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The DAILY PROPHET

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★ THE WIZARD WORLD'S BEGUILING BROADSHEET OF CHOICE ★

THE DAILY PROPHET COMPETITION
★★★★★★★★★ WIN A NIGHT IN TRANSILVANIA
FULL REPORT PAGE 7

National Weather
south - sunny period 3c
north - cloudy & rain 7c
central - cloudy & rain 5c
London - sunny period 5c

Zodiac ★ Aspects
to - ♍ virgo ☌ ☍ luna app-
♓ in - ♈ aries - rom ◯ t
♌ sicle - ≈ ne pi ✶ sees ♓

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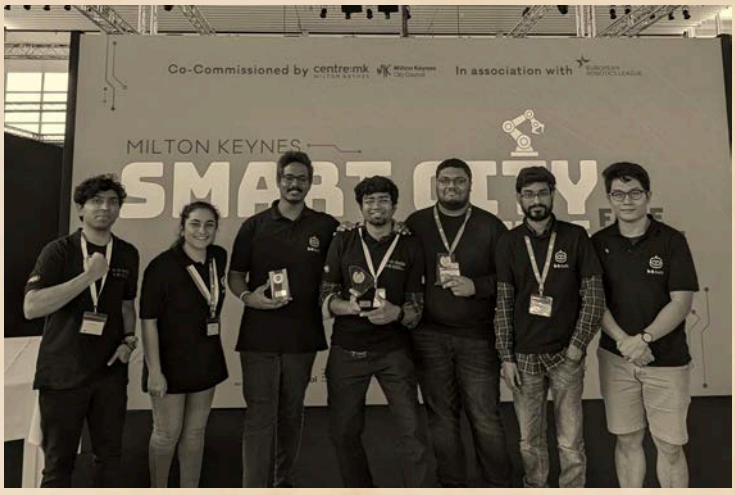
b-it-bots №1 AGAIN!

This is the second world championship title for the team after winning for the first time in 2019 in Sydney! The b-it-bots @Work team has done it again - the team has won the RoboCup@Work competition at RoboCup 2023 in Bordeaux, France! The official results of the competition can be found at https://atwork.robocup.org/rc2023/. The following wizards participated in the competition: Kevin (team leader), Gokul, Ravisankar, Shubham, Vamsi, Vivek, and Santosh. They were supported by others who did not attend the competition, including Sathwik, Kishan, Hamsa, Chaitanya, Deebul, and Wasil. In September, the b-it-bots @Home team also repeated their success from the 2019 ERL Smart City competition by winning two episodes and joint overall best team this year in Milton Keynes! Lucy, their favorite robot, was going about her business opening doors, and helping Muggles at home, supported by Minh, Manish, Hamsa, Melvin, Zain, Nada and Vivek. The b-it-bots also took part in a couple of other competitions this year. We caught up with them and Lucy in May at the METRICS HEART-MET competition at ICRA 2023 in London supported by Manish, Melvin, Bharath, Hamsa and Zain, building on their success from the competition at the Cobot Maker Space, University of Nottingham, in October 2022, where they were also supported by Ananya and Ekansh. You could also catch Bharath, Vamsi and Saad winning the METRICS HEART-MET competition in Florence with the Kinova arm, and Kevin, Vamsi, Ravisankar and Deebul placing 6th at the Robothon® - The Grand Challenge 2023 challenge, with support from Ludovico, Kishan and others. Readers may recall that in addition to the @Work wins, the b-it-bots were also world champions in the @Home League back in 2009.



The Daily Prophet, on behalf of all of our readers, offers our sincere congratulations to the world champions!

(Due to concerns raised about their winning streak, the b-it-bots seeks to clarify that they work closely with the Misuse of Muggle Artefacts Office at the Ministry to ensure their robots comply with all regulations.)

