Vienna Center for Logic and Algorithms

Annual Report 2020/2021

Contents

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 VCLA was funded by TU Wien in association with the FWF - 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:

- The VCLA International Student Awards for Outstanding Theses
- The LogicLounge series
- The VCLA Workshop Series
- The VCLA series of winter and summer schools
- The VCLA Visitor Program
- Hosting talks by renowned international speakers
- Cooperations, and
- Educational outreach

Due to the restrictions of the COVID-19 pandemic, a large number of events and talks in 2020/2021 had to be postponed, cancelled, or took place online.

www.vcla.at

In Memoriam

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

Helmut was a vital part of the rebirth of the Austrian logic scene, and it was a matter close to his heart to build bridges between the computer science expert and the layman. His vision is being carried on by the students who he mentored, and his colleagues have launched a number of activities in his honor that will keep his legacy alive.

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 VCLA together with Stefan Szeider, but also to bring to Austria the largest logic conference in history - 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).

Photo (c) Philipp Horak

Posthumously, Helmut was awarded 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 funded the Helmut Veith Stipend for Female Master´s Students. Memorial site listing his achievements in academia and beyond:

www.vcla.at/2016/03/helmuth-veith-1971-2016

Organization

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
Agata Ciabattoni (co-chair)
Thomas Eiter
Matteo Maffei
Reinhard Pichler
Stefan Szeider (co-chair)
Georg Weissenbacher

Local Board
Matthias Baaz
Pavol Cerny
Laura Kovács
Alexander Leitsch
Martin Nöllenburg
Magdalena Ortiz
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
	Alexandra Traxler

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

Obituary Edmund M. Clarke

We are deeply saddened by the loss of Edmund M. Clarke, who passed away in December 2020.

Edmund Clarke is best known for his work on Model Checking, an automated technique to check temporal logic properties of computer systems, for which he, Allen Emerson, and Joseph Sifakis received an ACM Turing Award in 2007. Model Checking had a tremendous impact in academia as well as in industry, and is now routinely applied to verify hardware and software.

Edmund Clarke, who received an honorary doctorate from TU Wien in 2012, had close ties to Austria: as a mentor, friend, and scientific collaborator, he was a positive influence and inspiration to numerous Austrian and Austria-based researchers in the field of formal methods and automated verification. His ideas and research were central to the Special Research Program on Rigorous Systems Engineering (funded by the Austrian Science Fund FWF), a joint research effort of 15 investigators in the field of automated verification and reasoning.

Photo (c) Nadja Meister

His highly influential publications on Counterexample-Guided Abstraction Refinement and Bounded Model Checking were co-authored by his then visitor Helmut Veith and postdoc Armin Biere, both of whom were later appointed full professors at Austrian universities. The late Helmut Veith shared a particularly close friendship with Edmund Clarke.

Edmund Clarke was a member of the advisory board of the FWF-funded

Obituary Edmund M. Clarke

...continuation from page 9

doctoral college on Logical Methods in Computer Science, a keynote speaker at the official opening of the Vienna Center for Logic and Algorithms, and an editor of the Handbook of Model Checking (with Thomas A. Henzinger, Helmut Veith, and Roderick Bloem).

He was a founder of the conference CAV on Computer-Aided Verification, which was held in Austria in 2014 as part of the Vienna Summer of Logic and co-chaired by members of the Austrian research community in 2013, 2014, and 2018.

Edmund Clarke shaped the field of automated verification. He and his work were instrumental to careers and research paths of many researchers in Austria, and will continue to serve as an inspiration for many generations of researchers to come.

Our thoughts are with Edmund Clarke's family. He will be remembered not only as a giant in computer science, but also as a great friend.

(written by Georg Weissenbacher)

http://www.vcla.at/2021/03/obituary-edmund-m-clarke/

Activities

The VCLA annual report summarises our activities throughout the year. This report provides details on the events and activities between October 1, 2020 and September 30, 2021. We divide the activities presented in this report into the following subsections:

- LogicLounges and Guest Talks (p. 12)

The LogicLounge is a series of public lectures bringing together the general public and experts from the fields of logic, philosophy, mathematics, computer science, and artificial intelligence.

- Conferences (p. 17)

They are organized by the members of the research groups hosting the VCLA.

- Educational Outreach and Science Communication (p. 19)

The VCLA is raising awareness about the field of logic and algorithms by running educational outreach projects for teachers and students as well as science communication activities for the general public.

- VCLA International Student Awards (p. 25)

These annual awards aim to recognize and support students all over the world for their outstanding Master and Undergraduate Theses in the field of Logic and Computer Science.

- Helmut Veith Stipend (p. 27)

The Helmut Veith Stipend is awarded annually to excellent international female students who pursue (or plan to pursue) one of the master's programs in Computer Science at TU Wien.

- Cooperations (p. 33)

The VCLA cooperates with academic programs and initiatives, as well as with initiatives raising awareness for gender mainstreaming and diversity in the field.

Activities - LogicLounges

CAV21 and VCLA hosting a talk by Joscha Bach
Cognitive AI: From AI models to mental representations?

Due to the COVID-19 situation, the 18th public lecture in the series of Logic Lounges took place as a virtual lecture on July 22, 2021.

The LogicLounge with Joscha Bach was hosted by the 33rd International Conference on Computer-Aided Verification (CAV) and organized by Leopold Haller in collaboration with the Vienna Center for Logic and Algorithms at TU Wien (VCLA) and supported by Roderick Bloem and Georg Weissenbacher.

Joscha Bach, PhD, is a cognitive scientist and AI researcher with a focus on computational models of cognition. He has taught and worked in AI research at Humboldt University of Berlin, the Institute for Cognitive Science in Osnabrück, the MIT media lab, the Harvard Program for Evolutionary Dynamics and is currently a principal AI researcher at Intel Labs, California.

Abstract:

The aspiration of philosophy can be understood as the integration of all theories, and the aspiration of mathematics as the exploration of all consistent languages. Philosophy starts out

with natural languages, mathematics with formal ones.

In this sense, Artificial Intelligence is more than research into advances in information processing. It is also a daring, risky and extremely important philosophical project.

Initiated in 2014 at the Vienna Summer of Logic, the LogicLounge has since become an event travelling between Vienna and the venue of the CAV conference, where it has become a regular event in memoriam of Prof. Helmut Veith (1971 - 2016).

