



Vienna Center for
Logic and Algorithms



Annual Report 2017/2018

Contents

| | |
|----|------------------------------------------------------|
| 5 | About VCLA |
| 6 | In Memoriam |
| 7 | Organization |
| 9 | Activities |
| 10 | LogicLounge |
| 10 | Toby Walsh |
| 11 | Ethics and Morality of Robotics |
| 12 | Logic in Computer Science – A Teaching Perspective |
| 13 | Conferences |
| 13 | Practice and Theory of Automated Timetabling (PATAT) |
| 14 | EDBT/ICDT Joint Conference 2018 |
| 16 | Workshops |
| 16 | Research Workshop on Confluent Graphs |
| 17 | Deontic Reasoning |
| 19 | Helmut Veith Memorial Workshop |
| 20 | Substructural Logics |
| 21 | Symposia |
| 21 | In Honour of Georg Gottlob |
| 22 | In Memoriam Helmut Veith |

| | |
|-----------|-------------------------------------|
| 23 | Science Education |
| 23 | Children's University Vienna |
| 24 | Algorithms in 60 Seconds |
| 26 | Long Night of Research |
| 27 | VCLA International Student Awards |
| 29 | Helmut Veith Stipend |
| 30 | Cooperations |
| 30 | Workshop Women in Logic |
| 31 | Vienna Ball of Sciences |
| 32 | Logical Methods in Computer Science |
| 33 | Invited Speakers and Visitors |
| 35 | Media Coverage |
| 46 | VCLA Chairs 2014-2017 |
| 47 | VCLA Chairs since 2018 |
| 48 | Organization 2014-2017 |

About VCLA



Vienna Center for Logic and Algorithms

The Vienna Center for Logic and Algorithms (VCLA) is a globally unique competence center in the field of logic and algorithm research.

It was founded in September 2011 and officially opened in January 2012 in the presence of the rector of the Technische Universität Wien (TU Wien) Sabine Seidler and Turing Award laureate Edmund M. Clarke. The Center was founded by Stefan Szeider and Helmut Veith and led by both until Helmut Veith passed away in March 2016.

In December 2017, Agata Ciabattoni became the new elected co-chair, and the VCLA board structure changed. The changes are presented at the end of this report.

The VCLA was funded by TU Wien for its first four-year period and will continue to be funded for another four years in association with the Doctoral College Logical Methods in Computer Science (LogiCS).



The Center aims at promoting international scientific collaboration in logic and algorithms and communicating Austria's excellence in these two areas of computer science research, using a variety of channels.

These objectives are realized through various activities which include:

- VCLA International Student Awards for Outstanding Theses
- LogicLounge
- VCLA Workshop Series
- VCLA Schools, a series of winter and summer schools
- VCLA Visitor Program
- hosting of talks by renowned international speakers
- co-organisation of events, and
- science education

www.vcla.at

In Memoriam

VCLA co-chair Helmut Veith (1971-2016) passed away in tragic circumstances on March 12, 2016.

Accompanying the rebirth of the Austrian logic scene his marking of the field, space, and time is further on augmented by the students who he mentored, and by his visionary activities of building bridges between the computer science expert and the layman.

Helmut studied Computational Logic at TU Wien, a *studium irregulare* with a curriculum he designed himself, together with Richard Zach. After appointments at TU Munich and TU Darmstadt, he returned to TU Wien for a full professorship in Computer Aided Verification.

Helmut's passion for logic led him to establish not only the Vienna Center for Logic and Algorithms with Stefan Szeider, but also to bring the largest logic conference in history to Austria - the Vienna Summer of Logic. Helmut served as the speaker of the Doctoral College Logical Methods in Computer Science and as the deputy coordinator of the National Research Network Rigorous Systems Engineering (RiSE).

Posthumously, Helmut was awarded



Photo (c) Philipp Horak

the ERC Advanced Grant - one of the highest academic distinctions in Europe - for his project HYDRA (Harnessing Model Checking for Distributed Algorithms).

In honor of Helmut's advocacy for women in computer science, the TU Wien, the Wolfgang Pauli Institute, and Helmut's friends and colleagues fund the Helmut Veith Stipend for Female Master's Students.

Memorial site listing his achievements in academia and beyond:

<http://www.vcla.at/2016/03/>

Organization since 2018

The VCLA is coordinated by the executive board in consultation with the local board while taking into account the strategic advice from the external advisory board.

| Executive Board | Local Board |
|-----------------------------|-------------------|
| Agata Ciabattoni (co-chair) | Matthias Baaz |
| Thomas Eiter | Laura Kovács |
| Matteo Maffei | Alexander Leitsch |
| Reinhard Pichler | Martin Nöllenburg |
| Stefan Szeider (co-chair) | Magdalena Ortiz |
| Georg Weissenbacher | Stefan Woltran |

| External Advisory Board | |
|---------------------------------------------|------------------------------------------------|
| Roderick Bloem (TU Graz) | Georg Gottlob (TU Wien/Oxford University) |
| Nadia Creignou (Université d'Aix-Marseille) | Anuj Dawar (University of Cambridge) |
| Fedor Fomin (University of Bergen) | Miroslaw Truszczynski (University of Kentucky) |
| Moshe Y. Vardi (Rice University) | |

| PR and Project Management | Mihaela Rozman |
|---------------------------|----------------|
|---------------------------|----------------|

Collaborations

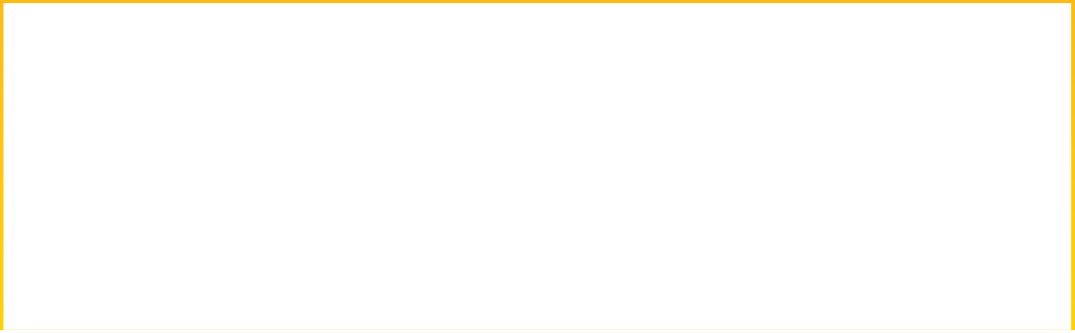
The VCLA frequently collaborates with the following co-funding institutions:

- Kurt Gödel Society (KGS)
- Austrian Rigorous Systems Engineering (ARiSE)
- Wolfgang Pauli Institute (WPI)
- Institute of Science and Technology Austria (IST Austria)

Logic and Algorithms Groups

The Center is hosted by six research groups at the Faculty of Informatics:

- Algorithms and Complexity Group
- Database and Artificial Intelligence Group
- Formal Methods in Systems Engineering Group
- Knowledge-Based Systems Group
- Theory and Logic Group
- Security and Privacy Group



Activities

The VCLA annual report summarises our activities through the year. This report, provides details on the activities between October 1, 2017, and September 30, 2018.

The activities presented in this report are divided in the following subsections:

- **LogicLounge**

After the successes of the Logiclounge series of public discussions first held at the Vienna Summer of Logic in 2014 (the largest event in the history of logic), VCLA continuous this series of discussions with eminent scientists in the areas of logic, philosophy, mathematics, computer science and artificial intelligence, and the public.

- **Conferences**
- **Workshops**
- **Symposiums**
- **Science Education**
- **VCLA International Awards**

The annually awarded VCLA International Student Awards aim to recognize and support students all over the world for their outstanding scientific works in the field of Logic and Computer Science in two categories: Outstanding Master Thesis and Outstanding Undergraduate Thesis. The Awards are dedicated to the memory of Helmut Veith, the initiator of the award.

