

## CONTACT INFO

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- ☎ +49 (0) 89/2180 - 6748
- 📖 [ResearchGate](#)
- 🐙 [Github](#)
- 🏠 [Homepage](#)

## TECHNICAL EXPERTISE

Experienced in Geostatistical analysis, Machine Learning, and Classification Algorithms.

Full experience with GIS software (Envi, ArcGIS).

Skilled in R, Python, Google Earth Engine (GEE)

# THANH-NOI PHAN

Postdoctoral Researcher | Ludwig-Maximilians University of Munich

My broad research interests focus on understanding the interactions between human activities and surface climate, environment, and landscapes across spatial and temporal scales. I combine field-based inventory data, advanced remote sensing techniques, data harmonization, and diverse geocomputational approaches to achieve my research goals.

## EDUCATION

- 7.2019 • **Georg-August-Universität Göttingen**  
PhD in Geography (magna cum laude) 📍 Göttingen, Germany  
  
Dissertation: Air surface temperature estimation using MODIS land surface temperature data in northwest Vietnam
- 6.2012 • **Asian Institute of Technology**  
MSc in Natural Resources Management 📍 Bangkok, Thailand  
  
Thesis: Detecting Land Use and Land Cover Change using Remote Sensing and GIS: Case Study of Tam Nong District, Phu Tho Province, Vietnam
- 7.2007 • **Hanoi University of Mining and Geology**  
BSc in Geodesy (Survey Engineering) 📍 Hanoi, Vietnam  
  
Thesis: GPS Positioning

## RESEARCH EXPERIENCE

- 06.2019 – present • **Postdoctoral Researcher**  
Ludwig-Maximilians-Universität München (LMU Munich) 📍 Munich, Germany
- 11.2018 – 05.2019 • **Associate Researcher**  
Georg-August-Universität Göttingen 📍 Göttingen, Germany
- 03.2008 – 10.2013 • **Lecturer and researcher**  
Vietnam National University of Agriculture (VNUA) 📍 Hanoi, Vietnam
- 07.2007 – 02.2008 • **Geodesy Engineer, Land/GPS Surveyor**  
Geodetic and Topographic Division 📍 Hanoi, Vietnam


## TEACHING EXPERIENCE

- 03.2008 – 10.2013 • **Geodesy for Land Management Program**  
Teaching Geodesy courses (Basic & Advanced) for Land Management Program at VNUA. 📍 Hanoi, Vietnam
- 03.2008 – 10.2013 • **Photogrammetry, Remote Sensing, and GIS**  
Teaching Photogrammetry, Remote Sensing, and GIS courses for Land Management Program at VNUA. 📍 Hanoi, Vietnam
- 10.2024 • **Introduction to Google Earth Engine for Big Data Analysis**  
This extracurricular course is designed to provide Bachelor's, Master's, and PhD students at LMU Munich with the essential resources to start using Google Earth Engine (GEE). 📍 Munich, Germany

## SCHOLARSHIP & AWARDS

- 12.2024


**Travel Grant, LMU Munich Mentoring Program**  
I received this award to attend and present at the 2024 American Geophysical Union (AGU) Fall Meeting in Washington, D.C., the United States.

 München, Germany
- 11.2017  
–  
04.2018


**Family Oriented Finishing Grant**  
This grant offers stipends for PhD students who have families and demonstrate strong research results.

 Göttingen, Germany
- 11.2013  
–  
10.2017


**Scholarship for PhD program at the University of Göttingen, Germany.**  
Scholarship from the Government of Vietnam

 Göttingen, Germany
- 08.2010  
–  
06.2012

**Scholarship from Ford Foundation**  
Scholarship for Master Degree at Asian Institute of Technology (AIT), Bangkok, Thailand.

 Bangkok, Thailand
- 05.2005

**Scholarship for outstanding student**  
This scholarship, provided by The Aerial Photo - Topography Company and the Military Map Department of Vietnam, is awarded to the top 5 students at Hanoi University of Mining and Geology.

 Hanoi, Vietnam
- Scholarship for excellent students**  
The Hanoi University of Mining and Geology awards scholarships to excellent students during the academic year. Hanoi, Vietnam 09.2002 – 07.2007

## Research Projects

### MORE STEP – Mobility at risk: Sustaining the Mongolian Steppe Ecosystem | [Website](#)

This is a collaborative and interdisciplinary research project of Mongolian and German partners funded by the German Federal Ministry of Education and Research.

