# MB2024
# Program Schedule

All times are local, BST

**Wednesday 15th May**

| Time | Conference Suite 2A | Meeting Room 4 | Meeting Room 7 | Meeting Room 5 |
|---|---|---|---|---|
| 09:00 - 10:00 | **Keynote: Anne-Marie Brouwer** | | | |
| | Measuring Mental States | | | |
| 10:00 - 10:40 | **Measuring behavior and physiology in and around the cockpit** | **Advances in using AI to assess animal behaviour and welfare** | **Behavioral tests (A)** | **Workshop: Certifying Digital Monitoring Technologies** |
| 10:00 - 10:20 | Ivo Stuldreher - Assessing progress in flight performance in a virtual reality simulator | Mona Giersberg - Transdisciplinary Initiatives to Collaborate on the Responsible Use of AI for Animal Welfare | Mahesh Karnani - Measuring motivational switching in mice using open-design: the Switchmaze | |
| 10:20 - 10:40 | Bertille Somon - EEG characterization of dynamic complex processes and rare events to understand operator's activity in aeronautical context. | Malou van der Sluis - Using Multi-Directional Computer Vision for Automated Leg Health Scoring in Broilers | Eline Eberhardt - Interobserver Reliability and Validity for Video-based Clinical Behavior of Canines in Preclinical Safety Studies | |
| 10:40- 11:10 | **Break** | | | |
| 11:10 - 12:30 | **Measuring behavior and physiology in and around the cockpit** | **Advances in using AI to assess animal behaviour and welfare** | **Methods for the Study of Olfactory learning and Memory** | **Technology for measuring behavior (A)** |
| 11:10 - 11:30 | Anneka Hamann - A Window into the Mind? On Usefulness and Challenges of Neurophysiological Measurements in the Cockpit | Arjan van Putten - Identifying and tracking group housed hens using ArUco marker backpacks | Kyle Roddick - An Overview of Methods for Measuring Olfaction in Rodents | Poja Shams - Monitoring Work Stress: The Role of Physiological Measures in Enhancing Workplace Well-being |
| 11:30 - 11:50 | Maykel van Miltenburg - Unlocking Cost-Effective Insights: Leveraging Webcam Metrics for Cognitive Workload Assessments | Oleksiy Guzhva - AI in rose-coloured glasses: how close to an individual animal can (should) we come? | Richard Brown - Pavlovian Conditioned Odour Preferences in Mice | Jennifer Lumetzberger - From Bees to Prisons in Computer Vision: Lessons for Recording Behavior in the Real World |
| 11:50 - 12:10 | | Saif Agha - AI-PigNet: Insights into the social interaction of pigs through automated data and social network analysis | Wyatt Ortibus - Olfactometer Methodologies in Rodent Olfaction Research: "What can we test about learning and memory?" | Jeanette Hadaschik - Implementing Behavioural Decision-Making Tasks Into Virtual Reality environments |
| 12:10 - 12:30 | | Emma Baxter - Challenges and opportunities of working with PLF technology and AI researchers: the applied ethologist's experience | Robert Gerlai - Olfactory Cues in Zebrafish Behavioural Studies: From Anxiety to Learning | Bénédicte Batrancourt - Rest activity pattern as behavioral marker of apathy in patients at home using sensors. |
| 12:30 - 14:00 | **Lunch** | | | |
| 14:00 - 15:00 | **Human factors** | **Advances in using AI to assess animal behaviour and welfare** | **Behavioral tests (B)** | **Tutorial:  Beats Science Coding – Web-based video analysis for behavioural sciences** |
| 14:00 - 14:20 | Esther Bosch - Beyond Snapshots: Validation of a Continuous Frustration Assessment in a Simulator and Real-World Setting | Marwa Mahmoud - Towards early prediction of disease in farm animals: Vision-AI for automatic analysis of face, gait and motion for sheep behavior understanding | Thilo Womelsdorf - Translational Validity of Assessing Cognitive Control and Memory Functions in Nonhuman Primates Using Gamified Tasks | |

