

# 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		<b>Keynote: Sara Beery</b> Open Challenges in Generalizable Computer Vision for Ecology	<b>Keynote: Christy Anna Hipsley</b> Visualising evolution in 4D: prospects and challenges for large-scale CT datasets	<b>Keynote: Alexander Mathis</b> Deep Learning Tools for the Analysis of Movement, Identity & Behavior	<b>Keynote: Luca Pegoraro</b> 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		<b>Magali Frauendorf</b> - Species and sex/age class identification models for trap cam images of Swedish wildlife	<b>Yichen He</b> (for Anjali Goswami) - Biodiversity Phenomics: From Development to Deep Time	<b>Valentin Gillet</b> - From image stacks to neuronal connections: machine learning reveals insect neuroanatomy	<b>Maja Tarka</b> - Measuring multivariate beetle morphology in wild populations
11:15		<b>Jonas Hentati-Sundberg</b> - Sensors and AI for automated seabird monitoring	<b>Yichen He</b> - A Deep Learning Pipeline to Quantify Cranial Suture Morphology from 3D Scans	<b>Harshith Bachimanchi</b> - Bringing microplankton to focus: Holography and deep learning	<b>Najmeh Abiri</b> - Tick Species Classification Using Deep Learning Models: Challenges and Solutions in Citizen Science Projects
11:30		<b>Lars Holmberg</b> - Ageing and sexing birds	<b>Sridhar Halali</b> - Using micro-CT imaging to unravel the evolution of sensory traits in butterflies	<b>Hanbang Zou</b> - Deep learning-based object detection for soil bacterial community analysis in microfluidics	<b>Ola Olsson</b> - High-throughput quantitative pollen analysis based on computer vision and deep learning
11:45		<b>Chris Cooney</b> - Advancing the study of bird colour evolution using AI and computer vision	free	<b>Nikolay Oskolkov</b> - Applications of Computer Vision for Studying Cell Morphology	<b>Giuseppe Bianco</b> - Engineering image acquisition for CV
12:00					
12:15					
12:30		LUNCH (self-catered)	LUNCH (self-catered)	LUNCH (self-catered)	LUNCH (self-catered)
12:45					
13:00					
13:15					
13:30	<b>Keynote: Ben Weinstein</b> Towards general models for airborne ecological monitoring	<b>Keynote: Allison Hsiang</b> Deep learning in deep time: Using computer vision and automation to study morphology and structure of microfossil communities	<b>Keynote: Seth Donoughe</b> Quantifying tissue traits to reveal how developmental mechanisms shape macroevolutionary trajectories	<b>Keynote: Quentin Geissmann</b> Insect Ecology in the Digital Age: Smart Traps and Automated Identification	
13:45					
14:00	Coffee				
14:15				Closing Remarks (5 mins)	
14:30	<b>Emanuel Larsson</b> - Image Analysis and Visualization support at Lund University			free / time for meetings	
14:45		<b>Meghan Balk</b> - Assessing evolvability in a fossil lineage using a CV pipeline to produce phenomic data set	<b>Matteo Redana</b> - "Tracking" thermal sublethal effect for freshwater ectotherms		
15:00	<b>Alexandros Sopasakis</b> - Building Autonomous Image Analysis Systems for Applications in Ecology	<b>Workshop lecture: Ben Weinstein</b> A short introduction to applied computer vision	<b>Roberta Hunt</b> - Using AI to Generate Phylogenetic Trees from Images of Pinned Insects		<b>Erik Svensson</b> - Using thermal imaging to study quantitative genetics and selection on plasticity and thermal adaptation
15:15		<b>Workshop lecture: Allison Hsiang</b> Building training datasets	<b>Moritz Lürig</b> - Mapping out morphospace in a color-polymorphic insect using deep learning		
15:30	Fika		<b>Masahito Tsuboi</b> - What phenomics will and will not teach us		Open panel discussion 1
15:45		short break	short break		short break
16:00	<b>Jonas Ahlstedt</b> - Combining Image Analysis and Visualisation in Blender 3D	<b>Workshop lecture: Alexander Mathis</b> The basics of automated movement detection and pose estimation	<b>Social activity:</b> Team-games and science shows at Vattenhallen Science-Center (5 min. walking from Forum venue)		Open panel discussion 2
16:15					
16:30	<b>Kalle Åström</b> - Natural and Artificial Cognition and AI Lund	<b>Workshop lecture: Quentin Geissmann</b> DIY hardware for image/video acquisition			
16:45					
17:00		<b>Workshop lecture: Sara Beery</b> The CV4Ecology program			
17:15			free / time for meetings		
17:30	<b>Poster session</b>	free / time for meetings		<b>Traditional "Friday Pub" Ecology Building</b>	
17:45					
18:00 onward	Pizza dinner + cash bar Ecology building	free	Pub night Downtown Lund	free	