

Welcome to the Artificial Intelligence 4 Animal Science Conference, Zurich, 4-6 June 2025

On behalf of the Organizing Committee, we are pleased to invite you to the Artificial Intelligence 4 Animal Science Conference, taking place from June 4th to 6th, 2025, in Zurich, Switzerland. This event will bring together scientists, researchers, and industry professionals from around the world to explore the transformative role of artificial intelligence (AI) in animal science, covering areas such as precision livestock farming, behavior monitoring, disease prevention, and decision-support systems.

The integration of AI in animal science is evolving rapidly, requiring an interdisciplinary approach that combines expertise in engineering, data science, computer science, biology, and animal science. The aim of this conference is to foster collaboration across disciplines, presenting cutting-edge research, innovative applications, and AI-driven solutions that enhance productivity, sustainability, and animal welfare.

The event is organized in collaboration with leading research institutions and industry stakeholders, ensuring a dynamic exchange of knowledge and expertise. The program will feature parallel scientific sessions and a plenary session, offering participants the opportunity to engage in indepth discussions and advance both fundamental and applied research. (ai4as.eaap.org)

Zurich, a hub for scientific innovation and technology, provides an ideal setting for this gathering. Participants will have the chance to engage in stimulating discussions while experiencing the city's vibrant culture and scenic landscapes.

We are confident that the Artificial Intelligence 4 Animal Science Conference will serve as a catalyst for new ideas, partnerships, and technological advancements in the field. We look forward to welcoming you to Zurich for an inspiring and enriching experience!

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Frontiers in Veterinary Science (second most-cited veterinary science journal) bridges animal and human health, takes a comparative approach to medical and surgical challenges through innovative biotechnology and therapy. It welcomes contributions related to the assessment, education, prevention, control, diagnosis, and treatment of animal diseases, while also evaluating their impact on human health. Veterinary research today is interdisciplinary, collaborative, and socially relevant, transforming our understanding of animal health and disease. Led by Field Chief Editor Prof. Andres M Perez (University of Minnesota), the journal is Open Access and indexed in PubMed Central, Scopus, and DOAJ, uniting relevant veterinary sciences to enhance animal and human health.

Scientific programme

Wednesday 4 June

Session A.

Ethics and Industry Adoption of AI in Animal Science: Addressing practical implications and challenges, including bias and data ownership, as well as industry implementations of AI

Room: CAB G 11

Chair: Giersberg / De Temmerman Session Type: Theme session

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Session B.

Emerging Al Applications in Precision Livestock Farming: Innovations in generative Al, digital twins, large language models (LLMs), big data, and robotics

Room: CAB G 61

Chair: Chai / Allain / Oczak Session Type: Theme session

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16:45	Bridging Al and Clinical Expertise: A Neuro-Symbolic System for Emergency Veterinary Triage Analysis L. Bukowski, L. Wizenty, M. G. Doherr	27
17:00	Extracting video-based phenotypes on a large scale from video data M. Johansen, C. Coello, Ø. Nordbø, R. Sagevik, K. H. Martinsen	27
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Plenary session.

Inspiring AI: from health care to livestock farming

Room: ETF C 1 Chair: Niu / Maselyne

Session Type: Plenary session

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Friday 6 June

Session E. Advancing Digital Biomarkers with AI: Breakthroughs in animal identification, health and welfare monitoring, behavior analysis, and remote sensing technologies

Room: CAB G 11

Chair: Liu / Maselyne / Oczak Session Type: Theme session

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Session F.

Al for Research and Farm Management: Leveraging Al to address research challenges in various animal science disciplines and improve informed decision-making

Room: CAB G 61 Chair: Pastell / Niu

Session Type: Theme session

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The European Federation of Animal Science - EAAP

The main aims of the EAAP are to promote, by means of active co-operation between its members and other relevant international and national organizations, the advancement of scientific research, sustainable development and production systems; experimentation, application and extension; to improve the technical and economic conditions of the livestock sector; to promote the welfare of farm animals and the conservation of the rural environment; to control and optimize the use of natural resources in general and animal genetic resources in particular; to encourage the involvement of young scientists and technicians. More information on the organization and its activities can be found at www.eaap.org.

