Dr. Vera Vértesi
Curriculum Vitae

🏠 Faculty of Mathematics
University of Vienna
Oskar-Morgenstern-Platz 1,
1090 Wien, AUSTRIA
📞 (+43) 1 4277 50601
✉ vera.vertesi@univie.ac.at
🖥 https://homepge.univie.ac.at/Vera.Vertesi

RESEARCH INTERESTS

low dimensional topology, contact and symplectic geometry, knots, tangles, Heegaard Floer homology, TQFT

POSITIONS

2020 – PRESENT	**University of Vienna**, Assistant Professor
2014 – 2019	**CNRS** (French National Center for Scientific Research) Université de Strasbourg – Researcher (CR1)
2012 – 2014	**CNRS** (French National Center for Scientific Research) Université de Nantes – Researcher (CR2)
2010 – 2012	**MIT**, Cambridge, USA CLE Moore Instructor (Postdoc)
2009 – 2010	**MSRI**, Berkeley, USA Postdoc
2009	**Alfréd Rényi Institute**, Budapest Young Researcher (Postdoc)

THIRD-PARTY FUNDING

2016–2020	**ANR**: Quantum topology and contact geometry
2011–2015	**NSF grant PI** (126.256 USD): Contact manifolds and Heegaard Floer homology
2010–2014	**OTKA**: Topology of Manifolds
2009–2013	**OTKA**: Complexity and Algebra
2007–2010	**OTKA**: Discrete and Continuos
2007–2009	**OTKA**: Singularities and Holomorph geometry

ACADEMIC VISITS

MAY–AUG, 2018	**Australian National University**, Canberra
APR–JUNE, 2017	**Newton Institute**, Cambridge, UK
OCT–NOV, 2015	**Institute Mittag–Leffler**, Stockholm
APR–MAY, 2014	**Alfréd Rényi Institute**, Budapest
JAN–FEB, 2014	**University of California**, Santa Barbara
JULY–AUG, 2013	**University of California**, Santa Barbara
MAY, 2013	**Simons Center for Geometry and Physics**, Stony Brook
APR, 2013	**University of California**, Santa Barbara
JAN–FEB, 2013	**University of California**, Santa Barbara
JULY, 2012	**Alfréd Rényi Institute**, Budapest
SEP–DEC, 2011	**Institute for Advanced Study**, Princeton
MAY, 2009	**University of Cape Town**, South Africa
SEP–OCT, 2008	**Georgia Institute of Technology**, Atlanta
OCT, 2007–MAY, 2008	**Columbia University**, New York
SEP–OCT, 2007	**University of Cape Town**, South Africa
OCT 2005–MAR, 2006	**ETH**, Zürich
OCT–NOV, 2004	**Babes-Bolyai University**, Cluj, Romania

EDUCATION

2005 – 2009	**ELTE** (Eötvös Loránd University), Budapest
23.AUG.2009	**Ph.D. in Mathematics**, Summa Cum Laude
2000 – 2005	**ELTE** (Eötvös Loránd University), Budapest Diploma with Honours in Mathematics
1996 – 2000	**Fazekas Mihály Secondary School**, Budapest Special Program in Mathematics

HONORS AND AWARDS

2019	**Microsoft Research Family Fellowship** ICERM, Providence
2017	**Simons Fellow**, Newton Institute, Cambridge
2014	**Prime d'Excellence Scientifique** 3 year grant of the CNRS
2011	**American Women in Mathematics** travel grant
2008	**Eötvös Fellowship**, Hungarian Ministry of Education
2005	**Pro Scientia Gold Medal**, awarded every two years **Excellent Student Award**, Eötvös Loránd University
2004	**Rényi Kató Award**, Bolyai János Mathematical Society

LANGUAGE SKILLS

Hungarian (native), English (C2), French(B2), German(B1)

SYNERGIC ACTIVITIES

2020	**Panelist** for the National Science Fundation
2019	**Project leader** Women in Symplectic and Contact Geometry and Topology, **ICERM**
2012	**AMS special session** on Symplectic and Contact Geometry

STUDENT SUPERVISION

2021–PRESENT	Willi Kepplinger, **graduate student**,
2021–PRESENT	Eric Stenhede, **graduate student**,
2016–PRESENT	Viktoria Földvári, **graduate student**, ELTE (Eötvös Loránd University), Budapest
2020	Willi Kepplinger, **master student**, University of Vienna
2016–2017	Pierre Antoine Oria, **master student** (M2), Université de Strasbourg
2012	Raaez Lorgat, **undergraduate** research opportunity, MIT

PERSONAL

I was born on 13 April 1982 in Budapest, Hungary. My husband is from Linz, Austria. We have two wonderful daughters, Zsófi (2015) and Kinga (2017). I love biking, hiking and snowboarding.