- **Helmut Veith Stipend**

The Helmut Veith Stipend is awarded annually to excellent female students in the field of computer science who pursue (or plan to pursue) one of the master's programs in Computer Science at TU Wien. The annual deadline is November 30. The Helmut Veith Stipend is dedicated to the memory of an outstanding computer scientist, and a strong advocate and mentor for women in computer science.

- **Cooperations**

Activities - LogicLounge

LogicLounge: Toby Walsh

LogicLounge with Toby Walsh “Living with Artificial Intelligence – How to stay Human” took place at TU Wien in September 2018.

Prof. Walsh (UNSW Sydney) has addressed the opportunities, myths, and questions surrounding the economic, cultural, political, and legal changes brought about by artificial intelligence in one-hour long public debate with the moderator Franz Zeller (ORF), and the audience.

More than 300 participants were invited to participate in a giveaway to win a signed copy of Toby Walsh’s book *It’s Alive!: Artificial Intelligence from the Logic Piano to Killer Robots*, whose German translation appeared on the bookshelves at the end of September 2018. The debate was also attended by invited high school classes.

After the successes of the Logiclounge series of public discussions first held at the Vienna Summer of Logic in 2014 (the largest event in the history of logic), the discussions with eminent scientists in the areas of logic, philosophy, mathematics, computer science and artificial intelligence, and the public continue.



LogicLounge with Toby Walsh*



Anna Prianichnikova, Franz Zeller, Herta Veith, Stefan Szeider, Toby Walsh, Vesna Sabljakovic-Fritz, Stefan Woltran, Thomas Eiter, Georg Weissenbacher, Uwe Egly*

The LogicLounge has since become an event travelling between Vienna and the venue of the CAV (Computer Aided Verification) conferences, where it has already become a regular event in honour of the late Prof. Helmut Veith (1971-2016).

Recording is available:

<http://www.vcla.at/logiclounge/>

Activities - LogicLounge

LogicLounge: Ethics and Morality of Robotics

The LogicLounge on Ethics and Morality of Robotics took place in the Oxford Union Debating Chamber in July 2018 as a joint public debate hosted by the Federated Logic Conference (FLoC) 2018 and VCLA.

The debate among the six panelists specialized in ethics, law, computer science, data security and privacy was moderated by Judy Wajcman (LSE).

It brought together over 350 participants interested in the discussion on the profound ethical and moral implications of big data and algorithms influencing public policy and everyday livelihoods.

After the successes of this series of public discussions, first held at the Vienna Summer of Logic in 2014 (the largest event in the history of logic), the LogicLounge has since become an event travelling between Vienna and the venue of the CAV (Computer Aided Verification) conferences, where it has already become a regular event in honour of the late Prof. Helmut Veith (1971-2016).

Panelists

- Luciano Floridi (U. of Oxford)
- Ben Kuipers (U. of Michigan)
- Francesca Rossi (AI Ethics Global Leader; IBM Research AI; U. Padova)
- Matthias Scheutz (Tufts University)
- Sandra Wachter (U. of Oxford)
- Jeannette Wing (Columbia University)

Organizers

- May Chan (FLoC 2018)
- Marta Kwiatkowska (U. of Oxford)
- Mihaela Rozman (VCLA)
- Georg Weissenbacher (TU Wien / VCLA)

Recording is available at
<http://www.vcla.at/logiclounge>



The panelists and the moderator of the LogicLounge

Activities - LogicLounge

LogicLounge: Logic in Computer Science – A teaching perspective

The LogicLounge on Logic in Computer Science – A teaching perspective, took place at TU Wien in October 2017. This edition was dedicated in memoriam Helmut Veith, the initiator of the LogicLounge discussion series.

The topic of the event honored Helmut Veith's contributions to the education of numerous young researchers. Helmut was passionate about improving education in logic and computer science. The master program Logic and Computation and doctoral college on Logical Methods in Computer Science – LogiCS were established under his guidance.



Moderator Laura Kovács, with M. Huth and J. Makowsky, and A. Prianichnikova



Chair of FMCAD 2018 at TU Wien, Georg Weissenbacher, dedicating the LogicLounge in memoriam Helmut Veith

The panelists Michael Huth (Imperial College London) and Janos Makowsky (Technion) discussed the discrepancy between the needs for formal reasoning in practical application, and largely historically motivated curricula of teaching logic in computer science. The panelist offered some proposals on how to break the teaching tradition, and to introduce new patterns of knowledge dissemination. The discussion was moderated by Laura Kovács.

The LogicLounge marked the end of the Symposium in Memoriam Helmut Veith, part of the 17th Formal Methods in Computer-Aided Design Conference 2017 (FMCAD), chaired by Georg Weissenbacher.

<http://www.vcla.at/logiclounge>

Activities - Conferences

Conference: Practice and Theory of Automated Timetabling (PATAT 2018)

The 12th biannual conference on the Practice and Theory of Automated Timetabling (PATAT), hosted by the Database and Artificial Intelligence Group, attracted more than 80 participants to TU Wien in August 2018.

Hannes Werthner, the dean of the Faculty of Informatics, held the welcome speech. The scientific program comprised of 48 paper presentations, and four internationally renowned keynote speakers in the field of timetabling, optimization algorithms, artificial intelligence, and operations research as well as two invited tutorials.

The social events provided a range of networking activities in hallmarks of Viennese and Austrian cultural scene, among which stood out the ship tour on the Danube river in the UNESCO world heritage site – the Wachau.

The conference sponsors were the VCLA, EventMAP, EURO Working group on Automated Timetabling, MCP GmbH, and TU Wien.

Invited Speakers

- Johannes Gärtner (Ximes GmbH)
- Pascal Van Hentenryck (U. of Michigan)
- Louis-Martin Rousseau (ÉP de Montréal)
- Hana Rudová (Masaryk University)

Local Organizers

- Juliane Auerböck
- Emir Demirović
- Luca Di Gaspero
- Lucas Kletzander
- Florian Mischek
- Nysret Musliu
- Tommaso Urli
- Felix Winter

<http://patatconference.org/patat2018/>



Program chairs: Barry McCollum, Luca Di Gaspero, Ender Ozcan, Edmund Burke, Nysret Musliu

Activities - Conferences

Conference: EDBT/ICDT Joint Conference 2018

One of the most important international gatherings on data management technology and database theory – EDBT/ICDT Joint Conference 2018 attracted almost 330 participants to TU Wien in March 2018.

The joint EDBT/ICDT conference consisted of the 21st International Conference on Extending Database Technology (EDBT) and the 21st International Conference on Database Theory (ICDT).

The EDBT/ICDT 2018 combined the following workshops:

- the 20th International Workshop On Design, Optimization, Languages and Analytical Processing of Big Data (DOLAP)
- the 2nd International workshop on Data Analytics solutions for Real-Life Applications (DARLI-AP)
- the International Workshop on Big Data Visual Exploration and Analytics (BigVis)
- the Big Mobility Data Analytics (BMDA)



Poster presentations at EDBT/ICDT 2018

The conference was opened by the rector of TU Wien, Sabine Seidler. The scientific program was comprised of 118 paper presentations, tutorials, research challenges, Test of Time Awards, and several best paper and demonstration awards.

The community of researchers, practitioners and students had the opportunity to intensify the cooperation outside the lecture halls and to get to know all that is Viennese during the organized social events.

An interlude to EDBT/ICDT 2018 represented a special event in honour of professor Georg Gottlob (Oxford University, TU Wien).

The conference was sponsored by VCLA, the Wirtschaftskammer Wien, Oracle, SAP and TU Wien.

