Chad James Spreadbury

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Education

May 2016 to May 2020: PhD, University of Florida, Gainesville, FL

- Working towards a PhD in Environmental Engineering Sciences with a focus in Solid & Hazardous Waste Management.
- GPA: 4.0 (4.0 scale)

August 2013 to May 2016*: *B.S., University of Florida, Gainesville, FL

- Graduated *summa cum laude* with a Bachelor in Science in Environmental Engineering Sciences.
- GPA: 3.90 (4.0 scale)

August 2011 to May 2013*: *A.A., St. Petersburg College, Clearwater, FL

- Graduated *summa cum laude* with an Associates in Arts focusing on general engineering curriculum.
- GPA: 4.0 (4.0 scale)

Research Experience

May 2016 to Present: Graduate Researcher, Gainesville, FL

- Managed solid & hazardous waste research in litter prevention & waste-to-energy (WTE) residue beneficial use under my advisor, Dr. Timothy G. Townsend.
- Collected and interpreted litter data using ArcGIS within a local watershed to analyze the distribution of pollution and predict its source based on nearby land use activity.
- Proposed a new methodology considering local social and environmental factors in the collection of litter data from a categorical and geospatial perspective using GPS technology.
- Analyzed the feasibility of using combined ash as an aggregate in road base material from a performance standpoint via modified proctor compaction and limerock bearing ratio testing.
- Investigated the performance of bituminous material with varying replacements of WTE bottom and combined ash with respect to SUPERPAVE asphalt concrete mix design and volumetrics.
- Mentored undergraduates in scientific research with emphasis on methodology and theory on the reuse of WTE ash for aggregate road base and asphalt concrete materials.
- Disseminated WTE ash reuse findings with local stakeholders at the county, contractor, and academic levels along with the general public at the 2017 University of Florida Engineering Week E-Fair event.

August 2015 to April 2016: Undergraduate Research, Gainesville, FL

- Selected to pursue undergraduate research under Dr. David Mazyck and his graduate student, Regina Rodriguez, for the 2015-2016 academic year.
- One of 200 UF students chosen to perform research under the University Scholars Program, an initiative that provides academic and financial support for undergraduate researchers.
- Research topic: comparing Fourier transform infrared (FTIR) spectroscopy and Boehm titrations to analyze activated carbon surface group functionality and determine correlations between the two methods, if any.
- Presented in October 2015 at the Center for Undergraduate Research Board of Students (CURBS) Symposium to explain current results and learn about other studies around campus.

- Also disseminated results at the ESSIE Research Symposium (UF), Florida Undergraduate Research Conference (University of Tampa), and the Undergraduate Research Symposium (UF) in 2016.
- Work culminated in a journal article submission to UF's Journal of Undergraduate Research (JUR) and also an honors thesis to graduate with *summa cum laude* honors.

Teaching Experience

June 2016 to November 2016: Teaching Assistant, Gainesville, FL

- Chosen to co-teach *Introduction to Engineering* for Summer B and Fall 2016 semesters.
- Guided discussion of environmental engineering topics, including current events such as the Flint, MI water crisis, for 240 students/semester.
- Co-created course outline for environmental engineering using interactive activities (i.e. cloud in bottle) and examples of real-world products (i.e. sections of landfill liner/geonet, coagulants for water treatment) and research projects (i.e. concrete amended with waste-to-energy ash).

Involvement & Mentorship

April 2015 to Present: Webmaster, Social & Alumni Chair of Tau Beta Pi, Gainesville, FL

- Served as Webmaster of UF's chapter of Tau Beta Pi, the engineering honor society during 2015-2016 academic year.
- Maintained organization's website information using PHP coding concepts.
- Organized organization's website in an efficient, accurate manner so as to improve dissemination of TBP-related online information for members, institutions, and the public.
- Elected Social Chair for Fall 2016 semester responsible for fostering and putting together events that promote organization cohesiveness and encourage membership and retention.
- Led 2016 UF Art in Engineering networking social networking connecting candidates with members of our organization allowing for everyone to express and share their outlooks and approaches to STEM topics and how the arts are intertwined with these.
- Chosen to be the Alumni Coordinator for Spring 2017, where I aim to bridge the gap between alumni and student members by encouraging community, service, and mentorship.

