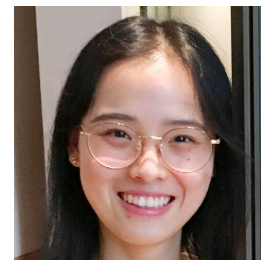


Yan Cheng  
PhD fellow  
Geography  
Postal address:  
Øster Voldgade 10, København K  
Email: [yach@ign.ku.dk](mailto:yach@ign.ku.dk)  
Phone: +4535322350  
Web: <https://ign.ku.dk/>  
Personal website: <https://yancheng-go.github.io/>



## Short presentation

I am passionate about using deep learning to decode earth observations (e.g., satellite images) and to understand terrestrial ecosystems in a changing climate. Application-wise, I am interested in physical climate risk assessment and nature-based solutions to climate change.

## Qualifications

Natural Resources Management, MSc, University of Twente  
1 Sep 2017 → 22 Mar 2019  
Award Date: 22 Mar 2019

Geographical Information Science, BSc, Wuhan University  
1 Sep 2013 → 30 Jun 2017  
Award Date: 30 Jun 2017

## Research outputs

### **Delineating Standing Deadwood in High-Resolution RGB Drone Imagery**

Möhring, J., Mosig, C., Cheng, Y., Mahecha, M. D., Priego, O. P., Beloiu, M., Volpi, M., Horion, S., Latifi, H., Shafeian, E., Fassnacht, F., Montero, D., Zielewska-Büttner, K., Laliberté, E., Cloutier, M., Schmehl, M-T., Frick, A., Müller-Landau, H., Cushman, K.C., Hupy, J. & 11 others, Ma, Q., Su, Y., Khatri-Chhetri, P., Kruse, S., Frey, J., Schiefer, F., Junttila, S., Potts, A., Uhl, A., Rossi, C. & Kattenborn, T., 15 Mar 2024.

### **High-resolution mapping of tree mortality in European forests**

Cheng, Yan, Oehmcke, Stefan, Mosig, C., Beloiu, M., Kattenborn, T., Abel, Christin, Gominski, Dimitri Pierre Johannes, Nord-Larsen, Thomas, Fensholt, Rasmus & Horion, Stéphanie, 11 Mar 2024.

### **Mapping Tree Mortality at Global Scale Using Sentinel-2**

Mosig, C., Mahecha, M. D., Montero, D., Cheng, Y., Perez-Priego, O., Beloiu, M., Volpi, M., Horion, S., Latifi, H., Shafeian, E., Fassnacht, F., Ganz, S., Zielewska-Büttner, K., Laliberté, E., Cloutier, M., Schmehl, M-T., Frick, A., Müller-Landau, H., Cushman, K.C., Hupy, J. & 11 others, Ma, Q., Su, Y., Khatri-Chhetri, P., Kruse, S., Frey, J., Schiefer, F., Junttila, S., Potts, A., Uhl, A., Rossi, C. & Kattenborn, T., 11 Mar 2024.

### **deadtrees.earth - an open, dynamic database for accessing, contributing, analyzing, and visualizing remote sensing-based tree mortality data**

Kattenborn, T., Mosig, C., Pratima, K., Frey, J., Perez-Priego, O., Schiefer, F., Cheng, Yan, Potts, A., Jehle, J., Mälicke, M. & Mahecha, M. D., 9 Mar 2024.

### **Scattered tree death contributes to substantial forest loss in California**

Cheng, Yan, Oehmcke, Stefan, Brandt, Martin Stefan, Rosenthal, L., Das, A., Vrieling, A., Saatchi, S., Wagner, F., Mugabowindekwe, Maurice, Verbruggen, Wim, Beier, Claus & Horion, Stéphanie, 2024, In: Nature Communications. 15, 1, p. 1-13 641.

### **A framework to assess multi-hazard physical climate risk for power generation projects from publicly-accessible sources**

Luo, T., Cheng, Yan, Falzon, J., Kölbl, J., Zhou, L., Wu, Y. & Habchi, A., 2023, In: Communications Earth and Environment. 4, 13 p., 117.