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- Klemen Potocnik (Slovenia)
- Diana Ruska (Latvia)

FAO Representative

· Badi Besbes

Auditors

- Georgia Hadji Pavlou (Cyprus)
- Zygmunt Maciej Kowalski (Poland)

Alternate Auditor

Jeanne Bormann (Luxembourg)

Secretary General

Andrea Rosati

The European Federation of Animal Science (EAAP) has close established links with its sister organizations of American Society of Animal Science (ASAS), American Dairy Science Association (ADSAS), Canadian Society of Animal Science (CSAS) and Asociación Latinoamericana de Producción Animal (ALPA) and is also member of the World Association for Animal Production (WAAP).



Organizers of the 1st EAAP Conference on Artificial Intelligence 4 Animal Science

Scientific Committee

- · Clément Allain IDELE
- · Victor Cabrera UW-Madison
- · Lilong Chai University of Georgia
- · Pieter-Jan De Temmerman ILVO
- · Mona Giersberg Utrecht University
- · Maria-Anastasia Karatzia Research Institute of Animal Science, HAO-Demeter
- · Kai Liu City University of Hong Kong
- Jarissa Maselyne ILVO
- · Hassan-Roland Nasser Agroscope
- · Mutian Niu ETH Zurich
- Maciej Oczak Vetmeduni
- · Matti Pastell Natural Resources Institute Finland
- · Hubert Pausch ETH Zurich

Organizing Committee

- · Mutian Niu ETH Zurich
- · Elli Broxham Stahl ETH Zurich
- Andrea Rosati EAAP
- · Riccardo Carelli EAAP
- · Jöel Berard Agroscope

About IAS – ETH Zurich



Home of the Institute of Agricultural Sciences is the LFW building, Universitätstrasse 2, 8092 Zurich

The Institute of Agricultural Sciences (IAS) at ETH Zurich is a leading centre for research and education in the fields of plant, soil, animal sciences as well as agricultural economics. The research conducted in animal sciences spans key areas including animal nutrition, genomics, physiology, and precision livestock farming, with a strong emphasis on improving sustainability, efficiency, and animal welfare in agricultural systems.

The Animal Nutrition Group, led by Prof. Mutian Niu, focuses on advancing our understanding of nutrient metabolism in ruminants to optimize feed efficiency and reduce environmental impact. Meanwhile, the Animal Genomics Group, headed by Prof. Hubert Pausch, investigates the genetic architecture of longevity traits in livestock using cutting-edge genomic and computational tools. The Animal Physiology Group, led by Prof. Susanne Ulbrich, conducts innovative research into the physiological processes underpinning animal health with a strong basic research focus on female reproduction across species.

All groups within IAS contribute to shaping the future of animal sciences through internationally recognized research, interdisciplinary collaboration, and active participation in global scientific networks. IAS researchers are committed to translating scientific insights into practical solutions for sustainable animal agriculture.

ETH Zurich is proud to host the Artificial Intelligence 4 Animal Science Conference at the CAB building in Zurich. The conference is supported by faculty and staff from the IAS, including contributions to the scientific and organizing committees.

For more information about the Institute of Agricultural Sciences, please visit the IAS official website.

Industry members

EAAP started in 2023 a new initiative to create closer connections between European livestock industries and the animal science network. Therefore, the "EAAP Industry Club" was shaped with the specific aim of bringing together the important industries of the livestock sector with our European Federation of Animal Sciences. All companies dealing with animal production (nutrination, genetic, applied technologies, etc.) are invited to join the "EAAP Industry Club" because industries will have opportunity to increase their visibility, to be actively involved in European animal science activities, and to receive news and services necessary to industries. In addition, through the Club, industries will enlarge their scientific network and will receive specific discounts on sponsoring activities.

