Name: Changwoo Ahn

Department: Environmental Science & Policy

Number of Nominations: 1

Previous Years’ Nominations: 2015

1. What characteristics make the nominee an exceptional mentor?

2. If you personally worked with the nominee, please describe your experience.
Changwoo Ahn – Mentoring Statement

It is an extremely humbling and rewarding experience to be a mentor for undergraduate students. I want my students to be empowered and transformed through my mentoring on their research and scholarship activities, so that they can develop not only much-needed skill sets, but also gain an ability and insight to integrate the things that they have learned to be able to understand the larger context of learning.

Each semester on the first day of class I talk to all my students about OSCAR’s research and scholarship program while strongly encouraging the students to get research and scholarship experience in their college education. Still, only a handful of students may pursue that experience in reality. Regardless, I passionately explain the importance of having a caring mentor(s) for the success of their college education. The first 15 to 20 minutes of my first class always does this as I strongly believe that student research and scholarship is pivotal to improving the quality of current college education.

Research and scholarship activities often require countless hours of keen attention even to minor details in every step of their learning process. It is also a process of truly understanding and building a character for each student. I make continuously conscious efforts to make myself available whenever students need me no matter what. I make sure they are heard, seen, and appreciated for their inquiries, actions, and progresses during the project, which I have observed truly motivate and empower them to move on to the next step, leading a necessary progress in their learning.

Students have to feel comfortable and confident with mentors to be successful with their projects. They should feel comfortable enough to ask questions and raise any concerns on their projects without hesitance. The mentor must be patient and should be able to show and communicate with students clearly that he or she cares. I am culturally sensitive and compassionate with my mentoring to address each student’s unique character and learning progress. What I have learned from my mentoring experience is that patience, flexibility, preparation, and communication are imperative to being a successful mentor. I provide specific knowledge, skills, and sources of information, and share my experience through meetings, conversations, and activities with students. These are all important ingredients in mentoring, yet nothing beats sincere and continuous “encouragement” and “praises” considerately tailored to each student.

Mentoring constantly challenges me to grow as a professor. I believe that I can make a difference if I provide supportive and effective mentoring in the lives of many students, and I have been fortunate enough to actually experience that to some degree. I often say to my students “Don’t suffer from learning, but it is necessary to struggle to learn, and let’s struggle to learn together”.

Thanks to many supports around the campus I had the most memorable moment of my mentoring experiences so far during the “Rain Project” last year. I have mentored over two dozen undergraduate students in this project. As much as I mentored through the many phases of the project it was the students who truly challenged me to become an aspiring teacher and mentor, so I am extremely grateful to all the undergraduate students who have worked on the Rain Project with me. I am humbly grateful to mentoring opportunities and will continue to do my best.
Changwoo Ahn- Evidence of Mentoring Experience

   Currently she is a naturalist at the Audubon Naturalist Society in Chevy Chase, Maryland. She 
   collected data that supported two publications produced as part of one of my graduate student’s 
   research and also produced her own writings noted below: 
   Richards, Jessica. 2007. Essay for internship at Ahn Wetland Ecosystem Lab, Fall 2006, In Ahn, 
   2006, Department of Environmental Science and Policy, George Mason University. 198 pp. 
   Richard, Jessica. 2007. Characterization of an ecosystem development in created wetland 
   mitigation banks in northern Virginia, GMU Faculty-Student Apprenticeship. Presented 
   at 2007 GMU Innovation Fair. 
   Richard, Jessica 2008. Establishing A Rating Curve for the Branch of Broad Run Stream that 
   Feed North Fork Wetland Mitigation Bank. A manuscript for Annual Report for Ahn Wetland 
   Ecosystem Laboratory. 

   Currently doing a Master’s on Neuroscience at College of William & Mary. Songhee participated 
   in collecting data on soil physicochemistry of local wetlands in northern Virginia. Songhee was 
   acknowledged in the following presentation and did her own presentation as follows: 
   Kang, S. 2009. Comparative Analysis of Soil Properties of Created and Preserved Wetlands in Northern 
   Virginia.” Presented at Innovation Conference. George Mason University, Fairfax, VA. 

3. Seungmin Baek, Spring 2008-Spring 2009, Biology Major (individual studies- 1 credit) 
   Baek, Seungmin 2008.Dynamics of soil physicochemistry of a wetland created for mitigation 
   beyond the mandatory five-year monitoring period. Presented and used for a research credit for 
   BIOL 497. Seung’s involvement on the long-term project of Ahn Wetland Ecosystem Lab will 
   be published in the near future as a summary of the decadal work on wetland soils. 

4. Youngjoo Kim, Spring 2008-Spring 2009, Biology Major. Youngjoo was mentored for lab and field 
   sampling methods and procedures to sample and process wetland soils in the Loudoun County 
   mitigation wetland. 