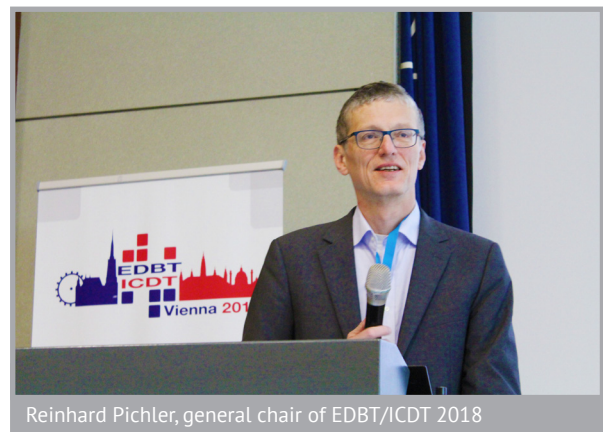
Activities - Conferences

Keynote Speakers

- Chris Jermaine (Rice University)
- Virginia Vassilevska Williams (MIT CSAIL)
- Ke Yi (Hong Kong U. of Science and Technology)
- Thomas Zeume (TU Dortmund)

Program Chairs

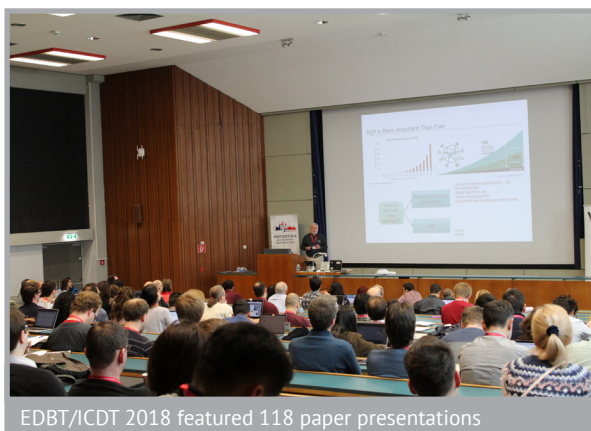
- Reinhard Pichler
(EDBT/ICDT chair, TU Wien)
- Michael Böhlen
(EDBT chair, University of Zürich)
- Benny Kimelfeld
(ICDT chair, Technion)



Reinhard Pichler, general chair of EDBT/ICDT 2018

Local Organizers

- Shqiponja Ahmetaj
- Juliane Auerböck
- Theresa Csar
- Johannes Fichte
- Wolfgang Fischl
- Adrian Haret
- Markus Hecher
- Markus Kröll
- Michael Morak
- Reinhard Pichler
- Sebastian Skritek



EDBT/ICDT 2018 featured 118 paper presentations

<http://edbticdt2018.at/index.html>

Activities - Workshops

Workshop: Research Workshop on Confluent Graphs

The research workshop on Confluent Graphs took place at TU Wien in July 2018. The workshop was organized jointly by the researchers at TU Wien, University of Würzburg, and University of Tübingen.

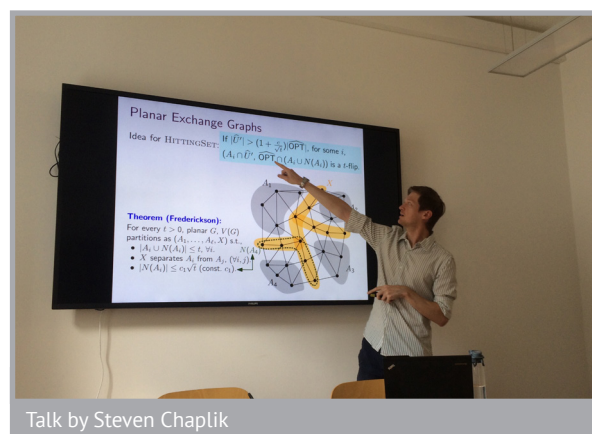
As data structures are used to store data in an organized form, and since data is the most crucial entity in computer science, the true worth of data structures is clear. The overall aim of the workshop was to stimulate discussion on the myriad of open problems in graph drawing and network visualization for algorithm engineering.

Steven Chaplick gave a talk on Approximation Schemes for Geometric Coverage Problems, which was opened for scientific public.

Organizers

- Steven Chaplick (U. of Würzburg)
- Henry Förster (U. of Tübingen)
- Fabian Klute (TU Wien)
- Andre Löffler (U. Würzburg)
- Martin Nöllenburg (Chair at TU Wien)

<http://www.vcla.at/events/research-workshop-on-confluent-graphs/>



Talk by Steven Chaplick

Activities - Workshops

Workshop: Deontic Reasoning - From Ancient Texts to Artificial Intelligence

The interdisciplinary workshop took place at TU Wien in June 2018. The workshop brought together experts from the fields of Logic, Sanskrit, Philosophy, Artificial Intelligence and Law for talks and brainstorming discussions.

The workshop featured 12 invited talks and 3 panel discussions.

Central questions that have guided the participants:

- (i) How can formal tools, such as mathematical logic or argumentation framework, enhance our understanding of ancient texts?
- (ii) And vice versa, what can we learn from ancient analyses with respect to the present quest for reasoning about laws or ethical machines (e.g. self-driving cars)?

The workshop is part of the project Reasoning Tools for Deontic Logic and Applications to Indian Sacred Texts, led by the VCLA co-chair Agata Ciabattoni and funded by Vienna Science and Technology Fund (WWTF).

The workshop was supported by WWTF, University of Vienna, Institute for the Cultural and Intellectual History of Asia (IKGA), TU Wien, and Wolfgang Pauli Institute, as well as VCLA.

The report on this interdisciplinary workshop appeared in ACM SIGLOG News 5(4), pp. 48-51 (2018).



Panel discussion with Giovanni Sartor and Matthias Baaz

Activities - Workshops

A selection of Invited speakers

- Matthias Baaz (TU Wien)
Logic
- David Brick (Yale U.)
Sanskrit
- Dov Gabbay (King's College)
Logic and AI
- Eberhard Guhe (Fudan U.)
Indian Philosophy
- Lawrence McCrea (Cornell U.)
Sanskrit
- Andrew Ollett (U. of Chicago)
Indian Philosophy
- Xavier Parent (U. of Luxembourg)
Artificial Intelligence
- Parimal Patil (Harvard U.)
Sanskrit and Indian Philosophy
- Giovanni Sartor (U. of Bologna)
Legal Reasoning

Organizers

- Agata Ciabattoni (TU Wien, chair)
- Elisa Freschi (ÖAW, co-chair)
- Francesca Gulisano (Scuola N.S., Pisa U.)
- Björn Lellmann (TU Wien)
- Matteo Pascucci (TU Wien)
- Kees van Berkel (TU Wien)

<https://mimamsa.logic.at/>



Panel discussion with Dov Gabbay and Lawrence MacCrea

Activities - Workshops

Workshop: Helmut Veith Memorial Workshop

The second workshop dedicated to the memory of the late VCLA co-founder Helmut Veith took place in Obertauern in January 2018.

The workshop is a continuation of Helmut's and Georg Moser's idea to give the community of logicians in computer science in Austria an opportunity for lively academic debates with internationally renowned researchers in the midst of the pristine nature of the Austrian Alps.

Among the participants were doctoral students as well as established researchers from Austrian universities and from abroad.

The workshop was supported by the VCLA, ARISE and University of Salzburg.

Keynote

- Orna Grumberg (Technion)

Organizers

- Adriana Pratter (TU Wien)
- Anna Prianichnikova (TU Wien)
- Ana Sokolova (U. of Salzburg)



Orna Grumberg (Technion)

<http://hvw2018.cs.uni-salzburg.at/>

Activities - Workshops

Workshop: Substructural logics – semantics, proof theory, and applications

This is the second workshop in the framework of the MSCA-RISE project SYSMICS (Syntax meets semantics—Methods, interactions, and connections in substructural logics). The workshop took place at TU Wien in February 2018.

Substructural logics are non-classical logics lacking some of the structural rules of classical logic and are motivated by philosophical, linguistic, and computational considerations. Traditionally, substructural logics have been investigated using proof theoretic and algebraic methods. In recent years, combined approaches have started to emerge.



One of the keynote speakers: David Pym

The report on the workshop was published in the ACM SIGLOG News, 5(2), pp. 58-60 (2018).

