International Forum for Computer Vision in Ecology and Evolution - Lund University, Department of Biology, Sep. 18th - Sep. 22nd 2023

	Monday 2023-09-18	Tuesday 2023-09-19	Wednesday 2023-09-20	Thursday 2023-09-21	Friday 2023-09-22
09:00	free	Coffee	Coffee	Coffee	Coffee
09:15		**Opening remarks (5 mins)**			
09:30		**Keynote: Sara Beery** Open Challenges in Generalizable Computer Vision for Ecology	**Keynote: Allison Hsiang** Deep learning in deep time: Using computer vision and automation to study morphology and structure of microfossil communities	**Keynote: Alexander Mathis** Deep Learning Tools for the Analysis of Movement, Identity & Behavior	**Keynote: Luca Pegoraro** Towards automated insect monitoring in the wild: promises and challenges
09:45					
10:00					
10:15					
10:30		Fika	Fika	Fika	Fika
10:45					
11:00		**Magali Frauendorf** - Species and sex/age class identification models for trap cam images of Swedish wildlife	**Meghan Balk** - Assessing evolvability in a fossil lineage using a CV pipeline to produce phenomic data set	**Valentin Gillet** - From image stacks to neuronal connections: machine learning reveals insect neuroanatomy	**Maja Tarka** - Measuring multivariate beetle morphology in wild populations
11:15		**Jonas Hentati-Sundberg** - Sensors and AI for automated seabird monitoring	**Erik Svensson** - Using thermal imaging to study quantitative genetics and selection on plasticity and thermal adaptation: insights from insects and birds	**Harshith Bachimanchi** - Bringing microplankton to focus: Holography and deep learning	**Najmeh Abiri** - Tick Species Classification Using Deep Learning Models: Challenges and Solutions in Citizen Science Projects
11:30		**Lars Holmberg** - Ageing and sexing birds	**Anjali Goswami** (given by Yichen He) - Biodiversity Phenomics: From Development to Deep Time	**Hanbang Zou** - Deep learning-based object detection for soil bacterial community analysis in microfluidics	**Ola Olsson** - High-throughput quantitative pollen analysis based on computer vision and deep learning
11:45		**Chris Cooney** - Advancing the study of bird colour evolution using AI and computer vision	**Yichen He** - A Deep Learning Pipeline to Quantify Cranial Suture Morphology from 3D Scans	**Nikolay Oskolkov** - Applications of Computer Vision for Studying Cell Morphology	**Giuseppe Bianco** - Engineering image acquisition for CV
12:00		LUNCH (self-catered)	LUNCH (self-catered)	LUNCH (self-catered)	LUNCH (self-catered)
12:15					
12:30					
12:45					
13:00					
13:15		**Keynote: Ben Weinstein** Towards general models for airborne ecological monitoring	**Keynote: TBA**	**Keynote: Seth Donoughe** Quantifying tissue traits to reveal how developmental mechanisms shape macroevolutionary trajectories	**Keynote: Quentin Geissmann** Insect Ecology in the Digital Age: Smart Traps and Automated Identification
13:30					
13:45					
14:00	Coffee				
14:15		leg-stretcher	leg-stretcher	leg-stretcher	**Closing Remarks (5 mins)**
14:30	**Emanuel Larsson -** Image Analysis and Visualization support at Lund University	**Workshop lecture: Ben Weinstein** A short introduction to applied computer vision	**Sridhar Halali** - Using micro-CT imaging to unravel the evolution of sensory traits in butterflies	**Matteo Redana** - "Tracking" thermal sublethal effect for freshwater ectotherms	free / time for meetings
14:45			**Moritz Lürig** - Mapping out morphospace in a color-polymorphic insect using deep learning	**Open panel discussion**	
15:00	**Alexandros Sopasakis -** Building Autonomous Image Analysis Systems for Applications in Ecology	**Workshop lecture: Allison Hsiang** Building training datasets	**Masahito Tsuboi** - What phenomics will and will not teach us		
15:15			**Roberta Hunt** - Using AI to Generate Phylogenetic Trees from Images of Pinned Insects		
15:30	Fika	Fika	Fika	Fika	
15:45					
16:00	**Jonas Ahlstedt -** Combining Image Analysis and Visualisation in Blender 3D	**Workshop lecture: Alexander Mathis** The basics of automated movement detection and pose estimation	**Social activity:** **Team-games at Vattenhallen Science-Center** **(5 min. walking from Forum venue)**	free / time for meetings	
16:15					
16:30	**Kalle Åström -** Natural and Artificial Cognition and AI Lund	**Workshop lecture: Quentin Geissmann** DIY hardware for image/video acquisition			
16:45					
17:00	**Poster session**	**Workshop lecture: Sara Beery** The CV4Ecology program			**Traditional "Friday Pub"** **Ecology Building**
17:15		free / time for meetings			
17:30					
17:45					
18:00 onward	**Pizza dinner + cash bar** **Ecology building**		**Pub night** **Downtown Lund**		

11/09/2023