The recording is available at:

http://www.vcla.at/logiclounge

Activities - Guest Talks

Vienna Logic Day Lecture 2021 - Georg Gottlob: Knowledge Processing, Logic, and the Future of AI

Every year on January 14, we celebrate World Logic Day. Its main aim is to bring the intellectual history and practical implications of logic to the attention of interdisciplinary science communities. The day also celebrates the idea that logic, as reasoning, is a central quality of human beings.

The first Vienna Logic Day Lecture at VCLA was an online event offering the possibility for worldwide participation. Specifically, we celebrated the World Logic Day 2021 with a guest talk by Georg Gottlob. Thinking, fast and slow, machine version? Prof. Gottlob discussed advances in interaction between logical reasoning and machine learning that might lead to fair automated decision-making.

Abstract:

Nowadays, when people speak about AI, they usually mean machine learning. Machine learning, in particular, deep learning, is a powerful method for generating a type of knowledge that could be classified as self-learned knowledge.

We humans, on the other hand, make heavy use of two types of knowledge: self-learned knowledge, and transferable knowledge learned or generated by others. If you read this and/or attend the talk, this is mainly because of this second type of knowledge.

In this talk, I will argue that the combination of both types of knowledge is needed for more powerful and fair automated decision making or decision support, and thus for the next level of AI. I will discuss various requirements for reasoning formalisms towards this purpose. After discussing logical languages for knowledge-representation and reasoning, I will briefly introduce the VADALOG

Georg Gottlob at the Vienna Logic Day Lecture

Activities - Guest Talks

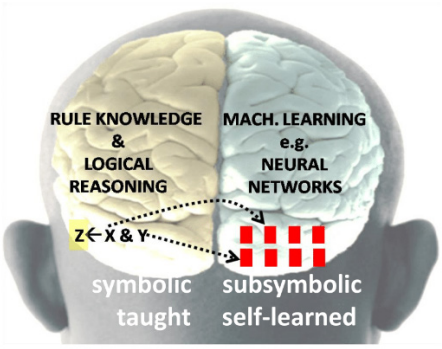
...**continuation from page 13:**

system developed at Oxford and give an outlook on my recent project RAISON DATA funded by the Royal Society.

Presentation slides:

https://logicday.vcla.at/vienna-logic-day-lecture/

Sample:



Details of talk:

Date: January 14, 2021

Time: 8am PST | 11am EST | 1pm GMT-3 | 5pm CET (Vienna)

Speaker: Prof. Georg Gottlob
(University of Oxford, TU Wien)

Title: Knowledge Processing, Logic, and the Future of AI

Moderators:

Prof. Agata Ciabattoni
Prof. Stefan Szeider

Recording available on Youtube channel of Vienna Center for Logic and Algorithms:

https://www.youtube.com/watch?v=j-HerlYBJEw

In addition to the Vienna Logic Day Lecture, the VCLA decided to set up a new website dedicated to this special day: logicday.vcla.at.

cf. pages 34/35 "World Logic Day - Ambassadors of Logic"

Activities - Guest Talks

Hans van Ditmarsch:
One Hundred Prisoners and a Light Bulb

Abstract: The following riddle that came to me by way of the well-known computer scientist Moshe Vardi was spreading like wildfire while I was teaching at the logic summer school ESSLLI 2003 in Vienna:

"A group of 100 prisoners, all together in the prison dining area, are told that they will be all put in isolation cells and then will be interrogated one by one in a room containing a light with an on/off switch. The prisoners may communicate with one another by toggling the light-switch (and that is the only way in which they can communicate).

The light is initially switched off. There is no fixed order of interrogation, or interval between interrogations, and the same prisoner will be interrogated again at any stage. When interrogated, a prisoner can either do nothing, or toggle the light-switch, or announce that all prisoners have been interrogated. If that announcement is true, the prisoners will (all) be set free, but if it is false, they will all be executed. While still in the dining room, and before the prisoners go to their isolation cells (forever), can the prisoners agree on a protocol that will set them free?"

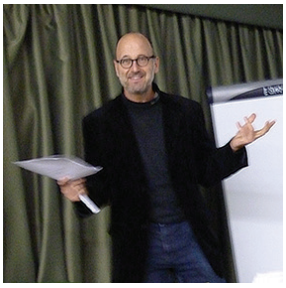
Puzzles such as the 'Muddy Children Puzzle' (also known as the 'Wisemen Puzzle'), 'Surprise Examination', 'Monty Hall', etc., often involve a (seemingly) paradoxical aspect making agents knowledgeable by announcements of their ignorance. There is a strong relation between such puzzles and the area in logic known as 'dynamic epistemic logic'.

Date: Tuesday, September 21, 2021

Venue: Seminarraum FAV 01, Favoritenstraße 9-11

Speaker: Hans van Ditmarsch

Open University, the Netherlands



Activities - Guest Talks

VCLA Co-Chair Stefan Szeider Holds a Guest Lecture on Algorithms at the Austrian Parliament

In an effort to enhance the digital skills of the members of the National Council, top computer scientists of TU Wien's Faculty of Informatics were invited to hold guest lectures at the Redoutensaal of Hofburg Vienna between mid June and September 2021.

The workshop "Digital Competencies @ Parliament" consisted of six modules:

- Computer Science (Basics)
- Algorithms
- Data Management and Analysis
- IT Security
- Digital Economy
- Digital Humanism

On June 15, VCLA co-chair Stefan Szeider, together with Martin Kronegger, held the lecture on Algorithms. This part of the program was advertised as follows:

COVID-19 has made visible the high dependence on algorithms. After all, smooth supply chains would have been unthinkable without algorithms planning logistics. In recent years, machine learning has also gained importance as a key technology. As a disruptive technology, it holds a great many opportunities but also risks. Machine learning is changing the labor market and can influence voting behavior.

http://www.vcla.at/2021/06/a-lecture-on-algorithms-at-the-austrian-parliament/

Stefan Szeider holds a lecture on algorithms at the Austrian Parliament

Activities - Conferences

CPAIOR 2021: 18th Int. Conference on the Integration of Constraint Programming, Artificial Intelligence, and Operations Research

CPAIOR 2021 is the 18th International Conference on the Integration of Constraint Programming, Artificial Intelligence, and Operations Research which was held as a hybrid event in Vienna, Austria from July 5-8, 2021.

Due to uncertainties regarding the COVID-19 situation, it was decided that CPAIOR 2021 would be a hybrid conference, thus including a physical part in Vienna as well as an online part.