### **MAPPING TREE MORTALITY IN CALIFORNIA FROM VERY HIGH RESOLUTION IMAGERY USING DEEP LEARNING**

Cheng, Yan, Oehmcke, Stefan, Brandt, Martin Stefan, Das, A., Rosenthal, L., Saatchi, S., Wagner, F., Vrieling, A., Verbruggen, Wim, Beier, Claus & Horion, Stéphanie, 2023.

### **Mapping and characterising tree mortality in California at individual tree level using deep learning**

Cheng, Yan, Oehmcke, Stefan, Brandt, Martin Stefan, Das, A., Rosenthal, L., Saatchi, S., Wagner, F., Verbruggen, Wim, Vrieling, A., Beier, Claus & Horion, Stéphanie, 2023. 1 p.

### **Quantifying Tree Mortality Drivers - a Case Study in a Boreal Forest**

Jääskeläinen, J., Junttila, S., O'Sullivan, H., Cheng, Yan, Horion, Stéphanie & Vastaranta, M., 2023, SSRN: Social Science Research Network, 50 p.

### **Seasonal-Trend Time Series Decomposition on Graphics Processing Units**

Serykh, Dmitry, Oehmcke, Stefan, Oancea, Cosmin Eugen, Masiliunas, D., Verbesselt, J., Cheng, Yan, Horion, Stéphanie, Gieseke, F. & Hinnerkov, Nikolaj Hey, 2023, *Proceedings - 2023 IEEE International Conference on Big Data, BigData 2023*. He, J., Palpanas, T., Hu, X., Cuzzocrea, A., Dou, D., Slezak, D., Wang, W., Gruca, A., Lin, J. C-W. & Agrawal, R. (eds.). IEEE, p. 5914-5923 10 p.

### **Identification of temporary livestock enclosures in Kenya from multi-temporal PlanetScope imagery**

Vrieling, A., Fava, F., Leitner, S., Merbold, L., Cheng, Yan, Nakalema, T., Groen, T. & Butterbach-Bahl, K., 2022, In: *Remote Sensing of Environment*. 279, 15 p., 113110.

### **Assessing Physical Climate Risks for the European Bank for Reconstruction and Development's Power Generation Project Investment Portfolio**

Luo, T., Zhou, L., Falzon, J., Cheng, Yan, Christianson, G., Wu, Y. & Habchi, A., 9 Dec 2021, World Resources Institute, 48 p.

### **Phenology of short vegetation cycles in a Kenyan rangeland from PlanetScope and Sentinel-2**

Cheng, Yan, Vrieling, A., Fava, F., Meroni, M., Marshall, M. & Gachoki, S., 2020, In: *Remote Sensing of Environment*. 248, 20 p., 112004.

## **Employment**

### **PhD fellow**

Geography 2

København K, Denmark

1 Sep 2021 → nu

### **Remote sensing specialist**

DHI

Denmark

18 Jul 2022 → nu

### **Data Analyst**

World Resources Institute

United States

18 Jan 2021 → 25 Aug 2021

### **AiO/Research Assistant**

University of Twente

Netherlands

2 Dec 2019 → 1 Dec 2020

### **Intern, Esri (Redlands, CA)**

31 May 2019 → 18 Oct 2019

## **Activities**

### **ETH Zurich**

Cheng, Yan (Visiting researcher)  
Feb 2024 → Mar 2024

### **Southern University of Science and Technology**

Cheng, Yan (Visiting researcher)  
Dec 2023

### **Wuhan University**

Cheng, Yan (Visiting researcher)  
Dec 2023

### **USGS**

Cheng, Yan (Visiting researcher)  
Jul 2023

### **Teaching assistant for the MSc course - "Satellite Image Processing and Analysis in the Big Data Era"**

Cheng, Yan (Other)  
Apr 2023 → Jun 2023

## **Prizes**

### **DDSA Travel Grant 2023**

Cheng, Yan (Recipient), Jun 2023

### **IEEE Geoscience and Remote Sensing Society Travel Grant**

Cheng, Yan (Recipient), May 2023

### **ITC Excellence Scholarship**

Cheng, Yan (Recipient), Apr 2017