The Industries that already joined the "EAAP Industry club are:













The Club gives:

Visibility • Company name and logo at EAAP website and all relevant documents • Slides with name and logo at Official Events • Priority links with EAAP Socials • Invite, through EAAP dissemination tools and socials, people to events organized by your company • Information disseminated through a brand new Industry Newsletter • Networking • Joining the Study Commissions and Working Groups • Suggest topics to be considered for Annual Meetings Scientific Sessions • Organize Professional Panel through the EAAP platforms • Economic Benefits • One free registration to each Annual Meeting and at every meeting organized by EAAP • Five individual memberships at no cost • Many possible discounts (-30%) to increase company visibility through: EAAP Newsletter, EAAP website, EAAP Annual Meetings and workshops • Support young scientist by sponsoring scholarships named by the company • Co-Organize and sponsor webinars

Make yourself more visible within the livestock industry via the animal science network!

For more information, please contact eaap@eaap.org.

About Zurich

Zurich, the largest city in Switzerland, is a dynamic blend of historical heritage, cultural richness, and cutting-edge innovation. With a history dating back over 2,000 years, Zurich was originally founded as a Roman settlement and later flourished as a major European trade hub. Today, it is a global center for finance, research, and technology, home to renowned institutions such as ETH Zurich, one of the world's leading universities in science and engineering.

The city's historic core, Altstadt (Old Town), is a treasure trove of medieval and Renaissance architecture, featuring landmarks like the Grossmünster and Fraumünster churches, famous for their stunning stained-glass windows by Marc Chagall. Zurich's picturesque streets are lined with charming cafés, boutique shops, and museums, making it an inviting destination for visitors.

Zurich is also known for its commitment to sustainability and green spaces, with over 1,200 fountains providing fresh drinking water across the city. In spring, the banks of Lake Zurich and the Limmat River offer breathtaking scenery, while the Uetliberg Mountain, easily accessible from the city center, provides panoramic views of the Swiss Alps.

Sightseeing in Zurich During Spring

- 1. Old Town (Altstadt) A walk through Zurich's historic heart, filled with cobbled streets, medieval buildings, and vibrant cultural spots.
- 2. Lake Zurich Promenade A scenic spot ideal for a relaxing stroll or a boat tour, especially enjoyable in springtime.
- 3. ETH Zurich and the Polyterrasse Visit one of the world's leading universities in science and technology, with breathtaking city views from the Polyterrasse.
- 4. Swiss National Museum (Ticket ~10-15 CHF) A must-visit to explore Switzerland's cultural and historical heritage. (Tram 4, stop: Hauptbahnhof)
- 5. Kunsthaus Zurich (Ticket ~23 CHF) One of Switzerland's most important art museums, featuring works from medieval to contemporary artists. (Tram 3, 5, 9, 31, stop: Kunsthaus)
- 6. Lindenhof Hill A peaceful spot in the city center offering fantastic panoramic views.
- 7. Bahnhofstrasse Zurich's premier shopping street, home to luxury boutiques and Swiss watch brands.
- 8. Uetliberg Mountain Easily accessible by train (S10 from Zurich HB), offering a panoramic view of Zurich and the Alps.

For more information about Zurich and its attractions, visit the official tourism website: https://www.zuerich.com/en.



Aerial view, ETH Zurich, Zentrum, © ETH Zürich / Alessandro Della Bella

Workshop venue

Address: CAB – ETH Zurich, Universitätstrasse 6, 8092 Zurich, Switzerland (Google Maps)



Conference planning:

DATE	TIME	ROOM	ACTIVITY 1	ROOM	ACTIVITY 2			
	13:00 - 14:00	CAB Foyer	Registration					
	14:00 - 16:00	CAB G 11	Session A	CAB G 61	Session B			
04 June	16:00 - 16:30	CAB Food & Lab	Coffee break					
	16:30 - 18:00	CAB G 11	Session A	CAB G 61	Session B			
	18:00	CHN Green Floor	Poster Session A a	nd welcome ı	reception			
	9:00 - 10:30	ETF C 1	Plenary session					
	10:30 - 11:00	ETF	Coffee break					
	11.00 - 12:30	ETF C 1	Plenary session					
	12:30 - 13:30	CAB Food & Lab	Lunch					
05 June	13:30 - 14:30	CHN Green Floor	Poster Session B					
	14:30 - 16:00	CAB G 11	Session C	CAB G 61	Session D			
	16:00 - 16:30	CAB Food & Lab	Coffee break					
	16:30 - 18:00	CAB G 11	Session C	CAB G 61	Session D			
	19:00	CLA	Social dinner					
	9:00 - 10:30	CAB G 11	Session E	CAB G 61	Session F			
6 June	10:30 - 11:00	CAB Food & Lab	Coffee break					
6 June	11.00 - 12:30	CAB G 11	Session E	CAB G 61	Session F			
	12:30		End of conference					

Building CAB

CAB foyer: registration desk

CAB Food & Lab: Coffee break and lunch

Room G 11:

Session A: Ethics and Industry Adoption of AI in Animal Science: Addressing practical implications and challenges, including bias and data ownership, as well as industry implementations of AI **Session C:** Advancements in Data Collection and Integration: Exploring cutting edge sensors,

multi-sensor systems, data labelling, and tools driving animal science innovation

Session E: Advancing Digital Biomarkers with AI: Breakthroughs in animal identification, health and welfare monitoring, behavior analysis, and remote sensing technologies

Room G 61:

Session B: Emerging Al Applications in Precision Livestock Farming: Innovations in generative Al, digital twins, large language models (LLMs), big data, and robotics

Session D: Efficient Al Modeling and Data Processing: Tools, algorithms, and workflows for scalable Al solutions

Session F: Al for Research and Farm Management: Leveraging Al to address research challenges in various animal science disciplines and improve informed decision-making

Building ETF

Plenary session: ETF C 1

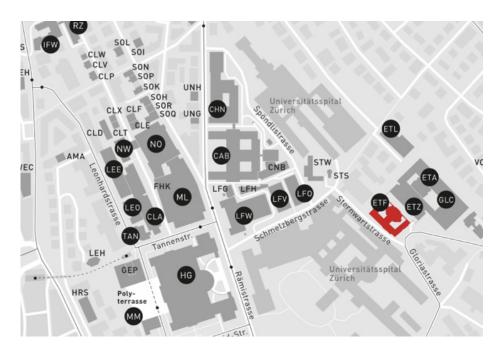
Coffee break (only in the morning of 5th of June): ETF

Building CHN Green Floor

Poster Sessions A, B Welcome reception

Building CLA

Glass Hall: Social dinner



The buildings CAB and CHN are joined, the building ETF is about 5 minutes' walk from CAB. CLA is also only a few minutes' walk from the other buildings

How to Reach the Venue (CAB – ETH Zurich)

From Zurich Airport (ZRH) to the City Center

- **By Train:** The fastest and most convenient option is the S-Bahn train (S2 or S16) from Zurich Airport to Zurich Hauptbahnhof (Zurich HB, main station). The journey takes about 10-15 minutes, and trains run every 5-10 minutes. Tickets cost approximately 6.80 CHF (valid for all public transport in Zurich for 1 hour).
- By Tram: Tram Line 10 runs directly from Zurich Airport to the city center (about 35 minutes).
- By Taxi: Taxis are available outside the arrival terminal. A ride to the city center costs approximately 60-70 CHF.

From Zurich Hauptbahnhof (Main Station) to CAB – ETH Zurich

- **By Tram:** Take Tram 6 (towards Zoo) or Tram 10 (towards Flughafen) and get off at ETH/ Universitätsspital. The journey takes around 5 minutes.
- On Foot: ETH Zurich's main building and CAB can be reached within a 10-15 minutes uphill walk from Zurich HB. Alternatively, the Polybahn funicular offers a quick ride from Central Square to ETH Zurich's Polyterrasse.