The aim of the conference was to bring together interested researchers from Constraint Programming (CP), Artificial Intelligence (AI), and Operations Research (OR) to present new techniques or applications, and to provide an opportunity for researchers in one area to learn about techniques in other fields. Another main objective of this conference series was to give these researchers the opportunity to show how the integration of techniques from different fields can lead to interesting results on large and complex problems.

http://www.vcla.at/events/

Invited Speakers

Maya Gupta
(Researcher, Entrepreneur):
"Why You Should Constrain Your Machine-Learned Models"

Adam Elmachtoub
(Columbia University):
"Contextual Optimization: Bridging Machine Learning and Operations"

Nikolaj Bjørner (Microsoft Research):
"Supercharging Plant Configurations using Z3"

Organizers

Nysret Musliu, TU Wien, Austria, Conference Chair
Peter J. Stuckey, Monash University, Australia, Program Chair

Program Committee

Fahiem Bacchus, Chris Beck, Andre Augusto Cire (University of Toronto)

Nicolas Beldiceanu
IMT Atlantique (LS2N)

Jeremias Berg (University of Helsinki)
Armin Biere (JKU Linz)

Mats Carlsson (RISE Research Institutes of Sweden)

Carleton Coffrin (Los Alamos National Laboratory)

Emir Demirović (TU Delft)

Activities - Conferences

15 papers from our research groups were accepted at AAAI 2021 Conference on Artificial Intelligence

The 35th AAAI Conference on Artificial Intelligence (AAAI-21) was held virtually from February 2-9, 2021. The general chair was Qiang Yang (Hong Kong University of Science and Technology, Hong Kong) and the program chairs were Prof. Leyton-Brown (University of British Columbia, Canada) and Prof. Mausam (Indian Institute of Technology Delhi, India). The purpose of the AAAI conference is to promote research in artificial intelligence (AI) and scientific exchange among AI researchers, practitioners, scientists, and engineers in affiliated disciplines.

15 research papers from our research groups were accepted in the main technical track of the top annual conference in artificial intelligence. Out of a record of 9,034 submissions, over 7,911 were reviewed. 1,692 papers were accepted, which gave an overall acceptance rate of 21% (Source: Kevin Leyton-Brown, University of British Columbia).

Accepted papers and researchers:

1657: Ranking Sets of Defeasible Elements in Preferential Approaches to Structured Argumentation: Postulates, Relations, and Characterizations. Jan Maly, Johannes Peter Wallner

2141: Strong Explanations in Abstract Argumentation. Markus Ulbricht, Johannes Peter Wallner

2874: Recursion in Abstract Argumentation is Hard — On the Complexity of Semantics Based on Weak Admissibility. Wolfgang Dvorak, Markus Ulbricht, Stefan Woltran

2881: The Complexity Landscape of Claim-Augmented Argumentation Frameworks. Wolfgang Dvorak, Alexander Greßler, Anna Rapberger, Stefan Woltran

4620: On the Complexity of Sum-of-Products Problems over Semirings. Thomas Eiter, Rafael Kiesel

4715: A Scalable Reasoning and Learning Approach for Neural-Symbolic Stream Fusion. Danh Le Phu-oc, Thomas Eiter, Tuan Anh Le

4901: The Complexity of Object Association in Multiple Object Tracking. Robert Ganian, Thekla Hamm, Sebastian Ordyniak

5031: The Parameterized Complexity of Clustering Incomplete Data. Eduard Eiben, Robert Ganian, Iyad Kanj, Sebastian Ordyniak, Stefan Szeider

5178: Parameterized Complexity of Small Decision Tree Learning. Sebastian Ordyniak, Stefan Szeider

5219: Constraint Logic Programming for Real-World Test Laboratory Scheduling. Tobias Geibinger, Florian Mischek, Nysret Musliu

5620: Knowledge-Base Degrees of Inconsistency: Complexity and Counting. Johannes K Fichte, Markus Hecher, Arne Meier

6418: Treewidth-Aware Complexity in ASP: Not All Positive Cycles Are Equally Hard. Markus Hecher, Jorge Fandinno

7201: SAT-Based Decision Tree Learning for Large Data Sets. Andre Schidler, Stefan Szeider

7531: Branch and Price for Bus Driver Scheduling with Complex Break Constraints. Lucas Kletzander, Nysret Musliu, Pascal Van Hentenryck

9326: Turbocharging Treewidth-Bounded Bayesian Network Structure Learning. P. R. Vaidyanathan, Stefan Szeider

Activities - Education

Project ADA: Algorithms Think Differently (Algorithmen Denken Anders)
www.ada.wien

ADA is a 3-year educational outreach program of the VCLA. The project is named after Ada Lovelace (1815 – 1852), who is generally considered to be the first computer programmer.

The project aims to engage pupils from the age of 8 to 18 years with unplugged computer science as well as programming activities. These activities foster creative computational thinking, which shapes all areas of digitalization that are crucial for innovation, growth, employment, and competitiveness. Furthermore, the project ADA recognizes the key role that teachers and educators play in introducing children to the fundamental concepts of computer science.

For some decades now – made public by the American computer scientist Jeanette Wing - it has been recognized that people who deal with computer science develop computational thinking. It is a kind of thinking that is algorithmic and process-oriented, in which abstraction and efficiency play a special role.

The project ADA has been made possible by the funding of the Vienna Business Agency and the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (former BMVIT). The cooperation partners of the project are Informatik Austria, Austrian Computer Association (OCG), eEducation Austria, Future Learning Lab of PH Wien, and EIS – Education Innovation Studios of Federal Ministry for Education (BMB).

The following activities were organized within the framework of project ADA:

- Workshop - Introduction to Scratch as part of EU Code Week
- Hackathon for good Artificial intelligence as part of EU Code Week & DigiEduHack
- Science communication events Digital Days, eEducation Austria, Praxistage, Hexagonal Debate
- Diary of a computer scientist Nationwide workshop series for girls led by female computer scientists

Activities - Education

Project ADA: Algorithms Think Differently
Week for Good Artificial Intelligence #4GoodAI

Within the scope of our project ADA, we aim to bridge the divide between school classrooms in Austria and the so-called ivory towers of academia.

From October 12-16, 2020, the Faculty of Informatics of TU Wien hosted a **week of virtual activities for school classes** in Austria under the theme "For Good Artificial Intelligence" (#4GoodAI).