| Time | | | | |
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| 14:20 - 14:40 | Stephen Provost - Identifying Team Process Behaviours of Clinical Nursing Teams Working on Lower-acuity Hospital Units | Lucy Asher - Can Artificial Intelligence Contribute to our Conceptual Understanding of Animal Welfare? | Rebecca Grut -- Sniffing Out Pigs Immediate Perception of Novel Odours (Pig Odour Hedonics) | |
| 14:40 - 15:00 | | Albert Ali Salah - Automatic pain estimation in equines and canines | Tereza Nekovářová - Measuring Episodic Memory in Preschool Children | **Demonstration**: A New Approach to Setting Up Operant Conditioning Experiments |
| 15:00 - 15:30 | **Break** | | | |
| 15:30 - 17:10 | **Using behavioural approaches to measure apathy like behaviour in rodents** | **Animal welfare** | **Bioacoustics** | **Tutorial: DISK — a Deep Learning method for missing skeleton data imputation in 2D and 3D** |
| 15:30 - 15:50 | Lianne Robinson - Development of a Behavioural Test Battery to assess Apathy-like Behaviours in Mouse Models of Neurodegeneration | Claire Witham - Home cage monitoring of group-housed animals in highly enriched enclosures | Buddhamas Pralle Kriengwatana - Acoustic features of vocalisations of laying hens in positive and negative emotional states | |
| 15:50 - 16:10 | Nicole Edwards - The splash test as a model of rodent apathy | Ineke Smit - Quantifying equine facial expressions with optical motion capture and surface electromyography; a proof of concept | Bruna Bezerra - Primate Detection Through Passive Acoustic Monitoring Varies According to Species and the Biome | |
| 16:10 - 16:30 | Richard Brown - Measuring "apathy" in mouse models of AD | Monica Battini - Setting up an observation strategy to record feeding synchronization in dairy cows | Mathilde Coutant - Bioacoustic sensors to monitor farm animal welfare: why the ethology matters | |
| 16:30 - 16:50 | John Salamone - Modeling Aspects of Apathy in Rodents using Effort-based Choice Procedures. | Sonia Rey - Rhythmicity as a welfare indicator – effect of extrinsic and intrinsic motivation in equines | | |
| 16:50 - 17:10 | Mercè Correa - The 3 choice-T-maze task with running wheel: a mice paradigm to evaluate preference for reinforcers that require vigor and the role of dopamine in anergia | Janire Castellano Bueno - Bridging the Gap - Integrating Wild Animal Welfare into Behaviour Studies | | |
| 19:00 | **Reception** | | | |

**Thursday  16th May**

| Time | Conference Suite 2A | Meeting Room 4 | Meeting Room 7 | Meeting Room 5 |
|---|---|---|---|---|
| 09:00 - 10:00 | **Keynote: Robert Gerlai** | | | |
| | What motivates zebrafish? Searching for effective unconditioned stimuli for appetitive associative | | | |
| 10:00 - 11:00 | **AI and machine learning** | **Novel Methods in Measuring Animal Affective States** | **Behavioral tests (C)** | **Tutorial: DIY home-cage monitoring** |
| 10:00 - 10:20 | Eline Eberhardt - Video-Tracking Locomotor Activity of Canines in Preclinical Safety Studies | Lauren Finka - Using Facial Action Unit and Geometric Morphometric approaches to quantify animal facial movements and their interpretability in the context of affective states | Robyn Grant - From labs to zoos to the field: mammalian whister and avian rictal bristle behaviour | |
| 10:20 - 10:40 | Tenzing Dolmans - Real-Time Adaptive Machine Learning Systems for Personalised Bruxism Management | Bridget Waller - Can Facial Action Coding Systems (FACS) be used to Quantify Emotion in Animals? | Ugne Simanaviciute - Developing novel whisker movement tests to examine object-related exploration and habituation in Reeler mice | |
| 10:40 - 11:00 | Jeanne I.M. Parmentier - Measuring equine respiration in the field: an exploration of microphone data and deep learning detectors | Claire Ricci-Bonot - Automated recognition of facial expression of frustration and disappointment in horses during feeding period | Veronika Borbélyová - Age- and Sex-Related Behavioral Changes During the Lifespan of Wistar Rats | |

| Time | Column 2 | Column 3 | Column 4 | Column 5 |
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| 11:00- 11:20 | | Catia Correia-Caeiro - A new observational tool for measuring facial movement in gorillas (*Gorilla* spp.): GorillaFACS - The Gorilla Facial Action Coding System | Ashwin Miriyala - Neural Control of Odour Seeking Behaviour In the Fruit Fly | |
| 11:00 - 11:30 | **Break** | | | |
| 11:30 - 12:30 | **AI and machine learning** | **Novel Methods in Measuring Animal Affective States** | **Digital Innovations in Home Cage Monitoring** | |
| 11:30 - 11:50 | Alyx Elder - Challenging Machine-Learning with Underwater Whisker Tracking in South African Fur Seals (*Arctocephalus pusillus* ) | Tiago Monteiro - Dogs' tail as a metronome of their emotional states and its use as a communicative tool: effects of intra and interspecific audiences during a frustration condition | Stefano Gaburro - Home cage rack-based technology: welfare and scientific applications | |
| 11:50 - 12:10 | Harry Gill - Validation Of An AI-based Markerless Tracking Approach For Gait Analysis In Domestic Dogs | George Martvel - CatLED: an Automated Landmark Detector for Cat Facial Analysis | Michael Tsoory - Detecting Sciatic nerve injury (SNI) induced motor impairments and recovery using the DVC system; a core facility unit user's perspective | **The future of the Measuring Behavior conferences series** |
| 12:10 - 12:30 | | Anna Zamansky - The Development of a Facial Landmark Scheme for Dogs | Fabrizio Scorrano - Use of rack base technologies in Pharmaceutical Settings | |
| 12:30 - 14:00 | **Lunch** | | 12:30 - 12:50 Thomas Svava Nielsen - Urination in the Home Cage: Development of a Digital Biomarker for Sample-Free Diagnosis of Diabetes in Mice | |
| 13:30 - 14:00 | **Poster pitches** | | | |
| 14:00 - 15:00 | | | | **Demonstrations** |
| 14:00 - 14:20 | Posters (in exhibtion area) | | | Climbing test for automated measurement of vertical activity in mice – Frederico Montechiaro (Ugo Basile) |
| 14:20 - 14:40 | | | | The Ethometer – Willem Dekkers (Royal GD) |
| 14:40 - 15:00 | | | | Advanced in-depth phenotyping smart cage – Michael Florea (Olden Labs) |
| 15:00 - 15:30 | Break | | | |
| 15:30 - 16:50 | **Considerations in behavioural phenotyping of genetic mouse models of Alzheimer's disease and frontotemporal dementia** | **Multi-modal measurements** | ~~**Tutorial: Computer Vision Tools for Measuring Behavior**~~ **Cancelled** | **Workshop: Measuring the welfare of wild animals** |
| 15:30 - 15:50 | Sevda Boyanova - Behavioural, cognitive and sensory phenotyping of knock-in mouse models of Alzheimer's disease and frontotemporal | Fan Xu - The constructive effect of positive encouragement on preschool children | | |
| 15:50 - 16:10 | Szu-han Wang - A simple task reveals mixed findings: factors to consider in preclinical behavioural research | Ivo Stuldreher - Classifying arousal and valence from facial expressions and physiological responses evoked by multiple stressors | | |
| 16:10 - 16:30 | Loukia Katsouri - Behavioural characterisation of humanised APP knock-in mice | Anna Kis - Non-invasive ways to measure sleep behaviour in family dogs | | |

