representations, (joint paper with L.M. Fehér and R. Rimányi), *Journal of Algebraic Geometry*, **17** (2008), 751-780.
- [74] Poincaré series associated with surface singularities, *Singularities I: Algebraic and Analytic Aspects*, International Conference in Honor of the 60th Birthday of Lê Dung Tráng, 2007, Cuernavaca, Mexico, *Contemporary Mathematics*, **474**, 2008, 271-299.

- [75] The Seiberg-Witten invariant conjecture for splice-quotients, (joint paper with T. Okuma), *Journal LMS* **28** (2008), 143-154.
- [76] On the Casson Invariant Conjecture of Neumann-Wahl (joint paper with T. Okuma), *Journal of Algebraic Geometry*, **18** (2009), 135-149.
- [77] On the canonical contact structures of links of complex surface singularities, Proceedings of the *Geometry of Singularities and Manifolds, Kusatsu 2008*, 2009, 99-118.
- [78] Surgery formula for the Seiberg-Witten invariants of negative definite plumbed 3-manifolds, (joint paper with G. Braun), *J. reine angew. Math.*, **638** (2010), 189-208.
- [79] Monodromy eigenvalues are induced by poles of zeta functions — the irreducible curve case (joint paper with W. Veys), *Bull. Lond. Math. Soc.* **42** (2010), no. 2, 312–322.
- [80] On the Milnor fibers of cyclic quotient singularities, (joint paper with P. Popescu-Pampu), *Proc. London Math. Soc.* **101**(2) (2010), 497–553.
- [81] On the Milnor fibers of sandwiched singularities, (joint paper with P. Popescu-Pampu), *Int. Math. Res. Not.* **6** 2010, 1041–1061.
- [82] The embedding dimension of weighted homogeneous surface singularities, (joint paper with T. Okuma), *Journal of Topology*, **3** (2010), 643–667.
- [83] Invariants of open books of links of surface singularities (joint paper with M. Tosun), *Studia Sc. Math. Hungarica*, **48**(1) (2011), 135–144.
- [84] Principal analytic link theory in homology sphere links (joint paper with W.D. Neumann and A. Pichon), Proc. of the Conference in Honor of the 60th Birthday of A. Libgober, *Topology of Algebraic Varieties*, Jaca (Spain), June 2009; *Contemporary Math.* **538** (2011), 377–387.
- [85] The Milnor fibre signature is not semi-continuous (joint paper with D. Kerner), Proc. of the Conference in Honor of the 60th Birthday of A. Libgober, *Topology of Algebraic Varieties*, Jaca (Spain), June 2009; *Contemporary Math.* **538** (2011), 369–376.
- [86] Two exact sequences for lattice cohomology, arXiv:1001.0640, Proc. of the conference to honor H. Moscovici’s 65th birthday, *Contemporary Math.* **546** (2011), 249–269.
- [87] The Seiberg–Witten invariants of negative definite plumbed 3–manifolds, *Journal of EMS* **13**(4) (2011), 959–974.
- [88] Some properties of the lattice cohomology, Proceedings of the ‘Geometry of Singularities and Manifolds’ conference at Yamagata University, Japan, September 2010, 42-60.
- [89] Yuri Ivanovich Manin, *Acta Math. Hungarica*, **133** (1-2) (2011), 1–13.
- Yuri Ivanovich Manin (in Hungarian), *Magyar Tudomány*, **172**, 2011/7, 839–842.
- [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.
- [93] Spectrum of plane curves via knot theory, (joint manuscript with M. Borodzik), *Journal of LMS*, II Ser. **86** (1) (2012), 87–110.
- [94] The lattice cohomology of $S^3_{-d}(K)$, (joint manuscript with F. Román), in *Zeta Functions in Algebra and Geometry, Contemporary Mathematics* **566**, Amer. Math. Soc., Providence, RI, 2012, pp. 261–292. (Proc. of 2010 Mallorca conference).
- [95] A counterexample to Durfee’s conjecture, (joint manuscript with D. Kerner) *Mathematical Reports of the Acad. of Soc., The Royal Soc. of Canada*, **34** (2) (2012), 50–64.