PUBLICATIONS LIST

[15] **Quantum** $gl(1|1)$ **and tangle Floer homology** (with A.P. Ellis and I. Petkova) accepted to *Advances of Mathematics*, arXiv:1510.03483
http://irma.math.unistra.fr/~vertesi/quantum.pdf

[14] **Combinatorial tangle Floer homology** (with I. Petkova), *Geometry & Topology*, 20:3219–3332, 2016. (2 citations)
http://irma.math.unistra.fr/~vertesi/tangle.pdf

[13] **On the equivalence of Legendrian and transverse invariants in knot Floer homology**, (with J. Baldwin, D.S. Vela-Vick) *Geometry & Topology*, 17:905–924, 2013. (5 citations) http://irma.math.unistra.fr/~vertesi/lossgrid.pdf

[12] **Legendrian and transverse twist knots** (with J. Etnyre and L. Ng) *Journal of the European Mathematical Society*, 15:969–995, 2013. (13 citations) http://irma.math.unistra.fr/~vertesi/twist.pdf

[11] **On invariants for legendrian knots.** (with A. Stipsicz) *Pacific Journal of Mathematics*, Vol.239 1:157–177, 2009. (10 citations) http://irma.math.unistra.fr/~vertesi/contactinvariant.pdf

[10] **Legendrian satellites** (with J. Etnyre) *International Mathematics Research Notices*, 23:7241–7304, 2018

[9] **An introduction to tangle Floer homology** (with I. Petkova) *Proceedings of the Gökova Geometry-Topology Conference 2015*, 168–186, 2016.

[8] **A self-pairing theorem for tangle Floer homology** (with I. Petkova) *Algebraic & Geometric Topology*, 16:2127–2141, 2016.

[7] **The equivalence problem over finite rings** (with Cs. Szabó) *International Journal of Algebra and Computation*, 21:449–457, 2011. (5 citations)

[6] **Knots and smooth 3–manifolds – Heegaard Floer homology** (in Hungarian) *Matematikai Lapok, Új sorozat*, 17:35–73, 2011.

[5] **Checking identities over finite 0-simple semigroups** (in Hungarian) *Matematikai Lapok, Új sorozat*, 13:54–75, 2008.

[4] **Transversely nonsimple knots** *Algebraic & Geometric Topology*, 8:1481–1498, 2008. (7 citations)

[3] **The membership problem in finite flat hypergraph algebras** (with G. Kun) *International Journal of Algebra and Computation*, 17:449–459, 2007. (4 citations)

[2] **The complexity of checking identities for finite matrix rings** (with Cs. Szabó) *Algebra Universalis*, 51:439–445, 2004. (8 citations)

[1] **The complexity of the word-problem for finite matrix rings** (with Cs. Szabó) *Proceedings of the American Mathematical Society*, 132:3689–3695, 2004. (8 citations)

PREPRINTS AND OTHER PUBLICATIONS

· **Braids in contact 3–manifolds**, Winter Braids Lecture Notes 4. (2017), Winter Braids VII (Caen, 2017), 4:1–23

· **The complexity of the identity checking problem in 0-simple semigroups** (in Russian, with S. Pletseva) *Journal of Ural State University*, 43:72–103, 2006.

· **Additivity of support norm for tight contact structures** (submitted to Journal of Differential Geometry) arXiv:1902.08030

· **Foliated Open books** (with J. Licata) arXiv:2002.01752

· **Contact Invariant in bordered Floer homology** (with I. Petkova, A. Alishahi, V. Földvári, K. Hendricks and J. Licata)

· **Lattice homology for links** (with A. Stipsicz)

INVITED CONFERENCE TALKS

JUNE, 2020	**Interactions of gauge theory with contact and symplectic topology in dimensions 3 and 4**, (Online) Banff, Canada
JUNE, 2020	**Holomorphic curves and low-dimensional topology**, Dubrovnik, Croatia (canceled due to COVID-19)
AUG, 2019	**Durham Symposium**, Durham, UK
JUL, 2019	**Frontiers in Floer homology**, Boston, USA
JUL, 2019	**Women in Symplectic and Contact Geometry and Topology workshop, IMPA**, Providence, USA
JUNE, 2017	**Swissmap - Women in Geometry and Topology**, Zürich, Switzerland