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EXCLUSIVE

STELLAR WORK RECOGNISED

Two students from the Master's Programme in Autonomous Systems won first and second place in the study award of the User Forum

for Telecommunications, Computers, Electronics and Automation (AFCEA) this year. At the AFCEA Bonn e.V., study prizes have been awarded annually since 2008 to young scientists for scientific qualification. Awards are given for outstanding theses in the fields of: Applied Computer Science, AI, Big Data, Automatic Speech Processing, communications engineering, radar technology and automation technology, robotics. Ahmed Faisal Abdelrahman was the winner of the entire competition with his master's thesis: A Neuromorphic Approach to Obstacle Avoidance in Robot Manipulation. He received prize money of 6,000 euros for his master's thesis, which was supervised by Prof. Paul Plöger (H-BRS), Prof. Maren Bennewitz (Uni Bonn), and Prof. Matias Valdenegro-Toro (University of Groningen). Neuromorphic computing (NC) attempts to mimic the properties of the brain through hardware, specifically by using analogue VLSI circuits. In his master's thesis, Abdelrahman tries to explore the advantages and limitations of an NC-based solution using a very common robotics problem (i.e. obstacle avoidance of a manipulator using an on-board camera). It is worth noting that this clever wizard's work has also been awarded the Förderpreis 2023 for the best thesis in Computer Science. Sushant Vijay Chavan won second place for his master's thesis on the topic: Coins Map - Composable ontology based indoor semantic map, was awarded a prize of 4,000 euros.

Indeed, at the celebratory event held on the occasion of the passing of 20 years since the foundation of b-it, both Abdelrahman and Dr. Alex Mitrevski won first place for their work. In an interview, Abdelrahman, who graduated in 2022, informed us as to what he has more recently been up to, "I went on to join the MIRMI in Munich as a research associate. The MAS programme was a great opportunity to contribute to applied research in robotics and machine learning, which I had been immensely interested in since my undergraduate studies. Through informative courses, participation with the b-it-bots team, and my own research projects, I gained knowledge and skills that far exceeded my expectations. With the support of my mentors, I pursued research that excited me and which culminated in my first publication at an international scientific conference, demonstrating a reinforcement learning application, and my thesis on neuromorphic techniques, which has since won both the AFCEA prize as well as the university's sponsorship award (Förderpreis). At TUM, I conduct research into safe machine learning for robot control as part of my doctorate studies, in affiliation with the Konrad Zuse School of Excellence in reliable AI (relAI).".

The best paper award was given to Minh Nguyen, Prof. Hochgeschwender, & Prof. Wrede at the 2023 International Workshop on Robotics Software Engineering (RoSE). The paper is titled, "An Analysis of Behaviour-Driven Requirement Specification for Robotic Competitions".

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New Institute for Magic Founded

The Institute for Artificial Intelligence & Autonomous Systems

The Institute, which has come to be known as A²S, bundles research, transfer and teaching at H-BRS on the topics of AI and autonomous systems. For those keen-eyed readers among you, this is the new politically-correct, Muggle-aligned terminology, which until recently was commonly known as “Magic”.

Prof. Teena Chakkalayil Hassan, a young professor from the Department of Computer Science takes over the leadership of the institute following the departure of Prof. Nico Hochgeschwender. Hassan is building a path to advance the areas of human-robot interaction, hospital logistics, AI for healthcare and environment perception through machine learning. She has the best prerequisites for this. She completed her master's degree in Autonomous Systems in 2014 with an excellent master's thesis on "Dynamic facial expression estimation by means of model fitting" in the Department of Computer Science at the H-BRS and then began her professional career. She made stops at the Fraunhofer Institute, at the University of Bielefeld and then at the University of Bamberg for her doctorate. From there, she went on to University of Bremen and then returned to the H-BRS as a professor for "Mathematical Foundations of Autonomous Systems”. The goal is to strengthen and accelerate AI and robotics in research and transfer at the institute. To achieve this, Hassan and her team rely on the internal network of the university involving various stakeholders and interested parties as well as the involvement of external experts from industry and academia. As one of the Institute's core values, Hassan wants to promote not only the scientific-technical but also the human-related aspects in AI and robotics.