- [96] The cohomology of line bundles of splice-quotient singularities, *Advances in Math.*, **229**(4), 2503–2524 (2012).
- [97] Heegaard Floer homologies for (+1) surgeries on torus knots (joint manuscript with M. Borodzik), *Acta Math. Hungarica* **139**(4) (2013), 303–319.
- [98] Hodge–type structures as link invariants, (joint manuscript with M. Borodzik), *Annales de L’Institute Fourier* **63**(1), 269–301 (2013).
- [99] The ‘corrected Durfee’s inequality’ for homogeneous complete intersections, (joint manuscript with D. Kerner), *Math. Zeitschrift* **274**, Issue 3–4 (2013), 1385–1400.
- [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.
- [101] Ehrhart theory of polytopes and Seiberg-Witten invariants of plumbed 3-manifolds, (joint manuscript with T. László), arXiv:1211.2539, *Geometry and Topology*, **18** (2014), 717–778.
- [102] On the semicontinuity of the mod 2 spectrum of hypersurface singularities, (joint manuscript with M. Borodzik and A. Ranicki), *J. of Algebraic Geometry* **24** (2015), 379–398.
- [103] Reduction theorem for lattice cohomology, (joint manuscript with T. László), *Int. Math. Res. Notices* **2015**, Issue 11 (2015), 2938–2985.
- [104] Holomorphic arcs on analytic spaces (joint manuscript with J. Kollár), *Inventiones math.* 200 issue 1 (2015), 97–147.
- [105] The Hodge spectrum of analytic germs on isolated surface singularities (joint manuscript with M. Borodzik), *J. Math. Pures Appl.* 103 (5) (2015), 1132–1156.

- [106] Immersions associated with holomorphic germs (joint with G. Pintér), *Comment. Math. Helv.* 90 (2015), 513–541.
- [107] Lattice and Heegaard Floer Homologies of Algebraic Links, (joint manuscript with E. Gorsky), *Int. Math. Res. Notices* Vol. 2015 (2015) 12737–12780. (It is the revised version of ‘Poincaré series of algebraic links and lattice homology’ arXiv:1301.7636).
- [108] The geometric genus of hypersurface singularities (joint manuscript with B. Sigurdsson), *Journal of European Math. Soc.* 18 (2016), 825–851.
- [109] Morse theory for manifolds with boundary, (joint manuscript with M. Borodzik and A. Ranicki), *Algebraic & Geometric Topology* 16:2 (2016), 971–1023.
- [110] Links of plane curve singularities are L-space links, (joint manuscript with E. Gorsky), *Algebraic & Geometric Topology* 16:4 (2016), 1905–1912.
- [111] Lattice cohomology and rational cuspidal curves, (joint manuscript with J. Bodnár), *Math. Research Letters* 23 (2016) no:2, 339–375.
- [112] A generalized FKG-inequality for compositions, (joint manuscript with D. Kerner), *Journal of Combinatorial Theory, Series A.* 146 (2017), 184–200.
- [113] Durfee-type bound for some non-degenerate complete intersection singularities, (joint manuscript with D. Kerner), *Math. Zeitschrift* 285 (2017) no. 1-2, 159–175.
- [114] Seiberg–Witten invariant of the universal abelian cover of $S^3_{-p/q}(K)$, (joint manuscript with J. Bodnár), *Proceedings Singularities and Computer Algebra – Festschrift for Gert-Martin Greuel on the Occasion of his 70th Birthday*, Springer, 2017, Ed’s: W. Decker, G. Pfister, M. Schulze; 173–197.
- [115] Euler characteristics of Hilbert schemes of points on surfaces with simple singularities (joint paper with Á. Gyenge and B. Szendrői), (short version, announcement), *Int. Math. Research Notices* (2017) 2017 Issue 13, 4152–4159.
- [116] Durfee’s conjecture on the signature of smoothings of surface singularities, (joint manuscript with J. Kollár, with an appendix by T. de Fernex), *Annales Scient. de l’Ecole Norm. Sup.* 4^e série, t. 50 (2017), 787–798.