Invited Speakers

- Matteo Maffei (TU Wien)
- Francesco Paoli (U. of Cagliari)
- Elaine Pimentel (U. of Rio Grande de Norte)
- David Pym (UCL; Alan Turing Inst.)
- Alwen Tiu (Australian National U.)
- Philip Wadler (U. of Edinburgh)

Organizing Committee

- Federico Aschieri (TU Wien)
- Paolo Baldi (TU Wien)
- Agata Ciabattoni (TU Wien, Chair)
- Francesco Genco (TU Wien)
- Francesca Gulisano (Scuola Normale Superiore di Pisa)
- Roman Kuznets (TU Wien)
- Björn Lellmann (TU Wien)
- Tim Lyon (TU Wien)
- Matteo Pascucci (TU Wien)
- Revantha Ramanayake (TU Wien)

<https://sysmics.logic.at/>

Activities - Symposium

Symposium: In honour of Georg Gottlob

A special event in honor of Georg Gottlob's influential and long-lasting research contributions to the fields of database systems and artificial intelligence took place alongside EDBT/ICDT joint conference on March 25, 2018.

Georg Gottlob's pioneering contributions to the theory, language design, algorithms, and systems in Web data extraction resulted in new methods which are reunifying the artificial intelligence (AI) and database techniques. They also contributed to successful spin-offs (Lixto, Wrapidity) of research projects funded by European Research Council (ERC), thus creating technological transfer, jobs, and permanently impacting not only the local livelihoods but also the international data intelligence industry.

Georg is a Professor at Oxford University, and an Adjunct Professor at the TU Wien. He received the Wittgenstein Award from the Austrian National Science Fund (FWF), ERC Grants, is an ACM Fellow, an ECCAI Fellow, a Fellow of the Royal Society, and a member of the Austrian and German Academy of Sciences, and the Academia Europaea.



Georg Gottlob*

He is also a member of the international advisory board of VCLA, and the speaker of doctoral college Logical Methods in Computer Science - LogiCS., funded by the FWF.

Speakers

- Christoph Koch (EPFL)
- Sihem Amer-Yahia (Laboratory LIG)
- Shqiponja Ahmetaj (TU Wien)
- Andreas Pieris (University of Edinburgh)
- Francesco Scarcello (DIMES Unical, University of Calabria)
- Pablo Barcelo (University of Chile)
- Thomas Schwentick (TU Dortmund)
- Phokion Kolaitis (University of California)

Organizers

- Michael Benedikt (University of Oxford)
- Michael Morak (TU Wien)
- Reinhard Pichler (TU Wien)

<http://www.vcla.at/2018/03/>

Activities - Symposium

Symposium: In Memoriam Helmut Veith

The Symposium in Memoriam Helmut Veith (1971-2016), which took place in October 2017 at TU Wien, was part of the 17th Formal Methods in Computer-Aided Design Conference 2017 (FMCAD), hosted by FORYTE research group under the baton of Georg Weissenbacher.

Helmut Veith was a leading researcher in the area of computer-aided verification, to which he made numerous contributions. He worked in particular on model checking for software and hardware, on abstraction tools, parametric questions in model checking, analysis and testing of computer programs, and in this context also on temporal logic.

Helmut Veith's research interests, however, were not limited to verification. He made significant contributions to the fields including computer security and embedded systems, mathematical logic (especially fuzzy logics), the theory of databases, finite model theory, and complexity theory.

The Symposium featured presentations of invited contributions published in the Special Issue of the journal on Formal Methods in System Design in Memoriam Helmut Veith, covering topics such as model checking, synthesis, distributed algorithms, and security.

The Symposium ended with a LogicLounge on how to teach logic in computer science.

<http://www.cs.utexas.edu/users/hunt/FMCAD/FMCAD17/veith/>



Symposium in Memoriam Helmut Veith at FMCAD 2018



One of the speakers, Roderick Bloem

Activities - Education

Science Education: KinderUni (Children's University Vienna)

For the first time the VCLA participated in the KinderUni activities at TU Wien, in July 2018.

Prof. Martin Nöllenburg and Prof. Stefan Szeider led a workshop for children aged between 10 and 12 years. Twenty-two registered kids could playfully learn how a computer thinks and solves problems. The activities were designed to retain attention of all forms of learners: hands-on, visual, auditory, read/write and kinesthetic.

The kids have also had a chance of competing in the two-tier human sorting network, where they were running with random numbers across the canvas on the floor and carry out parallel sorting comparisons; at the end, they arrived sorted at the end nodes of the network. Such sorting networks have numerous applications in computer science, where they are realized in various ways and used inter alia in the development of algorithms.

The used experiments are part of the well-known Computer Science Unplugged - CS Unplugged collection of free teaching material that teaches computer science through



engaging games and puzzles that use cards, string, crayons and lots of running around.

The Children's University Vienna has been organized every summer since 2003 by the University of Vienna. For two summer weeks, the doors of the Viennese universities are open to over 4,000 children aged 7 to 12 years. The goal is to get children excited about science and at the same time to increase the transfer of knowledge from the higher education institutions to the general public.

<http://www.vcla.at/sortieren/>

Activities - Education

Science Education: Video competition - Algorithms in 60 seconds

Almost 300 school children and teens participated in the VCLA video competition “Algorithms in 60 Seconds” initiated by Stefan Szeider. The task was to create short videos with a maximum length of 60 seconds.

The videos were supposed to address at least one of the fundamental questions about the technical and social aspects surrounding algorithms:

1. What are algorithms and how do they work?
2. Are there any algorithms outside the computer?
3. In which areas can algorithms be used meaningfully?
4. In which areas can algorithms help humanity?
5. What are possible dangers when using algorithms?



The competition was open to pupils in two age groups between the 10 and 18, to individuals as well as to school groups.

An international jury chaired by Stefan Szeider evaluated 97 videos, selected 10 finalist videos in both categories and determined the three best videos in each category.

The rector of TU Wien, Sabine Seidler welcomed the finalists of the competition at the award ceremony at TU Wien on June 28, 2018. The two best videos from both categories received cash prizes worth 6,000 EUR. The third-placed videos from both categories received prizes from the Austrian Computer Society (OCG) and DaVinciLab.

The project was supported by the most innovative actors in the field of digital education and digital skills in Austria. The competition was supported by the eEducation Austria Network, Federal Ministry of Education, Science and Research (BMBWF), Science Center Network, and Future Learning Lab (Center for Learning Technology and Innovation (ZLI)).

The competition was nominated for the eAward 2019 run by Report Verlag.

Activities - Education

Winners category 1 (below the age of 14)

1st place: Europaschule Linz

Video: Fehlerkorrektur analog und digital"

2nd place: Julian Köppl, Alexander Rode

Video: Algorithmen in 60 Sekunden (feat Lighting, MCQueen, Maseradi)

3rd place: Elena Fenkart, Emma Huchler, Teana Blagojevic, Esma Alkis
Video: Schindl

Winners category 2 (above the age of 15)

1st place: David Meyer

Video: Wie Algorithmen Menschen beeinflussen

2nd place: Laura Scheidl, Mona Abdel Baky, Pilar Stieber, Jasmin Weber
Video: Glitch

3rd place: Hannah Morscher, Zeia Gholam, Tim Wingert, Clemens Makoschitz
Video: Algorithmen in unserem Umfeld

20 finalists

The 20 videos which were the finalists of the competition are featured on our YouTube channel

<https://youtu.be/AFXi-NKQMRg>

Jury

- Florian Aigner (Science journalist)
- Agata Ciabattoni (VCLA)
- Martin Nöllenburg (TU Wien)
- Martina Seidl (JKU Linz)
- Stefan Szeider (VCLA, Chair)
- Alexander Wolff (U. Würzburg)

<http://www.vcla.at/activities/algorithmen-wettbewerb/>



Team from Europaschule Linz (out of competition)

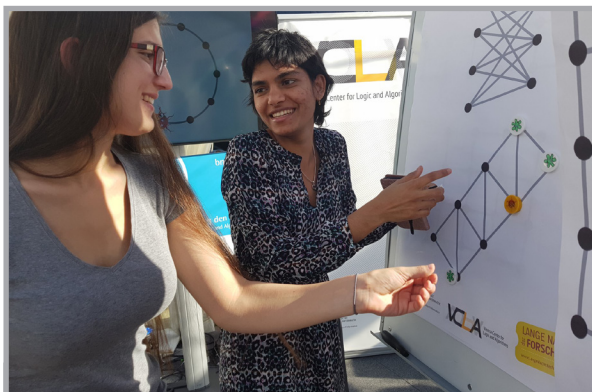
Activities - Education

Science Education: Long Night of Research

For the first time VCLA joined the 5000 researchers across Austria presenting their work at the Long Night of Research (Lange Nacht der Forschung - LNF) in Vienna in April 2018.