The aim of the Week 4GoodAI was to raise awareness for the need for the development of human-centered AI and its potential to make our lives better. We, the research community, as well as the decision-makers, have the responsibility to work towards this goal of AI for all. The recognition of the importance of the topic of GoodAI is visible by its inclusion on the agenda of every major international research conference concerned with AI, automated reasoning or decision-making. As a project partner of the pan-European AI4EU project, funded with €20 million connecting 79 partners from 21 countries, we work together to position the European Union as a world leader in the governance of the artificial intelligence respecting human values. Last but not least, as initiators of the initiative behind the Vienna Manifesto for Digital Humanism, we strive for analysis of the complex interplay of technology and humankind, for a better society and life, fully respecting universal human rights. Among the authors of the Manifesto are Edward A. Lee (UC Berkeley, USA), Helga Nowotny (Chair of the ERA Council Forum Austria, Former President of the ERC) and Moshe Vardi (Rice University) to mention but a few. What these authors share is the need to recognize our responsibility to shape technologies in accordance with human values and needs.

The cooperation partners of week 4GoodAI are Digital City Wien, the Vienna Cyber-Security and Privacy Research Center, and Verein FIT Sprungbrett. The ADA project is funded by the Federal Ministry for Climate Protection, Environment, Energy, Mobility, Innovation and Technology (BMK).

Activities - Education

Project ADA: Algorithms Think Differently
Week for Good Artificial Intelligence #4GoodAI

Week #4GoodAI - Virtual activities for pupils and teachers

That the majority of the population currently has little confidence in dealing with AI is an alarming signal. To boost the confidence of pupils and teachers, we organized activities ranging from virtual programming sessions (Scratch, Processing), live lectures (History of AI, AI and databases), workshops with women in IT as female role models to CS unplugged analogous activities or introduction of LEGOs.

Lectures by our renowned researchers on topics of artificial intelligence to webinars introducing school classes to programming in Scratch, LEGOs, or without using digital technology (CS Unplugged) were only half of the week's program. The second pillar of the activities in the framework of the Week #4GoodAI dealt with the topic of equal opportunities in computer science and STEM fields in general.

A virtual "SpeedMentoring" with female role models from research, administration, and business was supposed to break down stereotypes about women in computer science and IT, and serve as career counselling for both female and male pupils. In particular, mentees learned how IT can be combined with their interests (e.g. languages, biology, health or law), and how progressive digitization is opening up new job profiles and career prospects in areas that are not traditionally associated with IT.

"The next generation will apply for jobs that did not even exist before they started their studies. We want to show the opportunities that arise from technical know-how, and how exciting and diverse information technology is", illustrates Ass.Prof. Martina Lindorfer, TU Wien, winner of the Hedy Lamarr Prize of the City of Vienna.

Activities - Education

Virtual Hackathon for Good Artificial Intelligence

The virtual Hackathon for good AI, which ran between October 10 and 25, 2020 under the topic "The Health of the Individual and Society" was open to pupils between the 5th and 11th grade. Participants did not need any previous knowledge in programming to participate in this Hackathon.

Nearly 200 pupils from schools all over Austria accepted the challenge to create a chatbot, and the jury selected 5 winner teams who received cash prizes from the award fund of EUR 4,000.

Winner Teams Senior Grades

1st place: Team Fridolin
Sir Karl Popper Schule

Fridolin gives advice on how to protect against COVID-19.

2nd place: TeamMediBot
HTBLA Kaindorf an der Sulm

Gives advice on a healthy lifestyle.

3rd place: Team Swaggy
HAK Ybbs digBiz

Addresses various healthcare issues (e.g., calculation of body mass index).

Winner Teams Junior Grades

1st place: Team Monster Legends
NMS Gasgasse/AHS Friesgasse

A self-learning chatbot with feel-good advice for your home.

2nd place: Team SyntaxError
GRG5 Rainergymn./Wiedner Gymn.

This chatbot helps with the diagnosis of illnesses from symptoms.

Jury

Barbara Buchegger (saferinternet.at)

Agata Ciabattoni (TU Wien)

Jiehua Chen (TU Wien)

Revantha Ramanayake (TU Wien)

Martina Lindorfer (TU Wien)

Stefan Szeider (TU Wien)

https://www.ada.wien/hackathon-4-good-ai/hackathon-fur-gute-ki/

Activities - Education

#How2Hack - Explanatory Videos for Hackathon 4GoodAI 2020 #HealthTech

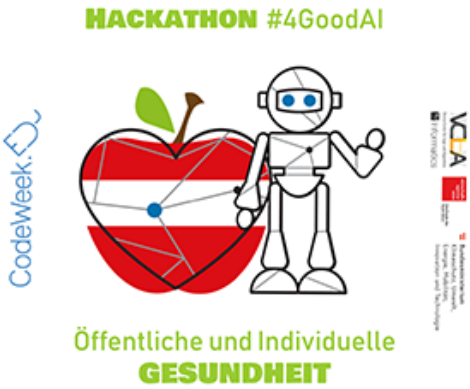
How2Hack was a series of short explanatory videos in which experts from different fields provided a brief overview about topics that were discussed in the Hackathon 4GoodAI 2020.

As assistance, experts from different areas gave advice, tricks, information and learning materials for the Hackathon 4GoodAI in recorded two-minute explanatory videos #How2Hack.

Furthermore, the #How2Hack videos could be used as introductory material for a variety of areas of the school syllabus – from biology, geography, mathematics, economy, political science and computer science.

These videos covered the following topics:

- What is a Hackathon?
  Yujiao Li (Lumos)
- How do I come up with a good idea?
  Jeremias Brändle (Lumos)
- Chatbots: How intelligent can they become, and why?
  Sindre Wimberger (Stadt Wien)
- What is the definition of Artificial Intelligence?
  Thomas Eiter (TU Wien)
- Since when do we talk about "Artificial Intelligence"?
  Thomas Eiter (TU Wien)
- How do you develop the product in a team?
  Lisa-Marie Fassl (Female Founders)
- Artificial Intelligence for good - how do we achieve this?
  Christian Voigt (Zentrum für soziale Innovation)
- What is a decision tree and how do you design a great chatbot?
  Nikolas Haimerl (Lumos)



Activities - Education

...continuation from page 23

- Fake News & Co.
  Mantas Bandonis (Lumos)
- Who will control the AI?
  Peter Schüller (TU Wien)
- How do I create something that someone needs?
  Craig Matthews (Science Park Graz)
- AI: from ancient Greece to the 1920s
  Thomas Eiter (TU Wien)
- Mental health and digital media
  Barbara Buchegger (Saferinternet)
- Smoke less pot with the help of AI and CANreduce.at
  Doris Malischnig (Institut für Suchtprävention)
- Is artificial intelligence a danger to humanity?
  Peter Schüller (TU Wien)
- AI in everyday life
  Thomas Eiter (TU Wien)

Other informational videos:

- Panel discussion on digital medicine at the Digital Days 2020

AGES:

- Nutrients and optimal nutrition?
- What do we know about milk?
- Sugar in our daily lives

All videos are available at
https://www.youtube.com/@viennacenterforlogicandalg5604

WIE BEKOMME ICH EINE GUTE IDEE? .....