Public Transport Tickets

Zurich's ZVV public transport system (buses, trams, and trains) operates with a unified ticketing system:

- Single Ticket (valid for 1 hour): ~4.40 CHF within Zurich city
- Day Pass: ~9.00 CHF (valid for unlimited travel within the city for 24 hours)
- **Zurich Card:** ~29 CHF (24h) or ~43 CHF (72h) includes unlimited public transport, discounts at museums, and boat trips on Lake Zurich

Tickets can be purchased at train stations, ticket machines, or via the ZVV app.

For more information on Zurich's public transport options, visit **ZVV's official website**.

By car

Parking facilities are available in the underground car park of the main building, which can be entered from the Karl-Schmid-Strasse. The parking is at walking distance from the conference buildings. Parking costs 4 CHF/hour, 35CHF/day. Parking for users with physical disabilities and a permit on display is free of charge.



Useful information

Official Language

The official language of Zurich is Swiss German, but English is widely spoken, especially in academic and professional settings.

Passport and Visa

Switzerland is part of the Schengen Area, allowing EU citizens to travel without a visa. Additionally, nationals from several non-EU countries, including the United States, Canada, Australia, and New Zealand, can enter visa-free for up to 90 days. For specific visa requirements, please consult the <u>Schengen Visa Info</u>.

Official Invitation and Certification

Participants can request an official invitation letter to assist with Visa requirements to riccardo@eaap.org. The invitation does not impose any financial obligations on the organizing committee. A certificate of attendance will be provided to all registered participants.

Liability and Insurance

The organizing committee is not responsible for personal accidents, lost or damaged property. Participants are encouraged to arrange their own travel and health insurance before arriving in Zurich.

Health and Emergency

In case of an emergency, dial 112 (European emergency number) for immediate assistance. Zurich also offers 24/7 medical services at hospitals and clinics throughout the city.

Currency

The official currency in Switzerland is the Swiss Franc (CHF). Most major credit and debit cards are accepted, and ATMs are widely available. Currency exchange services can be found at airports, train stations, and banks.

Local Time Zone

Zurich operates on Central European Time (CET, UTC/GMT +1) and follows Daylight Saving Time (CEST, UTC/GMT +2) from late March to late October.

Climate

Spring in Zurich is mild and pleasant, with temperatures ranging from 8°C to 20°C (46°F to 68°F) in May and June. It is recommended to bring light layers and a rain jacket as weather conditions can vary.

Electricity

Switzerland uses Type J electrical sockets with a standard voltage of 230V and a frequency of 50Hz. Travelers from countries using different plug types should bring an adapter.

Information for Participants

Registration Desk

The registration desk will be located at the CAB Foyer and will open at 13:00 on Wednesday 4 June 2025.

To Authors

Authors who do not wish to have their PDF presentations or posters made available on the EAAP website must notify EAAP by June 16, 2025. This can be done by sending an email to riccardo@ eaap.org. After this date, EAAP will assume permission to include the presentation/poster on the website.

Posters

Poster sessions will be organized both on June 4 and 5. Posters should be in portrait format and A1 size (594 x 841 mm).

Theatre Presentation Upload Desk

The upload desk for theatre presentations will be available at the registration desk at the entrance of CAB. The support team will assist participants with the upload process. Please ensure that your presentation is on a portable USB drive. Meeting rooms will be equipped with MS Windows computers, so PowerPoint presentations (*.ppt; *.pptx) are preferred. When preparing your presentation, allow approximately 3 minutes for questions and discussion at the end.

Lunches and coffee breaks

Lunches and coffee breaks will take place in CAB Food & Lab, with the exception of the Coffee break in the morning of 5th of June, which will be in building ETF.

Social dinner

The social dinner will take place in the Glass Hall of building CLA.

Conference Website

The Artificial Intelligence 4 Animal Science website is live and optimized for smartphone navigation. It contains detailed information about the conference program and venue. You can visit the conference website at the following link: https://ai4as.eaap.org/

Conference App

The conference program will be available for all delegates by downloading the app "EAAP" available for iOS/Android.