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| 16:30 - 16:50 | Julija Krupic - Cognitive and Behavioural Phenotyping of APP-KI mice in the home cage enclosures | Nattapong Thammasan - Towards a Multi-Modal Human Digital Twin for Nutrition and Wellbeing | | |
| Evening | **Conference dinner** | | | |

## Friday  17th May

| Time | Conference Suite 2A | Meeting Room 4 | Meeting Room 7 | Meeting Room 5 |
|---|---|---|---|---|
| 09:00 - 10:00 | **Keynote: Albert Ali Salah**<br>Designing Computational Tools for Behavioral and Clinical Science | | | |
| 10:00 - 11:00 | **TEATIME presents: Enhancing Reproducibility and Animal Welfare through Home Cage Systems** | **AI advances in pose estimation and behavior recognition in laboratory animals** | **Measuring farm animal behavior** | **Optimizing analysis of longitudinal, high resolution behavioural data** |
| 10:00 - 10:20 | Rasneer Sonia Bains - Listening Carefully, the Challenges of Recording Home Cage Ultrasonic Vocalizations | Liezl Maree - Multi-view triangulation-enabled annotation for multi-animal 3D pose in SLEAP | Marie Schneider - Method comparison to analyse the activity rhythm of dairy cows during early lactation | Mike Toscano - Methods to assess variation of movement within and across laying hens within a commercial system over extended periods of time |
| 10:20 - 10:40 | Irmgard Amrein - Clever testing of smart mice with IntelliCage protocols avoiding water restrictions | Caleb Weinreb - Parsing the sub-second structure of animal behavior with Keypoint-MoSeq | Laura Torres Borda - Equine social proximity according to space availability using ultra-wideband technology | Juan Steibel - Dyadic linear models for genetic analysis of behavioral interactions |
| 10:40 - 11:00 | Lars Lewejohann - Home-cage based testing: How to bring the test to the animal and not the animal to the experiment | Timon Daniels - Fast annotation of Rodent Behaviors with AI Assistance: Human Observer and Smart Annotator collaborate through Active Learning | Johanna Stenfelt - Olfactory Conditioning to Reduce Stress in Farm Animals – A Possible Experimental Set-up | Lucas Fontanesi - European Network on Livestock Phenomics (EU-LI-PHE): Mission on Big Data Focused on All Types of Animal-Related Phenotypes, Including Behavior |
| 11:00 - 11:30 | Break | | | |
| 11:30 - 12:10 | **TEATIME presents: Enhancing Reproducibility and Animal Welfare through Home Cage Systems** | **AI advances in pose estimation and behavior recognition in laboratory animals** | **Measuring farm animal behavior** | **Technology for measuring behavior (B)** |
| 11:30 - 11:50 | Lior Bikovski - Home cage: a uniquely sensitive tool for detecting hidden phenotypes | Adrian Loy - DeepRod: A human-in-the-loop system for automatic rodent behavior analysis | Wijbrand Ouweltjes - An investigation of several methods to monitor behaviour of housed dairy cows | John Church - Effectiveness of zoom equipped drones for use in reading livestock ear tags for animal identification. |
| 11:50 - 12:10 | Stefano Gaburro - Using Digital Biomarkers to Measure Animal Behavior for Translational Research: The 3Rs Collaborative Initiative | Vivek Kumar  - End-to-end behavior annotation pipeline for mouse behavior annotation. | Christiane Engels - Measuring Dairy Cow Behavior Using a Barometric Sensor | Michael Florea - Towards deep physiology in home cage: AI and sensor cages for multi-animal whole-body health testing |
| 12:10 - 12:45 | Closing session | | | |
| 12:45 - 13:30 | Lunch | | | |