JAN, 2017	**CAST - Contact and Symplectic Topology**, Nantes, France
SEP, 2016	**1 and half day for 2-categories and 3-manifolds**, Montpellier, France
SEP, 2016	**British Topology Meeting**, Glasgow, Scotland
JUNE, 2016	**SMF 2016 : Premier Congrès de la Société Mathématique de France**, Tours, France
MAY, 2014	**Low Dimensional Topology**, Budapest, Hungary
SEP, 2013	**British Topology Meeting**, Aberdeen, Scotland
DEC, 2012	**Symplectic and Low Dimensional Topologies in Interaction**, Simons Center, Stony Brook, USA
JULY, 2010	**7th Bolyai-Lobachevsky-Gauss conference**, Cluj-Napoca, Romania
MAY, 2010	**Knots, Contact Geometry and Floer Homology**, University of Tokyo, Japan
JAN, 2010	**Introductory Workshop: Homology Theories of Knots and Links**, MSRI, Berkeley, USA
JAN, 2010	**Connections for Women: Homology Theories of Knots and Links**, MSRI, Berkeley, USA
SEP, 2009	**AIM Workshop: Legendrian and transverse knots**, Palo Alto, USA
MAY, 2008	**2008 Program for Women in Mathematics**, IAS, Princeton, USA
JULY, 2007	**Conference on Universal Algebra and Lattice Theory**, Szeged, Hungary
JULY, 2005	**Conference on Universal Algebra and Lattice Theory**, Szeged, Hungary
JULY, 2004	**Logic Colloquium 2004**, Torino, Italy
MAY, 2004	**International Algebraic Conference**, Moscow, Russia
AUG, 2003	**Novi Sad Algebraic Conference**, Novi Sad, Serbia
JUL, 2002	**Conference on Universal Algebra and Lattice Theory**, Szeged, Hungary

SEMINAR TALKS

2020	Alfréd Rényi Institute (online), BACH−Bochum, Aachen, Cologne, Heidelberg (online) Western Hemisphere virtual symplectic seminar
2019	Symplectix (Université Paris-Sud II), Université de Strasbourg, Imperial College
2018	Alfréd Rényi Institute, Australian National University, Monash University, University of Sydney, University of Geneva
2017	Newton Institute, Université Paris Rive Gauche (Paris 7), University of Vienna
2016	Université Pierre et Marie Curie (Paris 6), Université Paris Rive Gauche (Paris 7), University of Regensburg
2015	University of Cambridge, Mittag−Leffler Institute, University of Heidelberg
2014	University of Heidelberg, Université de Strasbourg, Alfréd Rényi Institute, Hungarian Academy of Science
2013	Symplectix (Université Paris-Sud II), University of California Santa Barbara, Université Joseph Fourier (Grenoble), Alfréd Rényi Institute (Budapest)
2012	IST Austria, Université Catholique de Louvain, Université de Rennes, Université de Nantes
2011	Princeton University, University of Pennsylvania, Philadelphia, Harvard University, Université de Nantes, University of Southern California, University of Georgia
2010	Boston College, University of Massachusetts, Amherst, MIT, Georgia Institute of Technology, University of Southern California, Alfréd Rényi Institute
2009	MSRI, Georgia Institute of Technology, Alfréd Rényi Institute
2008	Georgia Institute of Technology, Alfréd Rényi Institute, Columbia University, Duke University, University of Georgia
2005	ETH Zürich
2004	University of Novi Sad
2003	Alfréd Rényi Institute, Attila József University (Szeged)

GRADUATE TEACHING

2017	**Lecturer**, "Braids in contact geometry", Winter Braids VII, Caen, week long program on braids
2016	**Lecturer**, "Legendrian knots", CEU Summer University, Budapest, week long program in low dimensional topology
2009	**Reading seminar on bordered Floer Homology**, Alfréd Rényi Institute, Budapest
2009	**Seminar on higher dimensional open books**, MSRI, Berkeley
2009	**Problem session** on Summer Graduate Workshop: Symplectic and Contact Geometry and Topology, MSRI, Berkeley
2008	**Mini course on Heegaard Floer homology**, Cape Town University, South Africa

UNDERGRADUATE TEACHING

2021	**Lecturer, Contact Topology** (3), University of Vienna
2020	**Lecturer, Algebraic Topology** (4+1), University of Vienna
2020	**Lecturer, Differential Topology** (2), University of Vienna
2012	**Lecturer, Introduction to Topology**, MIT
2011–2012	**Teaching Assistant, Multivariable Calculus with Theory**, MIT
2010	**Course Administrator, Linear Algebra**, MIT
2009	**Teaching Assistant, Introduction to Topology**, Eötvös Loránd University, Budapest
2002, 2007	**Teaching Assistant, Linear Algebra and Geometry**, Eötvös Loránd University, Budapest
2003–2004	**Teaching Assistant, Galois Theory**, Budapest Semester of Mathematics
2003–2004	**Teaching Assistant, Number Theory**, Budapest Semester of Mathematics
2001–2005	**Teaching Assistant, Introduction to Computer Science**, Budapest University of Technology and Economics

TEACHING CHILDREN

2014	**Camp Euclid**, online summer research camp for 10-19–year-olds
2013, 2014	**Fête de la Science**, a day of mathematical activities for 10-16–year old children, Strasbourg and Nantes
2012	weekly **Math Circle** for 8-10–year-old children, Graham Parks and School, Cambridge, USA
2011	15–minute video for **Girls' Angle** Women in Mathematics Video Series
2009–2010	talks on various **Math circles** in Berkeley, San Francisco and Boston
1997–1999	weekly **Problem Solving Seminar**, for 12-14–year-old children, Fazekas Mihály Secondary School, Budapest