WAS IST EIN ENTSCHEIDUNGSBAUM UND WIE ENTWIRFT MAN EINEN TOLLEN CHATBOT?

CHATBOTS – APPLIKATION DER KI – DEMO WIENBOT

FAKE NEWS & CO.
.....

WIE LAUTET DIE DEFINITION VON KÜNSTLICHER INTELLIGENZ?

WER WIRD DIE KI KONTROLLIEREN?
.....

Activities - Distinction

VCLA International Student Awards 2021

The VCLA International Student Awards are presented annually. The winners are invited to attend the award ceremony, and they receive a cash prize from an award fund of EUR 2,000. Since 2016, the awards have been dedicated to the memory of Helmut Veith (1971-2016), the initiator of the awards.

The highly successful sixth edition of the VCLA International Student Awards was concluded in July 2021 with the announcement of two winners in two award categories.

Based on an international call for nominations, the award committee announced one

- Outstanding Master Thesis Award

and one

- Outstanding Undergraduate Research Award.

The defense of the nominated Master and Bachelor Thesis had to be held between Nov 15, 2019 and Dec 31, 2020 (inclusive).

And these are the award recipients:

Outstanding Master Thesis Award

Tuukka Korhonen

Thesis: Finding Optimal Tree Decompositions

Supervisor: Matti Järvisalo (Helsinki University of Technology, Finland)

Master Thesis Award Winner: Tuukka Korhonen

Photo (c) Tuukka Korhoen

Activities - Distinction

... Continuation from page 25

Outstanding Undergraduate Research Award

Jasper Slusallek

Thesis: Algorithms and Lower Bounds for Finding (Exact-Weight) Subgraphs of Bounded Treewidth

Supervisor: Karl Bringmann (Max Planck Institute for Informatics, Saarbrücken, Germany)

Undergraduate Thesis Award Winner: Jasper Slusallek

Photo (c) Jasper Slusallek

Award Ceremony

Unfortunately, due to COVID-19, the usual award ceremony in Vienna for the winners had to be postponed. Nevertheless, the proud winners received the VCLA International Student Awards Certificate and the prize money.

Award Committee

- Robert Ganian (chair)
- Magdalena Ortiz (chair)
- Revantha Ramanayake (co-chair)
- Shqiponja Ahmetaj
- Jan Dreier
- Ekaterina Fokina
- Anna Lukina
- Johannes Oetsch
- Xavier Parent
- Emanuel Sallinger
- Zeynep G. Saribatur
- Stefan Schupp
- Mantas Simkus
- Sebastian Skritek
- Friedrich Slivovsky
- Max Tschaikowski
- Johannes P. Wallner
- Jules Wulms

http://www.vcla.at/2021/08/the-awardees-of-the-2021-vcla-international-student-awards/

Activities - Distinction

Helmut Veith Stipend Winner 2021

Helmut Veith (1971-2016) was a strong advocate and mentor for women in computer science. To honor Helmut's efforts, a stipend for outstanding female students in computer science was established in 2017 with the financial support of TU Wien, the Wolfgang Pauli Institute, and generous donations of friends and colleagues of Prof. Veith.

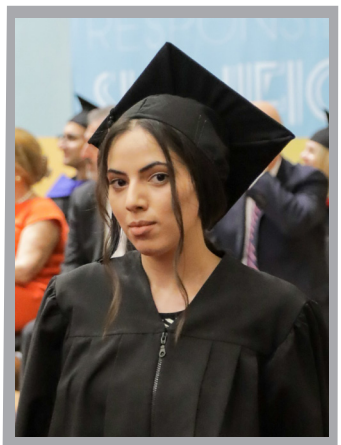
The 5th recipient of the annually awarded Helmut Veith Stipend for outstanding female MA students in computer science is Anna Baghumyan, who recently graduated from the American University of Armenia with a BS in Computer Science, and who has been admitted to the Data Science MA program at TU Wien.

Ms Baghumyan received an Akian Scholarship for her BA Studies, during which she was particularly interested in statistics, optimization and probability classes. During internships, she gained experience as a web and android developer, and to expand her skills in these fields of research, she enrolled for extracurricular classes such as online programming courses by Udemy and data science classes.

In addition, Anna Baghumyan also participated in several study-related projects and case studies such as predicting employee churn, classifying song genres from audio data, correctly guessing the street signs for smart cars, or forecasting the weather using machine learning techniques.

Students who are awarded a scholarship receive EUR 6,000 annually, and a waiver of all tuition fees at TU Wien. The annual deadline is November 30.

http://www.vcla.at/2021/05/5th-helmut-veith-stipend-recipient-announced/



Anna Baghumyan

Photo (c) Anna Baghumyan

Activities - Distinction

A Problem Solver's Paradise: Interview with Viktoriia Korchemna, 2018 Helmut Veith Stipend Winner

Studying Logic and Computation in Austria was not Viktoriias plan, "it just happened". When finishing her bachelor studies of theoretical mathematics at Taras Shevchenko National University of Kyiv, she was actively searching for a scholarship that would allow her to continue her studies. She reports that such scholarships are quite common in Ukraine, but less so in other European countries. In the end, it was her mother, a computer programmer, who came across the Helmut Veith Stipend offered by VCLA.

During Viktoriia's interview with the stipend committee in Vienna, it became clear that the MSc program Logic and Computation was the perfect fit. She had pictured this field of study as having a focus on practical applications, when in fact it centers on finding theoretical solutions to computational problems. At school, Viktoriia had entered mathematical competitions – this is how she came to love problem solving. "I am more interested in the theoretical part of computer science. I rarely code algorithms; I just prove that a particular algorithmic idea is correct and efficient, and the results can then be used by others, e.g., to speed up network learning," she says. In addition to her master's studies at TU Wien, she also took classes at the Faculty of Mathematics at the University of Vienna. Partly, she wanted to make sure that she had made the right decision in choosing Logic and Computation over Mathematics, and now she is certain of it.

Having obtained her master's degree with excellent grades, Viktoriia is now a PhD student at the Algorithms and Complexity Group of TU Wien.