At the VCLA station the visitors could play a paper-and-pen game based on the tree decomposition game, which we named “Catch the Virus” (Fang das Virus).

The VCLA chair Stefan Szeider specially adapted the Cops and Robbers game (Seymour und Thomas 1993) to give the visitors of the LNF 2018 the chance to taste the power of their own logic and playfully step into the world of algorithms.



Computer Science students, Hanna Lachnith and Neha Lodha



Agata Ciabattoni, Stefan Szeider, Heinz Fassmann (BMBWF)

Not only kids, but also students, as well as adults played the game with the PhD students of the FWF funded doctoral college - LogiCS, and with the VCLA co-chairs Agata Ciabattoni and Stefan Szeider. VCLA activity was available in English and German language.

The Long Night of Research is the biggest research-related event in Austria. In 2018, it attracted a record number of 228.000 visitors to 265 exhibition stations across Austria, allowing direct communication between the public and the researchers in a playful format.

<http://www.vcla.at/2018/04/die-lange-nacht-der-forschung-catch-the-virus-2/>

Activities - Distinction

Distinction: VCLA International Student Awards

The highly successful third edition of the VCLA International Student Awards was concluded in July 2018 with the celebration of two winners in two award categories.

Out of thirty-three submissions one was selected for the Outstanding Master Thesis Award and one for the Outstanding Undergraduate Research Award by a committee consisting of seventeen internationally recognized researchers.

The award ceremony took place as part of the FLoC 2018 Olympic Games. The VCLA International Student Awards 2018 have been presented to the winners by Dana Scott.

The VCLA was represented by Anna Prianichnikova.

The VCLA chairs Agata Ciabattoni and Stefan Szeider congratulate the following award recipients:

Master Thesis Award

Jeremy Liang An Kong –

Thesis: MCMAS-Dynamic: Symbolic Model Checking Linear Dynamic Logic)

Supervisor: Alessio Lomuscio (Imperial College London)

Undergraduate Research Award

Tomáš Lamser –

Thesis: Algorithmic Analysis of Patrolling Games

Supervisor: Antonín Kučera (Masaryk U.)

Tomas Lamser,
Jeremy Liang An Kong,
A. Prianichnikova,
Dana Scott



Activities - Distinction

Award Committee

- Federico Aschieri
- Paolo Baldi
- Ezio Bartocci
- Johannes Fichte
- Ekaterina Fokina
- Robert Ganian (co-chair)
- Yazmin A. Ibanez-Garcia
- Roman Kuznets
- Bjoern Lellmann
- Nysret Musliu
- Michael Morak
- Martin Nöllenburg
- Sebastian Ordyniak
- Magdalena Ortiz (general chair)
- Revantha Ramanayake (co-chair)
- Martin Suda
- Friedrich Slivovsky

The VCLA International Student Awards are given annually to the author of outstanding scientific work in the field of Logic and Computer Science. Since 2016 the awards are dedicated to the memory of the initiator of the distinction, Helmut Veith (1971-2016). The awards are accompanied by an award fund of 2000 EUR, and an invitation to the award ceremony.

<http://www.vcla.at/vcla-awards/>



Activities - Distinction

Distinction: Helmut Veith Stipend Award Ceremony

The second recipient of the annually awarded Helmut Veith Stipend for outstanding female master's students in computer science is Hanna Elif Lachnitt.

Hanna Lachnitt was presented with the Helmut Veith Stipend by the Vice Rector for Academic Affairs of TU Wien Kurt Matyas at the award ceremony on Friday, April 06, 2018. The ceremony was part of the symposium of the FWF funded doctoral college Logical Methods in Computer Science – LogiCS.

Hanna Lachnitt holds a Bachelor's degree in Computer Science from the Freie Universität Berlin. Since March 2018 she has been pursuing Master's degree in Computational Logic at TU Wien.



Hanna Elif Lachnitt and Kurt Matyas, Vice Rector for Academic Affairs of TU Wien*



Recipient's father, Agata Ciabattoni, Norbert J. Mauser, Hanna Lachnitt, Stefan Szeider*

The Helmut Veith Stipend is dedicated to the memory of an outstanding computer scientist who worked in the fields of logic in computer science, computer-aided verification, software engineering, and computer security.

Helmut Veith (1971-2016) was a strong advocate and mentor for women in computer science. To honour Helmut's efforts, a stipend for outstanding female students in computer science was established with the financial support of TU Wien, the Wolfgang Pauli Institute, and generous donations of friends and colleagues of Prof. Veith.

Students who are awarded a scholarship receive EUR 6000 annually, and a waiver of all tuition fees at TU Wien. The annual deadline is November 30.

<http://www.vcla.at/helmut-veith-stipend/>

Activities - Cooperation

Cooperation: Workshop Women in Logic

The Second Workshop of Women in Logic (WiL2018) took place in Oxford in July 2018 as a workshop of the 33rd annual ACM/IEEE Symposium on Logic in Computer Science (LICS), part of the Federated Logic Conference 2018 (FLoC). Report on the WiL 2018 appeared in ACM SIGLOG News 6(1), pp. 41-41 (2019).

The two invited speakers, and thirteen contributed talks, covered a broad range of topics: logic in computer science, philosophical and mathematical logic.

The 26 attendees came from academia and industry on the 5 continents, and covered all career stages from master's and PhD students, through early and mid-career scientists, to professors and retirees.

The workshop was supported by the VCLA, SIGLOG, UK Engineering and Physical Science Research Council (EPSRC), and Wadham College.

WiL is built on the success of the first such event, held in Reykjavik, Iceland, in 2017, again in association with LICS.

The workshop series intends to follow the pattern of similar peer networking workshops such as Women in Machine Learning or Women in Engineering. Its aim is to create opportunities for women in logic to present and promote their research, offering a place for sharing of experiences, and tools for managing the barriers and finding mentors for their research career.

Speakers

- **Perdita Stevens** (University of Edinburgh)
- **Brigitte Pientka** (McGill University)

Chairs

- **Amy Felty** (University of Ottawa)
- **Ursula Martin** (University of Oxford)
- **Valeria de Paiva** (Nuance Comms)

<https://sites.google.com/site/womeninlogic2018/welcome>



Women in Logic 2018

Activities - Cooperation

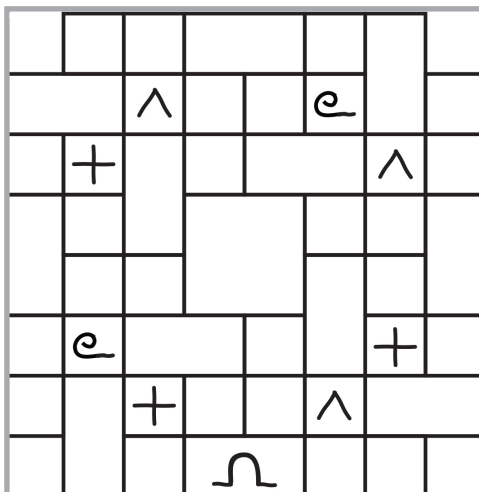
Cooperation: Vienna Ball of Sciences

The fourth Vienna Ball of Sciences took place on January 27, 2018, greeting more than 3000 guests in the halls of the Vienna City Hall.

As one of the partners of the Ball, VCLA was planting the seeds of logic among the ball's attendees with a logic puzzle, which was placed on all the tables of the venue, as well as at the VCLA booth. The logic puzzle "A Riddle of Alchemy" was designed by Maarten Löffler, University of Utrecht.