Houben Heads Masters

Following the departure of Prof. Paul G. Plöger in March, Prof. Sebastian Houben has been appointed the head of the Master's Programme in Autonomous Systems. He holds the position in the Examinations Committee and has vowed to act in the best interest of the students and the programme. Houben is notable for his work in divination (Machine Learning). Since September 2021, Dr Sebastian Houben has been Professor of Robot Vision and Machine Learning in the Department of Computer Science at H-BRS and dedicated his inaugural lecture to the topic of “The Three Levels of Informed Robot Sensing”. Sources close to the Ministry of Magic are said to be delighted at the work he has already done as headmaster and are confident that the programme will thrive under his leadership. When asked if he would continue to watch over the programme and its members, he quietly and assuredly replied,

“Always”

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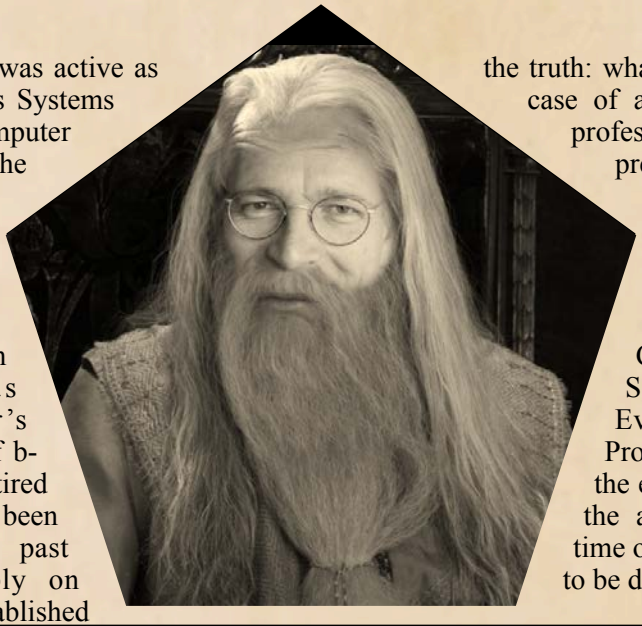
PAUL G. PLÖGER SIGHTED



For 20 years, Paul Plöger was active as Professor of Autonomous Systems at the Department of Computer Science. As a co-founder of the degree programme of the same name, he played a decisive role in making H-BRS one of the top universities in the field of artificial intelligence today. In this time, he served as headmaster of the master's programme, as well as head of b-it. Last March, he formally retired as professor however, he has been sighted on campus for the past couple of weeks — notably on Fridays! This reporter has established the truth: what first appeared to be a simple case of a professor moonlighting as a professor, has in fact turned out to be precisely that! He can be found back in the classroom teaching his beloved coursework to eager students. Whether it is Mathematics for Robotics & Control (aka The Dark Arts), Scientific Experimentation & Evaluation, Natural Language Processing or Neural Networks, the esteemed professor has come to the aid of his colleagues in their time of need and the students are said to be delighted.

Congratulations to Alex Mitrevski, who successfully defended his PhD this January at RWTH Aachen University. Alex's dissertation, titled "Skill Generalisation and Experience Acquisition for Predicting and Avoiding Execution Failures" was a cooperative PhD with the Knowledge-Based Systems group at RWTH Aachen University. The project was advised by our Prof. Paul Plöger & Prof. Gerhard Lakemeyer from RWTH Aachen University. The examination committee consisted of the two advisors as well as Prof. Michael Beetz of the Institute for Artificial Intelligence at the University of Bremen, as well as Prof. Bastian Leibe and Prof. Stefan Kowalewski of RWTH Aachen University. The dissertation was awarded a magna cum laude (1.0).

WHO IS SASCHA ALDA?

Professor Sascha Alda is the new Scientific Director at the Bonn-Aachen International Center for Information Technology (b-it) on the part of the Hochschule Bonn-Rhein-Sieg and succeeds Professor Nico Hochgeschwender, who has taken on a position at Bremen University. b-it is one of Europe's leading institutions for cutting-edge research and higher education in computer science. Alda is currently Dean of the Department of Computer Science at H-BRS and is the fourth Scientific Director of the institute from the ranks of the Department of Computer Science. Prof. Kurt Ulrich Witt, one of the founding directors of b-it, was succeeded by Prof. Paul Plöger in 2016, followed by Prof. Nico Hochgeschwender in 2022. A competent successor has been found in Professor Alda, who was a lecturer at b-it in the field of software engineering from 2005 to 2006 and is already well-networked as a result. His aim is to shape the digital transformation in exchange with business and society and to focus on data science and its application areas in media, life sciences and autonomous systems. The b-it is jointly supported by the four renowned universities and research institutions, the University of Bonn, RWTH Aachen University, Bonn-Rhein-Sieg University of Applied Sciences and the Fraunhofer-Gesellschaft. It is financed by the b-it Foundation and other third-party donors.