## List of Publications

[Google Scholar](#) | [Scopus](#) | [ResearchGate](#) | [Web of Science](#)

### Peer-Reviewed Journals (published)

- [15]. Nguyen, C. T., Diem, P. K., Nghia, D. H., Diem, N. K., Diep, N. T. H., **Phan, T.-N.**, Vo, Q. M., & Quang, N. H. (2025). Leveraging convolutional neural networks and textural features for tropical fruit tree species classification. *Remote Sensing Applications: Society and Environment*, 39, 101633. <https://doi.org/10.1016/j.rsase.2025.101633>
- [14]. Diem, P. K., Nguyen, C. T., Diem, N. K., Diep, N. T. H., Thao, P. T. B., Hong, T. G., & **Phan, T.-N.** (2024). Remote sensing for urban heat island research: Progress, current issues, and perspectives. *Remote Sensing Applications: Society and Environment*, 33. <https://doi.org/10.1016/j.rsase.2023.101081>
- [13]. Ji, S., Dashpurev, B., **Phan, T.-N.**, Dorj, M., Jäschke, Y., & Lehnert, L. (2024). Above-ground biomass retrieval with multi-source data: Prediction and applicability analysis in Eastern Mongolia. *Land Degradation & Development*. <https://doi.org/10.1002/ldr.5109>
- [12]. Dashpurev, B., Dorj, M., **Phan, T.-N.**, Bendix, J., & Lehnert, L. W. (2023). Estimating fractional vegetation cover and aboveground biomass for land degradation assessment in eastern Mongolia steppe: combining ground vegetation data and remote sensing. *International Journal of Remote Sensing*, 44(2), 452-468. <https://doi.org/10.1080/01431161.2023.2165421>
- [11]. Nguyen, C. T., Kaewthongrach, R., Channumsin, S., Chongcheawchamnan, M., **Phan, T.-N.**, & Niammuad, D. (2023). A regional assessment of ecological environment quality in Thailand special economic zone: Spatial

heterogeneous influences and future prediction. *Land Degradation & Development*, 34(18), 5770-5787. <https://doi.org/10.1002/ldr.4876>

[10]. **Phan, T.-N.**, Dashpurev, B., Wiemer, F., & Lehnert, L. W. (2022). A simple, fast, and accurate method for land cover mapping in Mongolia. *Geocarto International*, 37(26), 14432-14450. <https://doi.org/10.1080/10106049.2022.2087759>

[9]. Dashpurev, B., Wesche, K., Jäschke, Y., Oyundelger, K., **Phan, T.-N.**, Bendix, J., & Lehnert, L. W. (2021). A cost-effective method to monitor vegetation changes in steppes ecosystems: A case study on remote sensing of fire and infrastructure effects in eastern Mongolia. *Ecological Indicators*, 132. <https://doi.org/10.1016/j.ecolind.2021.108331>

[8]. **Phan, T.-N.**, Kuch, V., & Lehnert, L. W. (2020). Land Cover Classification using Google Earth Engine and Random Forest Classifier—The Role of Image Composition. *Remote Sensing*, 12(15). <https://doi.org/10.3390/rs12152411> (Highly Cited Paper)

[7]. Bayat, M., **Phan, T.-N.**, Zare, R., & Bui, D. (2019). A Semi-empirical Approach Based on Genetic Programming for the Study of Biophysical Controls on Diameter-Growth of *Fagus orientalis* in Northern Iran. *Remote Sensing*, 11(14). <https://doi.org/10.3390/rs11141680>

[6]. **Phan, T.-N.**, Kappas, M., Nguyen, K. T., Tran, T. P., Tran, Q. V., & Emam, A. R. (2019). Evaluation of MODIS land surface temperature products for daily air surface temperature estimation in northwest Vietnam. *International Journal of Remote Sensing*, 40(14), 5544-5562. <https://doi.org/10.1080/01431161.2019.1580789>

[5]. **Phan, T.-N.**, & Kappas, M. (2018). Application of MODIS land surface temperature data: a systematic literature review and analysis. *Journal of Applied Remote Sensing*, 12(04). <https://doi.org/10.1117/1.Jrs.12.041501>

[4]. **Phan, T.-N.**, Kappas, M., & Tran, T. (2018). Land Surface Temperature Variation Due to Changes in Elevation in Northwest Vietnam. *Climate*, 6(2). <https://doi.org/10.3390/cli6020028>

[3]. **Phan, T.-N.**, & Kappas, M. (2018). *Comparison of Random Forest, k-Nearest Neighbor, and Support Vector Machine Classifiers for Land Cover Classification Using Sentinel-2 Imagery*. *Sensors (Basel)*, 18(1). [doi:10.3390/s18010018](https://doi.org/10.3390/s18010018) (Highly Cited Paper)