LogiCS PhD students Adrian Rebola Pardo, and Neha Lodha, with one of the awardee



Riddle of Alchemy puzzle for the Vienna Ball of Sciences 2018

Among the attendees who solved the puzzle in the fastest time, the PhD students of the LogiCS doctoral college distributed cardboard glasses for experiencing virtual reality on a smart phone.

<https://www.wissenschaftsball.at/en/>

Activities - Cooperation

Cooperation: Logical Methods in Computer Science



The Doctoral College Logical Methods in Computer Science (LogiCS) was established in March 2014 and led by Helmut Veith† and Stefan Szeider.

In 2017, the funding body renewed the grant of the college for another 4 years.

The speaker of the LogiCS is Georg Gottlob, the co-speaker is Stefan Szeider.

LogiCS is a PhD degree program funded by the Austrian Science Fund FWF and run jointly by three Austrian universities (TU Wien, TU Graz and JKU Linz).

Its faculty comprises fifteen renowned researchers with strong records in research, teaching and advising, complemented by eleven associated members.

The program is aimed at highly motivated students who want to work in one of three fundamental fields of computer science: Databases and Artificial Intelligence, Verification, and Computational Logic.

The program has been very successful so far: It attracted excellent 61 students worldwide, whereas 40% percent of students are female.

<http://logic-cs.at/phd>



Several of
the LogiCS
students

© Sara
Meister

Invited Speakers and Visitors

Twenty-four talks by speakers from countries across the world have been hosted by the VCLA during the past year. An online listing with abstracts is available at <http://www.vcla.at/category/talks>

Rajeev Gore (Australian National University, Australia): Interactive Synthesis of Verified Vote-counting Programs

Iyad Kanj (DePaul University, USA): How to navigate through obstacles?

Markus Endres (Universität Augsburg, Germany): Preference-Aware Database Systems

Steven Chaplick (Universität Würzburg, Germany): Approximation Schemes for Geometric Coverage Problems

Torsten Schaub (University of Potsdam, Germany): ASP in Time

Ramchandra Phawade (Indian Institute of Technology Dharwad, India): Combining free choice and time in Petri nets

Martin Josef Geige (Helmut-Schmidt-Universität, Germany): Solving large-scale, mid-term planning problems under multiple objectives – A contribution to VeRo-Log 2017 optimization competition

Ronald de Haan (University of Amsterdam, Netherlands): Using Knowledge Compilation in Social Choice

Gyula O.H. Katona (Hungarian Academy of Sciences; Hungary): Cryptology, Isoperimetric Problems and Shadows

Christian Klamler (Universität Graz, Austria): Using Borda Scores for Ranking Sets of Objects

Daniel Paulusma (Durham University, UK): Colouring Square-Free Graphs without Long Induced Paths

Henning Fernau (Universität Trier, Germany): Self-monitoring approximation algorithms

Benjamin Niedermann (Universität Bonn, Germany): On Ortho-Radial Drawings for Metro Networks

Jorge Fandinno (IRIT de Toulouse, France): Argumentation Frameworks with Recursive Attacks and Evidence-Based Supports

Invited Speakers and Visitors

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Eunjung Kim (LAMSADE, France): Erdos-Posa Property of Chordless Cycles and its Applications

Przemysław Andrzej Wałęga (University of Oxford, UK): Horn fragments of Halpern-Shoham logic: complexity vs expressiveness

Maarten Löffler (Utrecht University, Netherlands): Pleaching Pencil-&-Paper Picture Puzzles

Sasha Rubin (University of Naples “Federico II”, Italy): Mini course: Milestones in solving games on graphs

Mohammad Farshi (Yazd University, Iran): (Weakly) Self-approaching graphs

Piotr Skowron (University of Warsaw, Poland): Approximating Optimal Social Choice under Metric Preferences

Tamara Mchedlidze (Karlsruhe Institute of Technology, Germany): Application of the point-line duality principle in graph drawing

Francesco Scarcello (University of Calabria, Italy): Dealing with the Shapley Value: islands of tractability and useful tools

Gerhard Woeginger (RWTH Aachen University, Germany): Buffers, Buckets, and Overflows

Roman Prutkin (Karlsruhe Institute of Technology, Germany): Graph Embeddings Motivated by Greedy Routing

Media Coverage

The VCLA was present in the media through its members and activities.

September 26, 2018 (LogicLounge)

Interview for Futurezone

Warum künstliche Intelligenz uns 50 Jahre Schmerzen bringen könnte

<https://futurezone.at/science/warum-kuenstliche-intelligenz-uns-50-jahre-schmerzen-bringen-koennte/400123082>

September 24, 2018 (LogicLounge)

Radio interview for Ö1 DigitalLeben (English and German)

Achtung, Sie sprechen mit einem Bot!

<https://oe1.orf.at/programm/20180924/527228>

September 23, 2018 (LogicLounge)

Interview for Der Standard.at and Der Standard.de

KI-Pionier: "Maschinen könnten uns in allen Fähigkeiten übertreffen"

<https://derstandard.at/2000087838663/KI-Pionier-Maschinen-koennten-uns-in-al-len-Faehigkeiten-uebertreffen?ref=rss>

September 22, 2018 (LogicLounge)

Newspaper Interview for Der Standard

„Künstliche Intelligenz könnte eine zweite Renaissance bringen“

<https://www.pressreader.com/austria/der-standard/20180922/282020443211242>

September 21, 2018 (LogicLounge)

Article on Der Standard.at

KI-Experte Toby Walsh: "Terminator ist noch 100 Jahre entfernt"

<https://derstandard.at/2000087816435/KI-Experte-Toby-Walsh-Terminator-ist-noch-100-Jahre-entfernt>

September 16, 2018 (Helmut Veith Stipend)

Interview on Der Standard.at

Die Magie der Informatik

<https://derstandard.at/2000087121013/Die-Magie-der-Informatik>

Media Coverage

September 12, 2018 (Helmut Veith Stipend)

Newspaper Interview for Der Standard

Die Magie der Informatik

<https://www.pressreader.com/austria/der-standard/20180912/281874414301321>

September 12, 2018 (Helmut Veith Stipend)

Article in DiePresse.at

Helmut Veith Stipendium für Informatik Studentinnen

<https://diepresse.com/home/karriere/karrierenews/5495362/Helmut-Veith-Stipendium-fuer-Informatik-Studentinnen>

September 4, 2018 (LogicLounge)

Article on MyScience.at

Leben mit künstlicher Intelligenz – Wie bleiben wir menschlich?

https://www.myscience.at/news/wire/leben_mit_kuenstlicher_intelligenz_wie_bleiben_wir_menschliche-2018-tuwien

September 3, 2018 (Stefan Woltran)

Article on MyScience.at

Auszeichnung für Stefan Woltran

https://www.myscience.at/news/wire/auszeichnung_fuer_stefan_woltran-2018-tuwien

August 30, 2018 (Nysret Musliu)

APA-Science

KI- und Optimierungstechniken für intelligente Planungssystemen

<https://www.science.apa.at/?id=CMS1340873582112>

August 25, 2018 (Matteo Maffei)

Article in Die Presse (printed)

Modul für mehr Internetsicherheit

<https://www.pressreader.com/austria/die-presse/20180825/282089162628790>

Media Coverage

August 24, 2018 (Matteo Maffei)

Article in Die Presse.at

Modul für mehr Internetsicherheit

<https://diepresse.com/home/science/5485345/Modul-fuer-mehr-Internetsicherheit>

August 21, 2018 (Matteo Maffei)

Article in Tiroler Tageszeitung

Neues Browser-Plugin der TU Wien soll Authentifizieren sicher machen

<https://www.tt.com/ticker/14718382/neues-browser-plugin-der-tu-wien-soll-authentifizieren-sicher-machen>

Article in Die Presse

Neues Browser-Plugin der TU Wien soll Authentifizieren sicher machen

<https://diepresse.com/home/techscience/5483294/Neues-BrowserPlugin-der-TU-Wien-soll-Authentifizieren-sicher-machen>