Viktoriia Korchemna

Activities - Distinction

...Continuation from page 29

What stands out in her résumé is the fact that she has already published in the proceedings of the two most renowned conferences in Machine Learning: Neural Information Processing Systems (NeurIPS) and the International Conference on Machine Learning (ICML). In fact, her NeurIPS paper The Complexity of Bayesian Network Learning: Revisiting the Superstructure (co-authored with her supervisor Robert Ganian) was among the fewer than 1% of submissions to be accepted for a full-length oral presentation at the conference. While this paper was based on her MSc and PhD studies, the idea for the ICML paper emerged in the course of a research visit of colleague Karolina Okrasa. Essentially, Viktoriia was part of a team that researched the best way to efficiently cluster a set of data points when some of the data is not known (The Complexity of k-Means Clustering when Little is Known). "The motivation for these algorithms comes from image recognition or recommender systems – imagine, for instance, how streaming services suggest shows to viewers," Viktoriia explains. ICML took place in Baltimore, but unfortunately, the Ukrainian scientist was not able to attend in person due to visa issues.

Viktoriia describes her PhD studies at TU Wien as fun, interactive, and team-oriented, thereby contradicting the common assumption that computer scientists spend most of their time alone in front of a computer. She observes that in her field, there is an abundance of problems that need solving – you don't need to look for them, but instead learn about them at conferences, workshops, or during research visits. "It is not always necessary to have in-depth knowledge of a problem, at least not at first. The lack of prior knowledge does not stop us from doing our job," she observes. For the paper on k-means clustering, it was a colleague who came up with the main idea, whereas Viktoriia sees her contribution in finding a solution to a problem with an algorithm that they had devised. "We were on the verge of abandoning the algorithm and moving on, when unexpectedly, I had an idea of how it could be fixed."

In her free time, Viktoriia likes to paint with oil or chalk ("something that I can erase or paint over") and go hiking.

https://www.ac.tuwien.ac.at/people/vkorchemna/

Activities - Distinction

Alonzo Church Award 2021

The ACM Special Interest Group for Logic and Computation (SIGLOG), the European Association for Theoretical Computer Science (EATCS), the European Association for Computer Science Logic (EACSL), and the Kurt Gödel Society (KGS) have announced that:

Georg Gottlob (VCLA advisory board member), Christoph Koch, Reinhard Pichler (VCLA executive board member), Klaus U. Schulz, and Luc Segoufin

have been selected as the winners of the prestigious 2021 Alonzo Church Award for Outstanding Contributions to Logic and Computation.

They are awarded for their fundamental work on logic-based web data extraction and querying tree-structured data,

published in:

(1) Georg Gottlob and Christoph Koch. "Monadic Datalog and the Expressive Power of Languages for Web Information Extraction." Journal of the ACM (JACM) 51.1 (2004): 74-113.

(2) Georg Gottlob, Christoph Koch, and Klaus U. Schulz. "Conjunctive Queries Over Trees." Journal of the ACM (JACM) 53.2 (2006): 238-272.

(3) Georg Gottlob, Christoph Koch, and Reinhard Pichler. "Efficient Algorithms for Processing XPath Queries." ACM Transactions on Database Systems (TODS) 30.2 (2005): 444-491.

(4) Georg Gottlob, Christoph Koch, Reinhard Pichler, and Luc Segoufin. "The Complexity of XPath Query Evaluation and XML Typing." Journal of the ACM (JACM) 52.2 (2005): 284-335.

About the Alonzo Church Award

The Alonzo Church Award for Outstanding Contributions to Logic and Computation was established in 2015 by the ACM Special Interest Group for Logic and Computation (SIGLOG), the European Association for Theoretical Computer Science (EATCS), the European Association for Computer Science Logic (EACSL), and the Kurt Gödel Society (KGS). The award is for an outstanding contribution represented by a paper or small group of papers within the past 25 years.

http://www.vcla.at/2021/05/alonzo-church-award-2021-for-vclas-georg-gottlob-und-reinhard-pichler/

Activities - Distinction

Hertha Firnberg Fellowships (FWF)

Three post-doc researchers from the Institute of Logic and Computation, all of them graduates of our LogiCS doctoral program (funded by the FWF, run jointly by TU Wien, Graz University of Technology and JKU Linz) received the prestigious FWF Hertha Firnberg Fellowship Grant for highly qualified female scientists.

About the Hertha Firnberg Program
The main goal of the Hertha Firnberg Program of the Austrian Science Fund FWF is to support highly qualified female post-doc researchers at the beginning of their scientific careers.

The Recipients and their Projects

Shqiponja Ahmetaj

Shqiponja from the research unit Databases and Artificial Intelligence presented her project "Foundations of Reasoning in the Shape Constraint Language".

logics LOGICAL METHODS IN COMPUTER SCIENCE

Katalin Fazekas

Katalin from the research unit Formal Methods in Systems Engineering introduced her project on "Incremental SAT and SMT Reasoning for Scalable Verification".

Zeynep G. Saribatur

Zeynep, who is also a member of the research unit Databases and Artificial Intelligence, submitted her project "AURA – Abstraction for Understandability of Reasoning in AI".

http://www.vcla.at/2021/07/three-logics-alumni-receive-prestigous-hertha-firnberg-fellowship/

Activities - Distinction

Netidee Stipend 2021 for Pamina Georgiou

Pamina Georgiou, member of the research group Formal Methods in Systems Engineering (TU Wien), received the Netidee Stipend 2021 funded by "Internet Stiftung" for her PhD thesis on "Automated Software Verification with First-Order Theorem Provers".

University:
TU Wien (Vienna Univ. of Technology)

Topic: Distributed Systems | Security | Privacy | Surveillance

Classification: Dissertation | PhD

http://www.vcla.at/2021/12/netidee-stipend-2021-for-pamina-georgiou/

Netidee Stipend Winner Pamina Georgiou

Photo (c) Pamina Georgiou

Abstract:

Automating formal methods is an ongoing effort in software verification necessary to conclusively prove that critical software infrastructure is error-free. Applications such as IoT, cloud computing and blockchain show that bugs can have severe implications on the safety and security of software. In this thesis, we propose trace logic to automate deductive verification of software using first-order theorem proving. Automated reasoning in trace logic helps to prove safety properties of while-like programs in full first-order logic with support for theories and sorts. Our aim is to extend the logical expressiveness of program semantics in trace logic, offering a fully automated and scalable approach towards reasoning-based software verification. Specifically, our project extends reasoning with trace logic to inter-procedural analysis and concurrency to make automated verification of these technologies possible and thereby pushing the state-of-the-art in automated reasoning.