5. Jonathan Castellano, Summer 2009, Civil and Infrastructure Engineering at GMU, GMU 
   Apprenticeship (URSP). Currently working at New West Technologies, LLC. 
   Jonathan worked with me as part of an apprenticeship to design wetland mesocosms that have 
   become a major outdoor teaching and research facility for student research and scholarship. His 
   entire apprenticeship was dedicated to technical design and trials of several hydrologic models for 
   wetland mesocosms operation for ecological engineering. 

6. Christina deMaraina, Spring-Summer 2009. Biology Major. Christina was mentored in a wetland 
   outdoor microcosm building. Her research internship continued throughout the summer 2009. I 
   helped her obtain an internship at EPA (pesticide section), and she was admitted to ESP as a 
   graduate student after the EPA internship. She has currently finished a Master’s student at GMU. 


   contributed to the translation of the book mentioned above. Ji Eun was admitted to GMU’s ESP 
   program as a Master’s student in 2012. 

   president. Daniel took two of my classes (BIOL 492/BIOL 379) and continued to be mentored 
   beyond class after the semester in constructing and planting the wetland mesocosms in Spring 
   2012. I mentored him on the biodiversity of wetland plant establishment as he participated in the 
   field construction operation of Wetland Mesocosm Compound in Spring 2012. Daniel is currently 
   in a dental school at VCU. The work he and his KSA members participated in became part of the 
   video documentary published by Creative Service (used for GMU’s new website and promotion) 

10. Mahamed Abdilleh, Civil Engineering major, Spring 2012-Spring 2013. Mahamed participated in a 
    project titled “Measuring denitrification enzyme activity of wetland soils” in my lab.
11. **Danielle Ringley**, Environmental Science major, Spring 2013-Fall 2014. Danielle was approved for the Intensive Undergraduate Scholarship Program (URSP) for Summer 2013 ($5,000). I introduced the program to her and worked with her on the application proposal. Also, I mentored her as an volunteer undergraduate intern in my lab this semester (SP 2013). I helped Danielle put together a research presentation for the 3rd Annual College of Science Undergraduate Research Symposium. She also presented at the National Conference on Undergraduate Research (NCUR) in April 3-5, 2014. She currently works at USDA.

Ringley, D. and C. Ahn. 2013. Soil bulk density tells maturation of soils in created wetlands, to be completed by the end of Spring 2013, COS Undergraduate Research Colloquium.


15. **Jesse Glendon**, Fall 2014-present, OSCAR work study student on EcoScience + Art. Jesse is working with me to analyze student participation and attendance in lecture series of EcoScience + Art - Evaluation of the impacts of the EcoScience + Art lecture series has been conducted.

16. **Andy Sachs**, URSP Spring 2015-present, Undergraduate Research and Scholarship Program (URSP) Project title: Assessment of the performance of a floating wetland to improve stormwater quality in Mason Pond. Mentored him in the application for Intensive URSP for Summer 2015. After a semester of URSP with me Andy continues working with me on my 4VA (the Rain Project) to present. He has also been tentatively admitted to Accelerated Master’s program in ESP, starting fall 2016 at GMU. Andy will also present a poster at a national conference by American Ecological Engineering Society this June with me as follow. A journal article publication will follow after that.


17. **Joanna Spooner**, Spring 2015-present, Undergraduate Research and Scholarship Program (URSP) on the Rain Project. Mentored her application for URSP for Summer 2015. She also continues working with me as an undergraduate mentee of mine on my 4VA grant. She has just been admitted to a Ph.D program in Ecology at University of North Carolina, staring fall 2016. She is currently working with me to analyze nutrient values of wetland plants harvested, which will lead to a journal article publication in the near future. The lab analyses of the samples are currently underway.

18. **Charles Cressey** (communication major), SP 2015. Currently mentoring him on designing communication materials for the Rain Project, Directed studies for the Rain Project (3 credits).

19. **Anthony Frank**, SP 2015-present, Directed studies for the Rain Project (EVPP 396-1 credit), designing the shape of a floating wetland. Mentored this art major student during the Rain Project, and he did one-semester work study position with me until Fall 2015.


21. **Abigail Baxter**, SP 2015, Mentoring her as a research intern for wetland soil carbon study accumulation in created wetlands. Started her Master’s degree in Soil Science at VT in fall 2015.

22. **Vinson Corbo**, SP-SU 2105. Mentoring him on a film/documentary design and planning for the Rain Project. Admitted to Plant Science Master’s at VT.


24. **Chris Rusinko**, SP 2015. Designing a floating wetland for a campus stormwater wet pond. Chris is was an art major, and worked with me throughout this semester in finalizing the design of the floating wetland. Several media coverages of the Rain Project for students interviewed him, and he was a student representative for the NBC4’s news coverage on the Rain Project in May 2015. He also presented at the OSCAR’s Scholarship Celebration in SP 2015.

