

# DOHEE KIM

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## RESEARCH INTEREST

Forest ecology, Carbon allocation, Biogeochemistry, Carbon cycle, Isotopic flux partitioning

## EDUCATION

<b>Texas A&amp;M University</b>	<b>College Station, TX, USA</b>
Ph. D. student. Dept. of Ecology and Conservation Biology (Dr. Asko Noormets)	Aug 2020 – Present
- GPA: 3.90/4.00	
<b>Ewha Womans University</b>	<b>Seoul, Korea</b>
M. S. in Environmental Science and Engineering (Dr. Ji-Hyung Park)	Mar 2018 – Aug 2019
- Interdisciplinary Bachelor-Master's program	
- GPA: 4.00/4.00 Summa Cum Laude	
<b>Ewha Womans University</b>	<b>Seoul, Korea</b>
B. S. in Environmental Science and Engineering	Mar 2014 – Feb 2018
- GPA: 3.79/4.00 Summa Cum Laude	

## SCHOLARSHIPS & GRANTS

▪ Dept. of Ecology and Conservation Biology Presentation Travel Grant, Texas A&M University, \$1000	2025
▪ 2023 AmeriFlux Annual Meeting Travel Stipend, AmeriFlux, \$1000	2023
▪ Ann Miller Gonzalez Graduate Research Grant, Native Plant Society of Texas (NPSOT), \$1600	2023
▪ Graduate Student Research and Presentation Travel Grant, Texas A&M University, \$500	2022
▪ Dept. of Ecology and Conservation Biology Presentation Travel Grant, Texas A&M University, \$500	2022
▪ High-Impact Research Mini-Grants, Texas A&M University, \$2000	2021
▪ McMillan-Ward Memorial Graduate Fellowship, Texas A&M University, \$25000/yr	2021 – 2023
▪ Excellence Fellowship Scholarships, Texas A&M University, \$25000/yr	2020 – 2021
▪ Teaching Assistant Scholarships, Korea Foundation for the Advancement of Science & Creativity, \$3000	2018
▪ Admission Scholarship (full tuition for 3 semesters), Ewha Womans University, \$20472	2018 – 2019
▪ Undergraduate Research Opportunities Program, Ewha Womans University, \$600	2017
▪ Study Abroad Scholarship (University of California, Berkeley), Ewha Womans University, \$2000	2016
▪ Undergraduate tutoring program (mentor), Ewha Womans University, \$500	2016
▪ Dean's list (7 semesters, Honors scholarships), Ewha Womans University, \$6680	2014 – 2017

## HONORS & AWARDS

▪ Outstanding Student Presentation Award (OSPA), American Geophysical Union	2024
▪ Ewha Engineering Capstone Design Contest (2nd prize in poster presentation)	2017

- Promising Student in Department, Ewha Womans University 2017
- Promising Student in Major, Ewha Womans University 2017
- Global Leader in Major, Ewha Womans University 2016

## PUBLICATIONS

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- (In preparation) **Dohee Kim**, Benju Baniya, Malik Nkrumah, Asko Noormets (2025), Seasonal asynchrony between above- and belowground growth and respiration in shortleaf pine forest, *New Phytologist*
  - (In review) Moeka Ono, Bhaskar Mitra, Benju Baniya, **Dohee Kim**, Asko Noormets (2025), The Use of Newly Assimilated Photosynthates by Soil Autotrophic and Heterotrophic Respiration on a Diurnal Scale, *Biogeoscience*
  - Asko Noormets, Guofang Miao, **Dohee Kim**, Moeka Ono, Steven G McNulty (2023), Chapter 5: Mitigation potential of forests: challenges to carbon accrual in the ecosystem, *Future Forests* 75-94, Elsevier, <https://doi.org/10.1016/B978-0-323-90430-8.00013-7>
  - **Dohee Kim**, Ju-Hee Lim, Yewon Chun, Omm Kulsum Nayna, Most Shirina Begum, Ji-Hyung Park (2021), Phytoplankton nutrient use and CO<sub>2</sub> dynamics responding to long-term changes in riverine N and P availability, *Water Research* 203:117510, <https://doi.org/10.1016/j.watres.2021.117510>
  - Yewon Chun, **Dohee Kim**, Shohei Hattori, Sakae Toyoda, Naohiro Yoshida, Jinhee Huh, Ju-Hee Lim, Ji-Hyung Park (2020), Temperature control on wastewater and downstream nitrous oxide emissions in an urbanized river system, *Water Research* 187:116417, <https://doi.org/10.1016/j.watres.2020.116417>
  - **Dohee Kim**, Most Shirina Begum, Jiho Choi, Hyojin Jin, Eliyan Chea, Ji-Hyung Park (2019), Comparing effects of untreated and treated wastewater on riverine greenhouse gas emissions, *APN Science Bulletin* (9), <https://doi.org/10.30852/sb.2019.872>