Activities - Cooperations

5th Women in Logic Workshop (WiL) 2021 {re-arranged to virtual}

Women in Logic 2021 is a satellite event of the 36th Annual ACM/IEEE Symposium on Logic in Computer Science (LICS'21) which took place from June 29 - July 2, 2021. Due to COVID-19, it had to be re-arranged as a virtual event.

The Women in Logic workshop (WiL) provides an opportunity to increase awareness of the valuable contributions made by women in the area of logic in computer science. Its main purpose is to promote the excellent research done by women, with the ultimate goal of increasing their visibility and representation in the community.

Our aim is to:

- provide a platform for female researchers to share their work and achievements;
- establish new connections and collaborations;
- foster a welcoming culture of mutual support and growth within the logic research community

Invited Speakers

- Simona Ronchi Della Rocca
  Università di Torino
  "Intersection types for probabilistic computation"
- Rineke Verbrugge
  University of Groningen
  "Zero-one laws for provability logic and its transitive sisters"

Date: Sunday, June 27, 2021

Venue: virtual

http://www.vcla.at/events

Women in Logic Workshop 2021

Activities - Cooperations

World Logic Day - Ambassadors of Logic
Creation of Website logicday.vcla.at

On 14 January, the world celebrates World Logic Day. It is the date of birth of Alfred Tarski as well as the date of death of Kurt Gödel, two of the most prominent logicians of the 20th century.

In addition to the **Vienna Logic Day Lecture (cf. pages 13/14)**, the VCLA decided to set up a new website dedicated to this special day: logicday.vcla.at

The center also appointed renowned scientists as "Ambassadors of Logic" and asked them to provide short statements on the rationale for the celebration of World Logic Day.

These 22 ambassadors were Arnon Avron (Tel Aviv Univ.), Johan van Benthem (Univ. of Amsterdam), Marcello D'Agostino (Univ. of Milan), Ron Fagin (IBM Almaden Research Center), Melvin Fitting (Lehman College), Dov Gabbay (King's College London), Silvio Ghilardi (Univ. of Milan), Rosalie Iemhoff (Utrecht Univ.), Neil Immerman (Univ. of Massachusetts Amherst), Phokion Kolaitis (UC Santa Cruz), Robert Kowalski (Imperial College London), Dale Miller (Inria Saclay - Île-de-France), Daniele Mundici (Univ. of Florence), Valeria de Paiva (Topos Institute, Berkeley), Catuscia Palamidessi (INRIA), Elaine Pimentel (Univ. College London), Graham Priest (CU New York; Univ. of Melbourne), Alexander Razborov (Univ. of Chicago), Alexandra Silva (Cornell Univ.), Sonja Smets (Univ. of Amsterdam), Moshe Vardi (Rice Univ.), and Martin Hyland (Univ. of Cambridge).

A snapshot of the website logicday.vcla.at

Activities - Cooperations

...continuation from page 34

Here are a few sample quotations from our Ambassadors of Logic:

That humans can reason is amazing; that reasoning can be captured by logical principles is intriguing; that logic can be used in many other ways is surprising. Thus logic amazes, intrigues, and surprises, among other things.
- Rosalie Iemhoff

Logic has made an impact in Mathematics by helping to organize its foundation and structure its proofs. However, logic and the theory of proofs have made a much broader impact within Computer Science, where it provides new designs and new languages as well as foundational results and far-reaching connections.
- Dale Miller

Logic plays an essential role in the modern world of information; but that is a distraction. The study of Logic leads not to easy technical answers but to hard questions about meaning which lie behind all our attempts at understanding.
- Martin Hyland

Logic rules the structure of the world, and if we only let it, also our actions in the world. Logic is our strongest ally in being coherent in reasoning, fair in criticizing, and clear-headed about the scope and limits of thinking.
- Johan van Benthem

When all is said and done, what's left, what stays, from being human, is Logic. Logic removes all the flesh and ornaments, and gives us the underlying bones of what we know. Whether it intends to do so or not, logic turns out to be a moral compass. We overlook it at our own peril, as Logic is even more inexorable than taxes and death.
- Valeria de Paiva

Logic is a cornerstone of rational thinking. The attempt to base mathematics on logic led in the first part of the 20th Century to a foundational crisis in mathematics. The insight that came out of this crisis was that a mathematical proof is evidence that can be checked computationally. And thus was born computer science.
- Moshe Vardi

Activities - Cooperations

Logical Methods in Computer Science

The Doctoral College Logical Methods in Computer Science (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).

LogiCS was established in March 2014 by Helmut Veith† and Stefan Szeider. In 2017, the funding body renewed the grant of the PhD program for another 4 years. The speaker of the new LogiCS is Georg Gottlob, the co-speaker is Stefan Szeider.

The faculty of the LogiCS comprises renowned researchers with strong records in research, teaching and advising.

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The program is aimed at highly motivated students who want to develop new logical methods and databases, Artificial Intelligence and verifications as well as applying them to solving problems in emergent areas like Security and Privacy, Cyber-Physical Systems, and Distributed Systems.

The program has been very successful so far: It attracted 69 excellent students worldwide, of which 41% percent are female doctoral candidates.

http://logic-cs.at/phd

Several of the LogiCS students

© Sara Meister

Media Coverage

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

August 11, 2021
Wiener Bezirksblatt
Hedy Lamarr Preis holt Forscherinnen vor den Vorhang
(Hedy Lamarr Award for Female Scientists)
https://wienerbezirksblatt.at/hedy-lamarr-preis-holt-forscherinnen-vor-den-vorhang/

August 17, 2021
Saarbrücker Zeitung
Auf der Suche nach dem schnellsten Algorithmus. Internationaler Preis für Bachelorarbeit
(Searching for the fastest algorithm: international prize for bachelor paper)
https://www.saarbruecker-zeitung.de/saarland/hochschule/saarbruecken-saarland-student-raeumt-preis-fuer-bachelorarbeit-ab_aid-62163697

July 2, 2021
economy
Gefahr aus dem internetten Nebenwohnsitz
(Subdomains pose danger to internet users)
http://economy.at/forschung/gefahr-aus-dem-internetten-nebenwohnsitz

June 17, 2021
brandaktuell.at
TU Wien: Digitale Kompetenzen im Parlament
(Digitale competences at parliament)
https://brandaktuell.at/2021/06/17/karriere/tu-wien-digitale-kompetenzen-im-parlament/