25. **Cameron Evans**, Fall 2015-present (SDG-OSCAR). Cameron is currently working with me on the production of a small art-ecology book/brochure. Will present the outcome at OSCAR scholarship celebration

26. **Khafre Barclift**, Fall 2014-present. Khafre (film major) has been mentored by me since Fall 2014 \ when the Rain Project class activities began. He and I have been working to put together a documentary “The making of the Rain Project”. He has been on SDG (OSCAR) officially since spring 2015 as well. Khafre will be presenting the documentary at the upcoming OSCAR scholarship celebration this May.

27. **Sharon Dorsey**, Fall 2015-present. EcoScience + Art Student Leadership Group member. I am an academic adviser for her Ecology concentration as well. She has just been the recipient of Provost Scholar Athlete Award.

28. **Micheal Harrier**, SP 2015- Fall 2015. A student member for the Rain Project, and afterward he has been mentored continuously on the harvesting the floating wetland in SU and FALL 2015. Just did an interview as a reference for his job application at an environmental consulting firm based in Richmond, VA. Michael, presented at the OSCAR’s Scholarship Celebration in SP 2015.


I have been mentoring undergraduate students not only one-on-one, but also through many presentations and meetings, including my activities with Aspiring Scientist Summer Internship, Study Abroad and International Office, Dream-Catchers, American Chemical Society, TEDxMason, GMUTV, COS STEM accelerator, WYSE (Washington Youth Summit on the Environment), GMU Engineers for International Development (EfID), Office of Sustainability Student Group, and GMU’s Songdo international campus in South Korea.

I am also currently mentoring the members of a newly formed (since fall 2015) EcoScience + Art Student Leadership Group on the campus, which has about 15 undergraduate students now and is growing to be an officially registered student club on the campus as of fall 2016. I meet and mentor them regularly.
March 9, 2016

To: OSCAR Mentor Awards Committee
From: Rick Davis, Dean, CVPA
Re: Changwoo Ahn

It is a great pleasure to write in support of my cross-campus colleague, Changwoo Ahn, as a worthy candidate for an OSCAR Mentor award. Since I am not in his department, I’m sure I don’t see the length, breadth, and depth of his day-to-day mentorship, but on the strong evidence of what I have observed from what might be thought of as a “loftier” perspective, I can recommend Changwoo as a mentor of great dedication and effect.

I base my judgment on three pillars. First, Prof. Ahn created and has built a thriving interdisciplinary “brand” here called EcoScience + Art, and under that banner has created innovative, student-centered programming. He looks to his students to do the majority of the heavy lifting in planning, organizing, and executing these projects, and he carefully mentors them in every phase.

Second, and relatedly, he created a deeply meaningful collaborative course and research activity called the Rain Project, involving artists and ecologists in an installation of “living sculpture” or floating wetland in Mason Pond which had the dual mission of beautification and purification (a pairing more typically found in the higher realms of Greek tragedy), and also enabled analysis of the uptake of toxins and other pollutants in the water. Once again, students were deeply implicated in the design, construction, installation, documentation, and analysis of this work, carefully mentored by Prof. Ahn.

Third, Prof. Ahn has been an enthusiastic participant in the “100th Meridian Project” (a multidisciplinary research initiative in CVPA, CHSS, COS, and VSE) since its inception, and was among the first to discover how to fully integrate students in the investigation. Since this project transcends any one class or time span, what starts out as instruction quickly turns into mentoring, and that very productive pattern appears to be characteristic of Changwoo’s work. He is generous with time and attention, concerned with and committed to student success, and an overall inspiration to students and colleagues alike.
I was first introduced to Dr. Changwoo Ahn during the Fall semester of my sophomore year when he was recruiting for The Rain Project. I met with him one on one in his office and he explained The Rain Project and the EcoScience+Art initiative and what he expected to accomplish with each. I immediately took interest as they were something that I am passionate about, and he saw the potential in me to help him execute/be a part of those goals. The Rain Project was designed to be strongly lead by students and I was one of the first to be recruited. I was able to work on this project through the OSCAR USRP program with Dr. Ahn as my mentor during the Spring of my sophomore year. I have learned more through this project than from any of my classes as this sort of hands on approach is a better platform to learn than any other. The design process taught key skills in collaboration, outreach, research, and experimental design. After the launch, I learned how to conduct various water quality tests that will be crucial to my future career. Without this project, there would be a major gap in my knowledge of a pivotal portion of this field. Dr. Ahn was always there to help facilitate the steps and provided insight and knowledge throughout the process, passing on the wisdom to his students. As this project has started to wind down, we have set our sights on future projects and have already accrued a large group of students interested in assisting. Dr. Ahn has not only helped me gain experience, but many other students and even more to come. He is hands down the most influential professor I've had the chance to work with at Mason and definitely goes above and beyond what is expected of him.

-Andy Sachs, GMU '17