- [117] Analytic singularities supported by a specific integral homology sphere link, (joint manuscript with T. Okuma), *Methods and Applications of Analysis*, Vol. 24, No. 2, pp. 303–320, June 2017. Special volume dedicated to Henry Laufer’s 70th birthday on February 15, 2017 (Conference at Sanya, China).
- [118] Links of rational singularities, L-spaces and LO fundamental groups, *Inventiones mathematicae* 210(1) (2017), 69–83.
- [119] Euler characteristics of Hilbert schemes of points on simple surfaces singularities (joint paper with Á. Gyenge and B. Szendrői), *European Journal of Mathematics*, Vol. 4, Issue 2 (2018), 439–524.

- [120] On the set of L-space surgeries for links, (joint manuscript with E. Gorsky), *Adv. in Math.* **333** (2018), 386–422.
- [121] Pairs of invariants of surface singularities, *Proc. Int. Cong. of Math.* 2018 Rio de Janeiro, Vol. 1, 745–776.
- [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.
- [123] Linear subspace arrangements associated with normal surface singularities, *Journal of Singularities* **18** (2018), 464–476; volume dedicated to E. Brieskorn.
- [124] Combinatorial duality for Poincaré series, polytopes and invariants of plumbed 3-manifolds (joint paper with T. László and J. Nagy), arXiv:1805.03457, *Selecta Mathematica* (New series) **25** (2019), no. 2, Art. 21, 31 pp.
- [125] The Abel map for surface singularities I: generalities and examples. (joint manuscript with J. Nagy), *Mathematische Annalen* **375**(3) (2019), 1427–1487.
- [126] Surgery formulae for the Seiberg–Witten invariant of plumbed 3-manifolds, (joint manuscript with T. László and J. Nagy), arXiv:1702.06692, *Revista Matemática Complutense* **33** (2020), 197–230.
- [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.
- [130] The Geometric P=W conjecture in the Painlevé cases via plumbing calculus (joint with Szilárd Szabó) arXiv:2001.11720, to appear in *IMRN*.
- [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*.
- [133] Motivic Poincaré series of cusp surface singularities (joint manuscript with J. Nagy), to appear in the Proceedings of *Escuela de Matemáticas Lluís Santaló 2019: p-adic Analysis, Arithmetic and Singularities*, Contemporary Math.

- [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.
- [135] The dimension of the image of the Abel map associated with normal surface singularities (joint manuscript with J. Nagy), arXiv:1909.07023, submitted.
- [136] The delta invariant of curves on rational surfaces II: Poincaré series and topological aspects (joint manuscript with J. I. Cogolludo-Agustín, T. László, J. Martín-Morales), arXiv:2003.07110, submitted.
- [137] The multiplicity of generic normal surface singularities, (joint manuscript with J. Nagy), arXiv:2005.10867, submitted.
- [138] Polar exploration of complex surface germs, (joint manuscript with André Belotto da Silva, Lorenzo Fantini and Anne Pichon), arXiv:2103.15444, submitted.
- [139] Local Newton nondegenerate Weil divisors in toric varieties, (joint manuscript with Baldur Sigurdsson), arXiv:2102.02948, submitted.
- [140] Normal reduction number of normal surface singularities (joint manuscript with J. Nagy and T. Okuma), arXiv:2108.12274, submitted.
- [141] Surface singularities, Seiberg–Witten invariants of their links and lattice cohomology, submitted.
- [142] Discriminant of the ordinary transversal singularity type. The local aspects. (joint manuscript with D. Kerner), submitted
- [143] Discriminant of the ordinary transversal singularity type. The global equivalence class. (joint manuscript with M. Kazarian and D. Kerner), arXiv:1308.6045, submitted.
- [144] Analytic lattice cohomology of normal surface singularities, (joint manuscript with T. Ágoston), arXiv:2108.12294.
- [145] Analytic lattice cohomology of surface singularities, II (the equivariant case), (joint manuscript with T. Ágoston), arXiv:2108.12294
- [146] Analytic lattice cohomology of curve singularities, (joint manuscript with T. Ágoston)
- [147] Analytic lattice cohomology of isolated singularities (joint manuscript with T. Ágoston)