

Yihang She

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EDUCATION

University of Cambridge PhD in Computer Science; expected submission: October 2026 UKRI Centre for Doctoral Training in Artificial Intelligence for Environmental Risks Supervisors: Srinivasan Keshav and Andrew Blake	2022–2026
ETH Zurich MSc in Geomatics; GPA: 5.3/6.0. Excellence Scholar. Scholarship advisor: Konrad Schindler	2019–2022
Nanjing University BSc in Geographic Information Science; GPA: 4.6/5.0. Graduated with distinction. Exchange student, University of California, Berkeley, Spring 2018; GPA: 3.9/4.0	2015–2019

RESEARCH THEMES

AI for scientific discovery, computer vision, physics-informed machine learning, synthetic data, and remote sensing

MANUSCRIPTS AND PEER-REVIEWED PUBLICATIONS

- [1] **Yihang She**, Andrew Blake, and Srinivasan Keshav. “PiCo: Physics-Informed Concept Probing for Geo-Foundation Models.” Manuscript in preparation, expected to submit for review by July, 2026.
- [2] **Yihang She**, Andrew Blake, Clement Atzberger, Adriano Gualandi, and Srinivasan Keshav. “PILA: Physics-Informed Low Rank Augmentation for Interpretable Earth Observation.” Accepted for publication conditioned on minor revisions, *Journal of Machine Learning Research*.
- [3] **Yihang She**, Andrew Blake, David Coomes, and Srinivasan Keshav. “Scaling Up Forest Vision with Synthetic Data.” *International Journal of Computer Vision*, 2026.
- [4] Zhengpeng Feng, **Yihang She**, and Srinivasan Keshav. “SPREAD: A Large-Scale, High-Fidelity Synthetic Dataset for Multiple Forest Vision Tasks.” *Ecological Informatics*, 2025.
- [5] **Yihang She**, Goutam Bhat, Martin Danelljan, and Fisher Yu. “Fast Hierarchical Learning for Few-Shot Object Detection.” *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2022.
- [6] Riccardo de Lutio, **Yihang She**, Stefano D’Aronco, Stefania Russo, Phillipp Brun, Jan Dirk Wegner, and Konrad Schindler. “Digital Taxonomist: Identifying Plant Species in Citizen Scientists’ Photographs.” *ISPRS Journal of Photogrammetry and Remote Sensing*, 2021.
- [7] **Yihang She**^{*}, Zihan Liu^{*}, Wenfeng Zhan, Jiameng Lai, and Fan Huang. “Strong Regulation of Daily Variations in Nighttime Surface Urban Heat Islands by Meteorological Variables across Global Cities.” *Environmental Research Letters*, 2021. ^{*}Equal contribution.

HONOURS, FELLOWSHIPS, AND AWARDS

Cambridge Centre for Carbon Credits PhD Fellowship Fully funded four-year PhD studentship awarded to international students	2022–2026
Excellence Scholarship and Opportunity Programme, ETH Zurich Fully funded master’s scholarship awarded to the top 3% of students in each cohort	2019–2021

Outstanding Graduate, Nanjing University	2019
Awarded to students in the top 5% of the graduating cohort based on academic performance	
National Scholarship, Ministry of Education of China	2016
Awarded to the top 0.2% of students nationwide based on academic excellence	

INVITED TALKS AND MEDIA

Cambridge Centre for Climate Science Symposium, University of Cambridge, UK	April 2026
Invited talk on PILA for interpretable Earth observation	
3DGeo Research Group Seminar, Heidelberg University, Germany	October 2025
Invited talk on synthetic data for forest vision	
PBS Documentary: <i>The Future of Nature</i>	March 2025
Rendered LiDAR point clouds from my work on the Scottish Cairngorms were featured	

PRESENTATIONS AT CONFERENCES AND WORKSHOPS

Conference on Computer Vision and Pattern Recognition, Denver, USA	June 2026
Poster presentations at the Synthetic Data for Computer Vision Workshop and the Computer Vision for Science Workshop.	
International Computer Vision Summer School, Sicily, Italy	July 2025
Poster presentation on "Scaling Up Forest Vision with Synthetic Data".	
EurIPS, Copenhagen, Denmark	December 2025
Poster presentation at the Representation Learning for Earth Observation Workshop.	
International Computer Vision Summer School, Sicily, Italy	July 2024
Poster presentation on physics-informed learning for remote sensing and geophysics.	
International Conference on Learning Representations, Vienna, Austria	May 2024
Poster presentation at the Climate Change AI Workshop.	
ELLIS Computer Vision Workshop, Modena, Italy	April 2024
Poster presentation on "From Spectra to Biophysical Insights: End-to-End Learning with a Biased Radiative Transfer Model."	
IEEE/RSJ International Conference on Intelligent Robots and Systems, Kyoto, Japan	October 2022
Oral presentation on 'Fast Hierarchical Learning for Few-Shot Object Detection.'	

SELECTED TRAINING AND WORK EXPERIENCE

EnterpriseTECH Cohort 16, Cambridge Judge Business School, University of Cambridge	2024–2025
Selected for an entrepreneurship programme for tech-innovation and worked on a biotechnology project under the supervision of Vincenzo Garzya, Head of Data and AI at AstraZeneca.	
Research Intern, Elevate3D, Zurich	2022
Adapted segmentation models for NeRF-based 3D reconstruction and developed a Blender pipeline in Python for generating synthetic 3D-object data.	
Research Assistant, ETH Zurich	2022
Extended a crop-mapping method to nationwide coverage across Switzerland and developed a data processing pipeline from raw satellite observations to analysis-ready data.	
Project Lead, Computational Intelligence Lab taught by Thomas Hofmann, ETH Zurich	2020
Developed a U-Net-based system for road segmentation in satellite imagery.	

Project Lead, 3D Vision Lab taught by Marc Pollefeys, ETH Zurich	2020
Developed an augmented-reality language-learning application using Microsoft HoloLens.	
Mitacs Globalink Research Intern, University of Winnipeg	2018
Identified research gaps in community forestry in Canada for environmental governance.	

TECHNICAL SKILLS

Data modalities and sensors: Experience with data in both 2D and 3D, including RGB, multispectral, LiDAR, and geodetic data from platforms ranging from drones to satellites.

3D vision and scientific machine learning: Experience with Unreal Engine, Blender, and graphics simulators; developed the pip-installable CAMP3D synthetic-data generation toolkit and implemented a 2,000-line radiative transfer model in PyTorch.

Research adaptability: Demonstrated ability to rapidly develop expertise and publish across leading venues. Research topics spanning 3D vision, physics-informed machine learning, and explainable AI, while developed within a coherent framework.

Languages: Chinese (native), English (fluent), Korean (basic), and German (basic).

TEACHING AND DEMONSTRATION

Scientific Demonstrator, Cambridge Festival, University of Cambridge	2024, 2026
Tutor, Undergraduate Course in Further Graphics, University of Cambridge	2024, 2025
Scientific Demonstrator, Department of Computer Science and Technology Undergraduate Open Days, University of Cambridge	2024
Tutor, Undergraduate Course in Artificial Intelligence, University of Cambridge	2024
Scientific Demonstrator, Cambridge Zero Community Day, University of Cambridge	2024

HOBBIES

Choral singing (tenor, Chapel Schola): recipient of the 2023 Choral Exhibition Award and the 2024 Instrumental Award from St Edmund’s College, Cambridge

Chinese calligraphy: more than 20 years of practice since childhood

Other interests: hiking, skiing, and reading