## PRESENTATIONS (\*Awarded)

### Oral

- **\*Dohee Kim**, Benju Baniya, Malik Nkrumah, Asko Noormets (2024). “Understanding inhibition of daytime ecosystem respiration: Effect of carbon availability in the Kok effect”, Abstract (B41B-06), 2024 AGU Fall Meeting, Washington, DC, 9-13 Dec. (*\*Outstanding Student Presentation Award (OSPA)*)
- **Dohee Kim**, Benju Baniya, Malik Nkrumah, Asko Noormets (2023), “On the importance of the decoupling of above- and belowground processes”, 2023 Ecological Integration Symposium, Texas A&M University, College Station, TX, Mar. 31.
- **Dohee Kim**, Benju Baniya, Moeka Ono, Asko Noormets (2022), “Is Drought the Primary Driver of the Seasonality of Carbon Allocation in a Subtropical Pine Forest?”, Abstract (B52B-06), 2022 AGU Fall Meeting, Chicago, IL, 12-16 Dec.

### Poster

- **Dohee Kim**, Benju Baniya, Clement Sarpong, Malik Nkrumah, Asko Noormets (2025). “Diurnal dynamics of Carbon allocation and respiratory costs under water stress using flux based estimates”, 2025 AmeriFlux Annual Meeting, Tucson, AZ, 21-24 Oct.
- Benju Baniya, **Dohee Kim**, Moeka Ono, Malik Nkrumah, Clement Sarpong, Guofang Miao, Asko Noormets (2025). “Non-structural carbon dynamics and partitioning in a shortleaf pine forest”, 2025 AmeriFlux Annual Meeting, Tucson, AZ, 21-24 Oct.

- Benju Baniya, **Dohee Kim**, Malik Nkrumah, Moeka Ono, Guofang Miao, Asko Noormets (2024). “Carbon Dynamics in a Shortleaf Pine Forest Amidst a Two-Year Drought”, Abstract (B11F-1380), 2024 AGU Fall Meeting, Washington, DC, 9-13 Dec.
- Moeka Ono, Bhaskar Mitra, Benju Baniya, Malik Nkrumah, **Dohee Kim**, Asko Noormets (2024). “On the Carbohydrate Substrate Dependence of Soil Autotrophic and Heterotrophic Respiration”, Abstract (B43C-1549), 2024 AGU Fall Meeting, Washington, DC, 9-13 Dec.
- **Dohee Kim**, Benju Baniya, Malik Nkrumah, Asko Noormets (2024). “Understanding inhibition of daytime ecosystem respiration: Insights into diurnal dynamics and carbohydrate physiology”, 2024 AmeriFlux Annual Meeting, Berkeley, TX, 03-06 Sep.
- Benju Baniya, **Dohee Kim**, Malik Nkrumah, Moeka Ono, Asko Noormets (2023). "Seasonal Dynamics of Carbon Allocation in a Shortleaf Pine Forest", Abstract (B51I-1890), 2023 AGU Fall Meeting, San Francisco, CA, 11-15 Dec.
- **Dohee Kim**, Benju Baniya, Malik Nkrumah, Moeka Ono, Asko Noormets (2023). "High-Frequency Carbon Isotope Measurements for Investigating Forest Carbon Allocation Dynamics", 2023 AmeriFlux Annual Meeting, Gardner, MA, 03-06 Oct
- Benju Baniya, **Dohee Kim**, Malik Nkrumah, Asko Noormets (2023). "US-CRK: new carbon allocation observatory in shortleaf pine", 2023 AmeriFlux Annual Meeting, Gardner, MA, 03-06 Oct
- **Dohee Kim**, Ji-Hyung Park, Chi-Yong Ahn (2019), “Changing nutrient controls on the composition and functionality of harmful algal species in an urbanized river system”, Abstract (OS21C-1747), 2019 AGU Fall Meeting, San Francisco, CA, 9-13 Dec.
- Juhee Lim, **Dohee Kim**, Yewon Chun, Most S. Begum, Ji-Hyung Park (2019), “Dissolved organic matter decomposition and carbon dioxide production in the lower Han River – Analysis of long-term observation data and organic matter characterization”, 2019 Conference of Korean Ecological Environment Conference, Seoul, Korea, 20-21 Feb.
- Juhee Lim, **Dohee Kim**, Yewon Chun, Most S. Begum, Ji-Hyung Park (2018), “Influence of major tributaries on organic matter characteristics and carbon dioxide emission in the lower Han River”, 2018 Conference of Korean Ecological Environment Conference, Gwang-ju, Korea, 21-23 Feb.