April 2014 to April 2015*: *Vice President of Chi Epsilon*, *Gainesville, FL

- Served as Vice President of UF's chapter of Chi Epsilon, the civil and environmental engineering honor society.
- Fulfilled leadership roles, resided as President when the incumbent was unable to, and assisted other officers in organizational planning and duties.
- Arranged for professionals in the civil and environmental engineering disciplines to visit and present their knowledge at general body meetings.
- Coordinated Fundamentals of Engineering exam reviews in partnership with Tau Beta Pi.

February 2014 to April 2016*: *Graham Center Civic Scholars, Gainesville, FL

- Published a report on aging infrastructure concerns in Gilchrist County, FL for the 2014 program.
- Interviewed Gilchrist County, FL officials to pinpoint local infrastructure concerns and find out what steps were being taken to solve these dilemmas.
- Chosen to analyze and compile all the 2014 aging infrastructure reports on counties and RPCs in Florida to publish a single, comprehensive document that discusses the common, statewide issues.
- Researched and published a report on food insecurity and its implications within Union County, FL for the 2015 program and discussed with county officials the extent of the problem and the steps being taken to resolve it.

- Proposed and published a public policy brief which suggests alleviating food insecurity within Florida through state sponsored research into the potential human health impacts of nanotechnology infused food packaging.
- Mentored 50 scholars for the 2016 program involving mental health services for children within Florida providing timely and helpful advice to mentees to exceed the goals outlined for this endeavor to understand the situation in their counties and develop the best possible solutions.

September 2013 to April 2014*: *Mentor, Gainesville, FL

- Volunteered with Motiv-8 and spent an hour per week at local middle schools assisting mentees with academic and nonacademic concerns and inspiring academic confidence.
- Interacted with staff and other students in a friendly and professional manner.
- Explored future academic and career opportunities with mentees, focusing on STEM.

September 2012 to May 2013*: *Promotional Officer of FES, Clearwater, FL

- Served as the Promotional Officer for the St. Petersburg College Student Chapter of the Florida Engineering Society (FES).
- Assisted in leadership duties, advertised organization, and recruited members on campus.
- Presented at the 2013 FES Leadership Conference on St. Petersburg College's chapter's winning of the Delta Award and how they were able to do so.

Honors & Awards

- Iva and Norman Tuckett UFTI Fellowship, College of Engineering, University of Florida (Apr. 2016)
- Outstanding Gator Engineering Two-Year Scholar Award, College of Engineering, University of Florida (Apr. 2016)
- Undergraduate Outstanding Service/Leadership Award, Department of Environmental Engineering Sciences, University of Florida (Apr. 2016)
- 2016 NSF Honorable Mention, National Science Foundation (Mar. 2016)
- Mentor for the 2016 Graham Center Civic Scholar Program, University of Florida (Feb. 2016)
- J. Fred and Lilly C. Wilkes Endowment Award, Department of Environmental Engineering Sciences, University of Florida (Dec. 2015)
- Inducted into Tau Beta Pi, the engineering honor society (Apr. 2015)
- 2015-2016 University Scholars Program, University of Florida (Mar. 2015)
- 2015 Graham Center Civic Scholar, University of Florida (Feb. 2015)
- Florida Environmental Scholarship, Department of Environmental Engineering Sciences, University of Florida (Jan. 2015)
- Inducted into Chi Epsilon, the civil and environmental engineering honor society (Apr. 2014)
- John W. and Mittie Collins Scholarship, College of Engineering, University of Florida (Mar. 2014)
- 2014 Graham Center Civic Scholar, University of Florida (Feb. 2014)
- Pinellas Chapter of FES Scholarship Award, St. Petersburg College (Apr. 2013)
- Florida Medallion Scholars Award, State of Florida (Aug. 2011)