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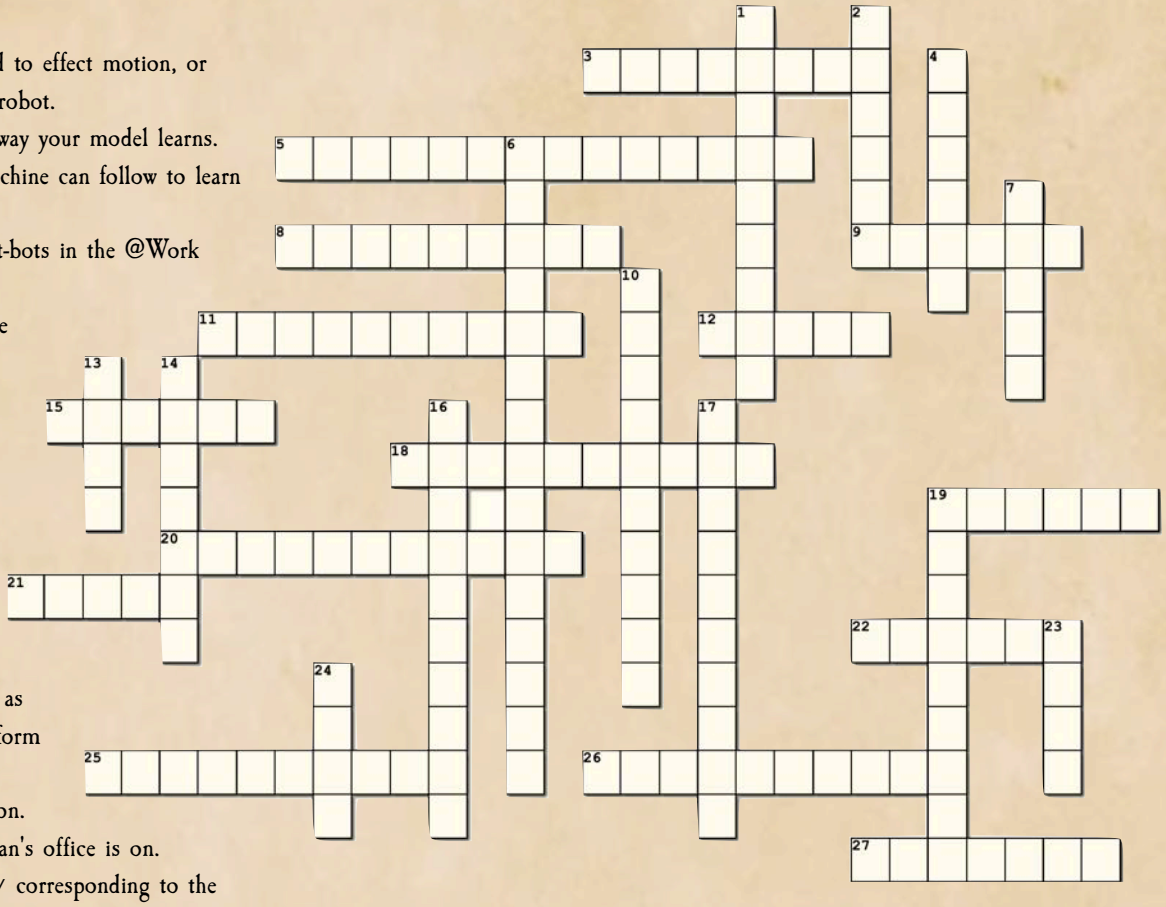
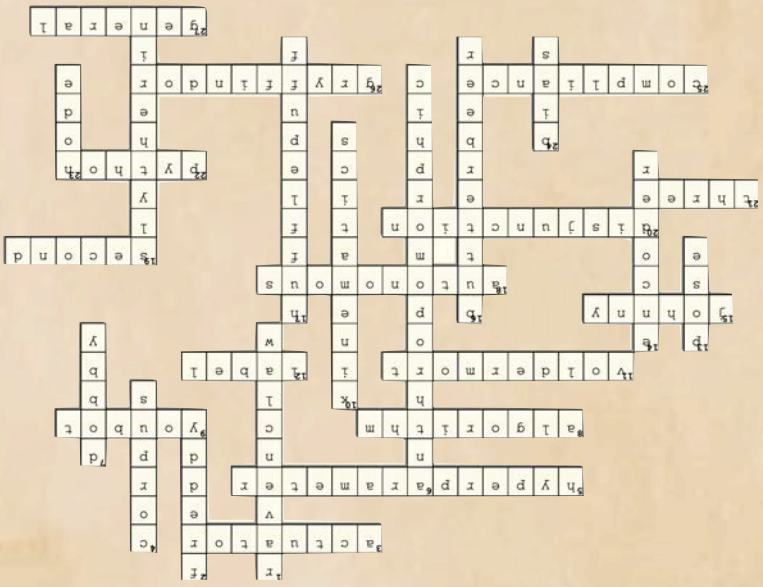