## THESIS

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- **Dohee Kim** (2019), “Nutrient Controls on the Composition and Functionality of Harmful Algal Species in an Urbanized River System” (Master’s thesis)
  - **\*Dohee Kim**, Jiho Choi (2017), “Assessment of Effects of Wastewater Treatment Plant on GHG Emissions from Rivers – Incubation Experiments Using Effluent from Jungnang Wastewater Treatment Plant and Wastewater from Phnom Penh, Cambodia” (Bachelor’s thesis; *Awarded at 2017 Ewha Engineering Capstone Design Contest*)

## RESEARCH & TEACHING EXPERIENCES

### Teaching Assistant

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- ECCB 319 Principles of forestry, Texas A&M University Aug 2025 – Dec 2025  
Laboratory instructor of Forest Vegetation Simulator (FVS, USFS) Aug 2024 – Dec 2024  
Aug 2023 – Dec 2023  
Aug 2021 – Dec 2021
  - High school Research & Education program, Ewha Womans University & Hansung Science High School

Research on the ‘Algal bloom and greenhouse gas emissions in the Han river’ Mar 2018 – Dec 2018

#### Research Assistant

- Forest Ecology Laboratory, Texas A&M University Jan 2025 – current
- Researcher in ‘Carbon allocation studies in shortleaf pine forest at Davy Crockett National Forest’ Aug 2024 – Dec 2024
- Jan 2022 – Aug 2023
- Ecosystem/Biogeochemistry Laboratory, Ewha Womans University Feb 2019 – Aug 2019
- Researcher in ‘Long-term biogeochemical study of the carbon cycle in an urbanized river system’

#### Undergraduate Research Assistant

- Ecosystem/Biogeochemistry Laboratory, Ewha Womans University Jan 2017 – Feb 2018
- Participated in the project on ‘Undergraduate Research Opportunities Program’

#### Laboratory Employee

- Ecosystem/Biogeochemistry Laboratory, Ewha Womans University Sep 2019 – Feb 2020
- Technology licensing officer

### EXTRACURRICULAR & SERVICES

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- Session chair in AGU 2025 annual meeting 2025
  - Benju Baniya, **Dohee Kim**, Moeka Ono, Asko Noormets, Carbon Allocation Dynamics: From Plant to Ecosystem Scale, Session proposal (B22), 2025 AGU Fall Meeting, New Orleans, LA
  - Student reviewer in AGU 2024 Outstanding Student Presentation Award (OSPA) 2024
  - Session chair in AGU 2024 annual meeting 2024
  - Dohee Kim**, Benju Baniya, Moeka Ono, Asko Noormets, Carbon Allocation Dynamics: From Plant to Ecosystem Scale, Session proposal (B11F), 2024 AGU Fall Meeting, Washington, DC, 9-13 Dec.
  - Presenter in Dept. of Ecology and Conservation Biology GSA Conference, Texas A&M University 2024
  - Mentor in Dept. of Ecology and Conservation Biology Howdy Week Open House, Texas A&M University 2022–2024
  - Mentor in Summer Training in Agriculture and Related Sciences (STARS) camp, Texas A&M University 2022
  - Mentor in Aggie Buddy Assistant Program, Texas A&M Korean Student Association 2022
  - Mentor in Study Abroad Webinar by Studying Abroad Graduates of Ewha (SAGE), Ewha Womans University 2021
  - Student head in departmental student organization (Storm Chaser), Ewha Womans University 2016–2017
  - Study abroad, University of California, Berkeley 2016
  - Peer tutoring in Elementary physics, Ewha Womans University 2016
  - Student head in department student council, Ewha Womans University 2014

### TECHNICAL SKILLS & FIELD EXPERIENCE

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#### Forest ecosystem

- Specialties in tunable infrared laser direct absorption spectrometer (TILDAS, Aerodyne Research, MA, US) and isotopic flux partitioning (Wehr&Saleska 2015)
- CO<sub>2</sub> flux measurement (Li-8100, Li-7200), Dendrometer, Datalogger (CR1000, CR200)
- Field experience in forest and basic field measurements

#### Freshwater ecosystem

- Specialties in cyanobacterial culture and identification, incubation, and manipulation

- DOM analysis (TOC, FL/UV-Vis, IC), dissolved CO<sub>2</sub> measurement (manual headspace method) by gas chromatography
- Field experience in freshwater and basic chemical water quality analysis

**Computing**

- Fluent in Matlab, SigmaPlot, MS Office
- Intermediate in R, Fortran

**CERTIFICATIONS**

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- Educated in the program approved in Accreditation Board for Engineering Education of Korea (ABEEK)  
(Substantial equivalency with Accreditation Board Engineering and Technology, ABET in USA)

## MEMBERSHIP

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- American Geophysical Union (AGU) student member, 2019 –
- AmeriFlux student member, 2023 –
- Texas A&M University Korean Student Association member, 2020 –
- Studying Abroad Graduates of Ewha member, 2019 –
- The Ecological Society of Korea student member, 2018 – 2019

## REFERENCES

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- Dr. Asko Noormets (Ph.D. Advisor)  
Professor, Texas A&M University  
[asko.noormets@ag.tamu.edu](mailto:asko.noormets@ag.tamu.edu)
- Dr. Ji-Hyung Park (M.S. Advisor)  
Professor, Ewha Womans University  
[jhp@ewha.ac.kr](mailto:jhp@ewha.ac.kr)

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