Article in Österreich Journal

Neues Browser-Plugin der TU Wien soll Authentifizieren sicher machen

http://www.oe-journal.at/index_up.htm?http://www.oe-journal.at/Aktuelles/!2018/0818/W3/52108AtuWien.htm

Article in Der Standard

Neues Browser-Plugin der TU Wien soll Authentifizieren sicher machen

<https://derstandard.at/2000085731884/Neues-Browser-Plugin-der-TU-Wien-soll-Authentifizieren-sicher-machen>

Article in Kronen Zeitung

Browser-Plugin soll Authentifizieren sicher machen

<https://www.krone.at/1758277>

Article in Wiener Zeitung

Browser-Plugin für mehr Internet-Sicherheit

https://www.wienerzeitung.at/themen_channel/wz_digital/digital_news/983948_Browser-Plugin-fuer-mehr-Internet-Sicherheit.html

Media Coverage

August 2/8, 2018 (VCLA)

Article in Stadtblatt Innsbruck (digital and print)

Cooler Video zu Algorithmen: Innsbrucker Schüler holt den ersten Platz

https://www.meinbezirk.at/innsbruck/c-lokales/coolers-video-zu-algorithmen-innsbrucker-schueler-holt-den-ersten-platz_a2805872

June, 2018 (VCLA)

Article in TU Wien Freihaus

Von Menschen und Algorithmen: Die besten Videos

<https://freihaus.tuwien.ac.at/menschen-algorithmen/>

June 26, 2018 (Matthias Baaz, Roderick Bloem, Georg Gottlob, Alexander Leitsch, Helmut Veith)

Article in Heureka 4/18

Logik für die Praxis: Georg Gottlob darüber, wie Österreich in der Logik Anschluss an die Weltspitze geschafft hat

<https://www.falter.at/falter/e-paper/lesen/602/heureka-4-18>

June 16, 2018 (Thomas Eiter, Stefan Woltran)

Article on Factorynet.at

KI-Forscher machen Politik Druck

<https://factorynet.at/a/offener-brief-ki-forscher-machen-politik-druck>

June 13, 2018 (Stefan Szeider)

Article in Horizont.at

Die verführerische Macht von Algorithmen

<https://www.horizont.at/home/news/detail/die-verfuehrerische-macht-von-algorithmen.html>

June 6, 2018 (Stefan Szeider)

Article in UpDate Magazine

„Den Robo-Politiker gibt es längst“

<http://updatedigital.at/news/commerce/den-robo-politiker-gibt-es-laengst/10.474.499>

Media Coverage

May 30, 2018 (Stefan Szeider)

Article in Horizont.at

Eine Frage der Berechnung

<https://www.horizont.at/home/news/detail/eine-frage-der-berechnung.html>

May 30, 2018 (Stefan Woltran)

Article in NÖ Nachrichten

Wie „Big Data“ Leben verändert

http://www.vcla.at/wp-content/uploads/2019/03/NOEN_20180530_SEITE_17_Wie-Big-Data.pdf

May 27, 2018 (Stefan Woltran)

Article in Meinbezirk

Spannende Diskussion zu Big Data in Horn

https://www.meinbezirk.at/horn/c-lokales/spannende-diskussion-zu-big-data-in-horn_a2641775

May 8, 2018 (Roderick Bloem, Georg Weissenbacher, Moshe Vardi)

Article in Tiroler Tageszeitung

Informatik: „Noch nicht angekommen, dass das eine Wissenschaft ist“

<https://www.tt.com/ticker/14335574/informatik-noch-nicht-angekommen-dass-das-eine-wissenschaft-ist>

Article in Der Standard (Roderick Bloem, Georg Weissenbacher, Moshe Vardi)

Informatik: „Noch nicht angekommen, dass das eine Wissenschaft ist“

<https://derstandard.at/2000079394927/Informatik-Noch-nicht-angekommen-dass-das-eine-Wissenschaft-ist>

May 4, 2018 (Helmut Veith Stipend)

Article in DiePresse.at

Helmut-Veith-Preis für Hanna Lachnitt

https://diepresse.com/home/karriere/karrierenews/5417489/Auszeichnung_HelmutVeithPreis-fuer-Hanna-Lachnitt

Media Coverage

May, 2018 (Stefan Szeider)

Article in Medien Manager (page 18)

Mitarbeiter aus Stahl: Wie neue Technologien Österreichs Medienbranche nachhaltig verändern

www.medienmanager.at/wp-content/uploads/2018/08/MedienManager-5-18.pdf

April, 2018 (VCLA)

Article in TU Wien Freihaus

Publikumsrekord beim TU Wien-Standort der Langen Nacht der Forschung 2018

<https://freihaus.tuwien.ac.at/langennacht/>

April, 2018 (Agata Ciabattoni, Stefan Szeider)

BMVIT

Das war Die Lange Nacht der Forschung 2018 (See 3:40)

<https://www.youtube.com/watch?v=6-BG4KfTtjo&feature=youtu.be>

April 27, 2018 (Helmut Veith Stipend)

Article on Monitor.at

Nachwuchs-Informatikerin ausgezeichnet

<https://www.monitor.at/storyid/article/nachwuchs-informatikerin-ausgezeichnet/>

April 25, 2018 (Helmut Veith Stipend)

Article on MyScience.at

Helmut-Veith-Preis für Hanna Lachnitt

https://www.myscience.at/de/wire/helmut_veith_preis_fuer_hanna_lachnitt-2018-tuwien

April 13, 2018 (Thomas Eiter)

Article on Die Presse

Wenn die Verkehrslawine ausbleibt

<https://diepresse.com/home/science/5405658/Wenn-die-Verkehrslawine-ausbleibt>

Media Coverage

March 27, 2018 (Reinhard Pichler, Georg Gottlob)

Article in Economy.at

Datenbanken werden zunehmend intelligent

www.economyaustria.at/technologie/datenbanken-werden-zunehmend-intelligent

March 26, 2018 (Reinhard Pichler, Georg Gottlob)

Article in Computerwelt.at

IT-Konferenz in Wien: Datenbanken werden intelligent

<https://computerwelt.at/news/it-konferenz-in-wien-datenbanken-werden-intelligent/>

March 11, 2018 (Stefan Woltran)

Interview for Idealism Prevails (podcast)

Künstliche Intelligenz ist fast allgegenwärtig

<https://www.idealismprevails.at/kuenstliche-intelligenz-ist-fast-allgegenwaertig-stefan-woltran/>

March 1, 2018 (Stefan Woltran)

Article in Furche

Der nächste Sprung

http://www.vcla.at/wp-content/uploads/2019/03/FURCHE_Woltran_Stefan_AI.pdf

February 5, 2018 (Agata Ciabattoni)

Article on Galileonet.at

Un'intelligenza artificiale "etica" per interpretare i testi sacri indiani

<https://www.galileonet.it/intelligenza-artificiale-etica-interpretare-testi-sacri-indiani/>

February 3, 2018 (Agata Ciabattoni)

Article in die Presse

Kann man Computern Ethik beibringen?