[2]. **Phan, T.-N.**, Degener, J., & Kappas, M. (2017). Comparison of Multiple Linear Regression, Cubist Regression, and Random Forest Algorithms to Estimate Daily Air Surface Temperature from Dynamic Combinations of MODIS LST Data. *Remote Sensing*, 9(5). <https://doi.org/10.3390/rs9050398>

[1]. **Phan, T.-N.**, Kappas, M., & Degener, J. (2016). Estimating Daily Maximum and Minimum Land Air Surface Temperature Using MODIS Land Surface Temperature Data and Ground Truth Data in Northern Vietnam. *Remote Sensing*, 8(12). <https://doi.org/10.3390/rs8121002>

#### Peer-Reviewed Journals (Under Review)

[3]. Oyundelger, K., Jäschke, Y., Gonchigsumlaa, G., Batjav, B., Damdindorj, S., Munkhzul, O., **Phan, T.-N.**, Mehring, M., Drees, L., Kasymov, U., Ring, I., Ritz, C.M., Wesche, K. (2024). Assessing pasture quality in Mongolian steppe: cross-validating local traditional knowledge and standard ecological surveys (Under Review).

[2]. Ji, S., Gonchigsumlaa, G., Damdindorj, S., Tseren, T., Sharavjamts, D., Otgondemberel, A., Gurjav, E., Puntsagsuren, M., Tsabatshir, B., Gungaa, T., Batbold, N., Drees, L., Ganbayar, B., Orosoo, D., Lkhamsuren, B., Ganbat, B., Damdinsuren, M., Gombosuren, G., Dashpurev, B., **Phan, T.-N.**, Dejid, N., Müller, T., Lehnert, L. (2024). Monitoring breakpoints under grazing pressure in Eastern Mongolia (Under Review).

[1]. Wang, Y., Oyunbileg, M., Khaliun, U., Batlai, O., **Phan, T.-N.**, Lehnert, L., Gonchigsumlaa, G., Damdindorj, S., Kasymov, U., Drees, L., Mehring, M., Dejid, N., Wesche, K. (2024). Herder mobility matters yet climate controls plant community composition in eastern Mongolian steppe. (Under Review).

## Conference Publications

- [5]. **Phan, T.-N.**, Zerres, V., Svanidze, D., Dashpurev, B., and L. W. Lehnert (2024). Grassland fire monitoring and their effects on ecosystems in Mongolian steppes. AGU24, 9-13 Dec, Washington D.C.
- [4]. Dashpurev, B., **Phan, T.-N.**, J. Bendix, L. Lehnert (2022). Deriving vegetation cover and land degradation in the vast eastern Mongolian Steppe from Sentinel 2 using random forest. ESA Living Planet Symposium, Bonn.
- [3]. Dashpurev, B., **Phan, T.-N.**, J. Bendix, and L. W. Lehnert (2021). Estimating the Effect of Infrastructure on Vegetation Degradation in Eastern Mongolia Steppe Using Machine Learning and Remote Sensing. IEEE International Geoscience and Remote Sensing Symposium IGARSS.
- [2]. Lehnert, L. W. & **Phan, T.-N.** (2020). Comparison of fire products in Mongolia reveals contrasting results. 22nd EGU General Assembly, Vol. 22, p. 11064.
- [1]. **Phan, T.-N.**, Y. Jäschke, O. Chuluunkhuyag, M. Oyunbileg, K. Wesche, and L. W. Lehnert (2020). Remote sensing of grassland communities in Mongolian Steppe combining multi-source data and machine learning classification algorithms. 22nd EGU General Assembly, Vol. 22, p. 13399.

## Academic Service

Session Chair, 42nd Asian Conference on Remote Sensing (ACRS 2021), Can Tho University, Vietnam, November 22-24, 2021

## Reviewer Activities

**Elsevier** (Sustainable Cities and Society; ISPRS Journal of Photogrammetry and Remote Sensing; Flora; Advances in Space Research; International Journal of Applied Earth Observation and Geoinformation);

**MDPI** (Remote Sensing);

**Nature** (Scientific Reports);

**IEEE** (IEEE Geoscience and Remote Sensing Letters);

**Taylor & Francis** (Physical Geography; Geocarto International; International Journal of Digital Earth);

**Wiley** (Earth and Space Science; Ecology and Evolution; Land Degradation & Development);

**Springer** (Environmental Earth Sciences; Environmental Monitoring and Assessment; SN Applied Sciences; Natural Hazards)

## References

### **Prof. Dr. Lukas Lehnert**

*Postdoctoral Mentor*

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### **Prof. Dr. Martin Kappas**

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