➨ Horizontal

3. Power mechanism used to effect motion, or maintain position of the robot.
5. Values that affect the way your model learns.
8. Set of rules that a machine can follow to learn how to do a task.
9. Robot used by the b-it-bots in the @Work League.
11. He who should not be named.
12. Part of training data that identifies the desired output for that particular piece of data.
15. b-it-bots robot who won the @Home World Championship in 2009.
18. Machine is described as autonomous if it can perform its task or tasks without needing human intervention.
19. The floor Prof. Hassan's office is on.
20. Boolean connective ∨ corresponding to the English word or.
21. Number of laws first stated by 20th-century author Isaac Asimov in 1941, in his novel I, Robot.
22. Popular programming language used for general programming.
25. Displacement of a manipulator in response to a force or torque.
26. Hogwarts house whose members value courage, daring, nerve and chivalry.
27. AI that could successfully do any intellectual task that can be done by any human being.

➨ Vertical

1. Hogwarts house whose members value intelligence, knowledge, wit and observation.
2. Newest robot to join The Masters
4. Large dataset of written or spoken material that can be used to train a machine to perform linguistic tasks.
6. Machines which imitate human body structure.
7. Famous house elf.
10. Relationship between the motion of the endpoint of a robot and the motion of the joints.
13. Alternative term for robot configuration, which describes the linear and angular position.
14. Feedback device that provides current position data to the controller.
16. Frothy, buttery drink.
17. Hogwarts house whose members value hard work, patience, loyalty and honesty.
19. Hogwarts house whose members value ambition, cunning, cleverness and resourcefulness.
23. Simple program that publishes or subscribes to a topic or contains a program that enables a ROS service..
24. Assumptions made by a model that simplify the process of learning to do its assigned task.



https://www.telusinternational.com/insights/ai-data/article/50-Beginner-AI-Terms-You-Should-Know
https://www.motoman.com/en-us/about/company/robotics-glossary
https://wiki.wpi.edu/Robotics/ROS_TERMS

Institute for AI and Autonomous Systems

HAVE YOU SEEN THIS WIZARD?

APPROACH WITH EXTREME CAUTION
DO NOT ATTEMPT TO USE
MAGIC AGAINST THIS WIZARD

Any information leading to the return of this Wizard shall be duly rewarded.
Notify immediately, by owl, the Ministry of Magic — Witch Watchers department.

HAVE YOU SEEN THIS WITCH?

APPROACH WITH EXTREME CAUTION
DO NOT ATTEMPT TO USE
MAGIC AGAINST THIS WIZARD

Any information leading to the return of this Wizard shall be duly rewarded.
Notify immediately, by owl, the Ministry of Magic — Witch Watchers department.

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