<https://www.pressreader.com/austria/die-presse/20180203/282162176658915>

Media Coverage

February 3, 2018 (Agata Ciabattoni)

Article in OÖNachrichten.at

Sanskrit-Logik fürs Auto

<https://www.nachrichten.at/nachrichten/weltspiegel/Sanskrit-Logik-fuers-Auto;art17,2804090>

February 2, 2018 (Agata Ciabattoni)

Article in Economy.at

Logische Ethik als Teil intelligenter Maschinen

<http://www.economyaustria.at/forschung/logische-ethik-als-teil-intelligenter-maschinen>

Article on Gazeta Shqiptare

Tekstet antike indiane kanë informacione si të ndërtohet një robot

<http://www.gsh.al/2018/02/02/tekstet-antike-indiane-kane-informacione-si-te-ndertoht-nje-robot/>

February 2, 2018 (Matteo Maffei)

Article in Horizont Magazin

Blockchain: Die Branche im Zwiespalt

<https://www.horizont.at/home/news/detail/blockchain-die-branche-im-zwiespalt.html>

February 1, 2018 (Agata Ciabattoni)

Article in E-Magazine MARS

Ancient Vedic Sanskrit: Text to teach ethics to robots

<http://sifme.org/mars-feb#page/4>

Article on Motherboard

La guida di Motherboard alle macchine a guida autonoma

<https://motherboard.vice.com/it/article/yw5ajk/la-guida-di-motherboard-al-le-macchine-a-guida-autonoma>

Media Coverage

January 31, 2018 (Agata Ciabattoni)

Article on ANSA.it

Gli antichi testi indiani ispirano le auto senza pilota

http://www.ansa.it/canale_scienza_tecnica/notizie/fisica_matematica/2018/01/30/gli-antichi-testi-indiani-ispirano-le-auto-senza-pilota-_28e95e22-2946-4b61-b0c6-ac6221415405.html

Article on Nottesport.it

I Veda custodiscono segreti per robot capaci di scelte giuste!

http://www.nottesport.it/veda-custodiscono-segreti-per-robot-capaci-di-scelte-giuste_65937.html

Article in Schattenblick.de

Altindische Texte und die Logik der Computer-Ethik

<http://schattenblick.de/infopool/natur/technik/ntin1232.html>

January 30, 2018 (Agata Ciabattoni)

Article on l'Adige.at

Auto senza pilota? Dall'antica India i consigli dai Sacri testi in sanscrito

<https://www.ladige.it/news/mondo/2018/01/30/auto-senza-pilota-dallantica-india-consigli-sacri-testi-sanscrito>

January 29, 2018 (Agata Ciabattoni)

Article on MyScience

Indian Sacred Texts and the Logic of Computer Ethics

https://www.myscience.org/news/2018/indian_sacred_texts_and_the_logic_of_computer_ethics-2018-tuwien

Article in Österreich Journal

Altindische Texte und die Logik der Computer-Ethik

[http://www.oe-journal.at/index_up.htm?http://www.oe-journal.at/Aktuel-](http://www.oe-journal.at/index_up.htm?http://www.oe-journal.at/Aktuelles/!2018/0118/W4/12901tuWien.htm)
[les/!2018/0118/W4/12901tuWien.htm](http://www.oe-journal.at/Aktuelles/!2018/0118/W4/12901tuWien.htm)

Media Coverage

January 29, 2018 (Agata Ciabattoni)

Article in Europapress.es

Buscan en los Vedas la lógica para enseñar Ética a las máquinas

<https://www.europapress.es/ciencia/ruinas-y-fosiles/noticia-buscan-vedas-logica-ensenar-etica-maquinas-20180129164931.html>

January 28, 2018 (Vienna Ball of Sciences with VCLA)

Article on diePresse.at

Der neue und der alte Bürgermeister am Wissenschaftsball

<https://diepresse.com/home/bildung/universitaet/5361802/Der-neue-und-der-alte-Buergermeister-am-Wissenschaftsball>

December 24, 2017 (Stefan Woltran)

Interview on Radio Fro

Künstliche Intelligenz ist fast allgegenwärtig

<https://www.fro.at/kuenstliche-intelligenz-ist-fastallgegenwaertig/>

November 28, 2017 (Matteo Maffei)

Article in Wiener Zeitung (digital and print)

ERC Grants bringen zehn Millionen Euro nach Österreich

https://www.wienerzeitung.at/themen_channel/wissen/forschung/931811_ERC-Grants-bringen-zehn-Millionen-Euro-nach-Oesterreich.html

Article on ORF Science

Zehn hochdotierte EU-Förderpreise

<http://science.orf.at/stories/2880902/>

Article on Tiroler Tageszeitung

Zehn Millionen-Förderungen des EU-Forschungsrats nach Österreich

<https://www.tt.com/ticker/13722528/zehn-millionen-foerderungen-des-eu-forschungsrats-nach-oesterreich>

Media Coverage

November 28, 2017 (Matteo Maffei)

Article in Der Standard

Zehn Millionen-Förderungen des EU-Forschungsrats nach Österreich

<https://www.derstandard.de/story/2000068657879/zehn-millionen-foerderungen-des-eu-forschungsrats-gehen-nach-oesterreich>

November 3, 2017 (Stefan Szeider)

Article on Futurezone.at

Silicon Valley macht Universitäten KI-Talente abspenstig

<https://futurezone.at/science/silicon-valley-macht-universitaeten-ki-talente-abspenstig/295.824.918>

Article in printed Kurier

Tech-Konzerne locken KI-Experten Talente

<https://www.pressreader.com/austria/kurier/20171103/282041917397028>

VCLA Chairs 2014-2017



Stefan Szeider and Helmut Veith were co-chairs of the Vienna Center for Logic and Algorithms until Helmut passed away in March 2016. They founded the VCLA in 2011, assuming the strategic leadership over its activities.

Stefan Szeider is a full professor at TU Wien and head of the Algorithms and Complexity Group at the Faculty of Informatics. He is also the deputy speaker of the Doctoral College Logical Methods in Computer Science and scientific co-organizer of the Vienna Gödel Lectures.

In his research, Szeider combines algorithmic and logic-based methods for the efficient solution of hard problems that arise in Artificial Intelligence, Automated Reasoning, and Combinatorial Optimization, complemented by complexity-theoretic methods for establishing theoretical limits and lower bounds.

Helmut Veith was a full professor at TU Wien and head of the Formal Methods in Systems Engineering Group at the Faculty of Informatics. He was also an adjunct professor at Carnegie Mellon University and the speaker of the Doctoral College Logical Methods in Computer Science.

In his research, Helmut Veith applied formal and logical methods to problems in software technology and engineering. His work focused on model checking, software verification and testing, embedded software and computer security.

VCLA Chairs since 2018



Agata Ciabattoni and Stefan Szeider, co-chairs of the VCLA since December 2017

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In December 2017, the VCLA board warmly welcomed the new elected VCLA co-chair, Agata Ciabattoni, to fill the position previously occupied by the late Helmut Veith.

Agata Ciabattoni is a full professor at TU Wien. In 2011 she has been awarded a START prize, the highest Austrian award for early career researchers, for her project Non classical proofs: Theory, Applications and Tools.

Agata Ciabattoni is mainly working in non-classical logics: proof theory, semantics and applications in various fields, ranging from programming languages to Indian Philosophy.

Organization 2014-2017

The following is the organisational structure from the 2016/2017 reporting period. Since January 2018 the VCLA board has a new structure which is presented at the beginning of this report.

Board

| |
|---------------------------|
| Thomas Eiter |
| Georg Gottlob |
| Alexander Leitsch |
| Reinhard Pichler |
| Stefan Szeider (co-chair) |
| Helmut Veith † (co-chair) |

Public Relations and Project Management

| |
|-----------------------------|
| Mihaela Rozman (May 2017-) |
| Katarina Singer (2014-2016) |

Advisory Board

| |
|----------------------------------------|
| Matthias Baaz (TU Wien) |
| Roderick Bloem (TU Graz) |
| Agata Ciabattoni (TU Wien) |
| Nadia Creignou (U. d'Aix-Marseille) |
| Anuj Dawar (University of Cambridge) |
| Fedor Fomin (University of Bergen) |
| Laura Kovács (TU Wien) |
| Miroslaw Truszczynski (U. of Kentucky) |
| Moshe Y. Vardi (Rice University) |

Collaborations

The VCLA frequently collaborates with co-funding institutions:

- Kurt Gödel Society (KGS)
- Austrian Rigorous Systems Engineering (ARiSE)
- Wolfgang Pauli Institute (WPI)
- Institute of Science and Technology Austria (IST Austria)

Logic and Algorithms Groups

The Center is hosted by five research groups at the Faculty of Informatics:

- Algorithms and Complexity Group
- Database and Artificial Intelligence Group
- Formal Methods in Systems Engineering Group
- Knowledge-Based Systems Group
- Theory and Logic Group
- Security and Privacy Group

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Vienna Center for
Logic and Algorithms



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