June 14, 2021
Apa Science
Sub auspiciis Promotionen im Juni 2021 an der TU Wien
(Sub auspiciis promotions in June 2021 at TU Wien)
https://science.apa.at/power-search/13051757741522116652

Media Coverage

June 13, 2021
ACIT Science Podcast
The Origins of Computer Science & Verifying Code With Logic with Marcel Moosbrugger
https://anchor.fm/acit-science/episodes/16-The-Origins-of-Computer-Science--Verifying-Code-With-Logic-with-Marcel-Moosbrugger-e12l01o

May 27, 2021
economy
Mehr Sicherheit für Blockchain und Kryptowährungen
(More Security for Blockchain and Crypto Currencies)
http://economy.at/technologie/mehr-sicherheit-fur-blockchain-und-kryptowahrungen

May 2021
Wien Wissen, Ausgabe 01/2021
Eine Blockchain für den Alltag (A blockchain for everyday life)
https://club.wien.at/static/ePaper/WIEN-WISSEN-2021-01/index.html#/6

May 12, 2021
computerwelt.at
COMPUTERWELT Roundtable: KI ist keine Hexerei (Roundtable: AI is no sorcery)
https://computerwelt.at/printausgabe/computerwelt-roundtable-ki-ist-keine-hexerei/

May 6, 2021
orf.at
Leicht geknackt, aber unersetzlich (Easily cracked, but irreplaceable)
https://orf.at/stories/3211803/#15473,1915292,1620315379

May 5, 2021
krone.at
Schnellere Transaktion. Forscher der TU Wien präsentieren Bitcoin-Turbo
(Faster Transactions with Bitcoin-Turbo)
https://www.krone.at/2406313a3859455

Media Coverage

April 26, 2021
vol.at / Vorarlberger Nachrichten
Technische Universität Wien meets Mädchen des itm-Zweiges
(TU Wien meets girls who study information technology and media at school)
https://www.vol.at/technische-universitaet-wien-meets-maedchen-des-itm-zweiges/6971166

April 17, 2021
Die Presse (print edition)
„Girls in ICT"-Day mit Diskussion und Speed Mentoring am 22. April
(Girls in ICT Day with Discussion and Speed Mentoring on April 22)
https://www.diepresse.com/5966377/mehr-madchen-in-die-informatik

April 8, 2021
meinbezirk.at
HAK Digital Business Ybbs erreicht ausgezeichneten 3. Platz bei Programmierwettbewerb der TU Wien
(HAK Digital Business Ybbs wins 3rd place at TU Wien Hackathon)
https://www.meinbezirk.at/melk/c-regionauten-community/hak-digital-business-ybbs-erreicht-ausgezeichneten-3-platz-bei-programmierwettbewerb-der-tu-wien_a4570574

March 31, 2021
APA Science
Auszeichnung für Laura Kovacs
(Award for Laura Kovacs)
https://science.apa.at/power-search/12000415366877412033

February 27, 2021
Kurier
Speedmentoring auf der BeST3
(Speed mentoring at BeST3)
http://www.vcla.at/wp-content/uploads/2021/09/KURIER_20210227_SEITE_5_Karriere.pdf

Media Coverage

December 9, 2020
it&t Nr. 12/2020-01/2021
Expertinnen am Wort (Experts speak)
http://www.vcla.at/wp-content/uploads/2020/12/ITT_20201209_SEITE_11.pdf

December 9, 2020
oe24.at
18 in Österreich tätige Forscher erhalten Millionen-Förderung vom ERC
(18 Austrian scientists win research grants worth millions)
https://www.oe24.at/newsfeed/18-in-oesterreich-taetige-forscher-erhalten-millionen-foerderung-vom-erc/456928584

November 25, 2020
Erfolgreiche Teilnahme bei der EU CodeWeek
(Successful participation in EU Code Week)
http://www.vcla.at/wp-content/uploads/2020/12/NOEN_20201125_SEITE_11_xtwrn.pdf

November 18, 2020
Report (+) Plus" Nr. 11/2020
Mit Diversität zum Erfolg (With diversity to success)
http://www.vcla.at/wp-content/uploads/2020/12/Another-SpeedMentoring.pdf

November 9, 2020
ittbusiness.at
IT-Security Expertinnen am Wort (IT Security experts)
https://www.ittbusiness.at/article/voesi-womeninict-it-security-expertinnen-now

October 17, 2020
computerwelt.at
TU Wien bot Woche 4GoodAI: Mit Frauen Online Speed Mentoring
(TU Wien offered a week 4GoodAI: Digital speed mentoring with women)
https://computerwelt.at/news/tu-wien-bot-woche-4goodai-mit-frauen-online-speed-mentoring/

Media Coverage

October 13, 2020
Radio report in Digital.Leben of ORF
Gute künstliche Intelligenz (Good Artificial Intelligence)
https://oe1.orf.at/programm/20201013/607437/Gute-Kuenstliche-Intelligenz

October 9, 2020
"Lange Nacht der Forschung 2020 digital": Umwelt- und Energiethemen zum selbst entdecken
("Digital Long Night of Research 2020": environmental and energy topics to discover on your own)
https://www.oekonews.at/?mdoc_id=1162109

October 8, 2020
brandaktuell.at
Klimaschutzministerium bei „Langer Nacht der Forschung 2020 digital": Forschung für Jung und Alt
(Ministry for climate security at the "Digital Long Night of Research 2020": research for old and young)
https://brandaktuell.at/2020/10/08/karriere/klimaschutzministerium-bei-langer-nacht-der-forschung-2020-digital-forschung-fuer-jung-und-alt/

October 8, 2020
APA OTS
Klimaschutzministerium bei „Langer Nacht der Forschung 2020 digital": Forschung für Jung und Alt (see translation above)
https://www.ots.at/presseaussendung/OTS_20201008_OTS0046/klimaschutzministerium-bei-langer-nacht-der-forschung-2020-digital-forschung-fuer-jung-und-alt

VCLA Chairs

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

© Luiza Puiu / Nadja Meister

Agata Ciabattoni and Stefan Szeider are co-chairs of the Vienna Center for Logic and Algorithms. Stefan Szeider and Helmut Veith (1971-2016) founded the VCLA in 2011, assuming chair's strategic leadership over its activities.

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.

Stefan Szeider is a full professor at TU Wien and head of the Algorithms and Complexity Group. He is also the deputy speaker of the Doctoral Program 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.

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Image credits: VCLA / Under designation * Nadja Meister

Vienna Center for Logic and Algorithms

TU WIEN Informatics

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