

LEAH HAMILTON

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EDUCATION

Virginia Polytechnic Institute and State University

PhD, Food Science and Technology

May 2022 Expected

Dissertation: "Utilizing Existing Product Descriptions and Natural Language Processing for Rapid Lexicon Development and Product Insights"

North Carolina State University

B.S., Food Science – Science Concentration

December 2016

Minor: English

Honors: 4.00 GPA | Summa Cum Laude | Valedictorian

AWARDS

1st Place, Institute of Food Technologists Sensory & Consumer Sciences Division Poster Competition June 2019

Pangborn 2019 Sensory Science Symposium Student Bursary March 2019

Southeastern Food Processors Association Food Science College Scholarship August 2016 – December 2016

Hase H and Lena M Smith Scholarship August 2015 – December 2016

W.F. and Mozelle Parker Scholarship August 2014 – December 2016

Leonard and Frances Crouch Scholastic Achievement Award August 2015 – May 2016

Eakes-Turner Food Science Scholarship August 2015 – May 2016

John and Kelli Rushing Food Science Freshman Scholarship August 2014 – May 2015

RESEARCH EXPERIENCE

US Department of Agriculture – Agricultural Research Service Food Science Research Unit

Graduate Research Assistant

July 2018 – Present

Applying automated natural language processing to generate a lexicon from a large corpus of food descriptions; mentoring students and peers in math, statistics, and computer programming; and assisting with various research and extension activities of the sensory evaluation lab.

US Department of Agriculture – Agricultural Research Service Food Science Research Unit

Biological Sciences Aide

May 2016 – June 2018

Designed and conducted volatile metabolomics experiments on a matrix new to the lab; repaired, relocated, and maintained a SPME-GCxGC-MS system; developed lab SOPs; assisted with other research activities; and managed lab operation, inventory, safety compliance.

North Carolina State University Department of Food, Bioprocessing, and Nutrition Sciences

Undergraduate Researcher

June 2014 – August 2014

Analyzed proximate, antioxidant, and phenolic content of chocolate samples.

PUBLICATIONS AND PAPERS

"Effects of Hydroxycinnamates and Exogenous Yeast Assimilable Nitrogen on Cider Aroma and Fermentation Performance"

Cairns, P, Lahne, J, Gallagher, D, **Hamilton, LM**, Racine, K, Phetxumphou, K, Ma, S, Huang, H, and Stewart, AC

Journal of the American Society of Brewing Chemists

In press

"Characterizing Consumer Emotional Response to Milk Packaging Guides Interpretation of Consumer Behavior"

Clark, E, Duncan, SE, **Hamilton, LM**, Bell, MA, Lahne, J, O'Keefe, S, and Gallagher, D

Food Quality and Preference

In press

"Fast and automated sensory analysis: Using natural language processing for descriptive lexicon development"

Hamilton, LM and Lahne, J

Food Quality and Preference, 83

2020

"Assessment of Instructions on Panelist Cognitive Framework and Free Sorting Task Results: A Case Study of Cold Brew Coffee"

Hamilton, LM and Lahne, J

Food Quality and Preference, 83

2020

"Fast and Automated Sensory Analysis: Using Natural Language Processing for Descriptive Lexicon Development"

Hamilton, LM and Lahne, J

Oral session presented at Pangborn Sensory Science Symposium 2019, Edinburgh, Scotland

2019

"Fast and Automated Sensory Analysis: Using Natural Language Processing for Descriptive Lexicon Development"

Hamilton, LM and Lahne, J

Poster session presented at IFT 2019, New Orleans, LA

2019

"Novel Oxidation Products in Cucumber Pickles in Real Time and Accelerated Shelf-Life Environments"

Hamilton, LM, Johanningsmeier, S, Rosenberg, L, and Wilson, E

Poster session presented at IFT 2019, New Orleans, LA

2019

"Exploring Consumer Perceptions of Virginia Hard Cider Packaging Using Free Sorting Tasks"

Earnhart, GE, Phillips, JB, Phetxumphou, K, **Hamilton, LM**, and Lahne, J

Poster session presented at IFT 2019, New Orleans, LA

2019

"Exploring Consumer Perceptions and Sensory Characteristics of Virginia Hard Ciders Using a Free Sorting Task"

Phillips, JB, Earnhart, GE, **Hamilton, LM**, Phetxumphou, K, and Lahne, J

Poster session presented at IFT 2019, New Orleans, LA

2019

"Mass Production Methods for a Dried Ready-to-Use Therapeutic Food Ingredient"

Harris, GK, Feng, S, Whitfield, S, Ward, T, **Hamilton, LM**, Nelson, C, and Hass, M

Poster session presented at NC State Spring Undergraduate Research

Symposium 2016, Raleigh, NC

2016

"What Did They Think?: The Impacts of Gender, Gender Perception, and Community on Pronoun Usage"

Hamilton, LM

Oral session presented at AEGS Symposium: Beyond These Walls, Raleigh, NC

2016

TEACHING EXPERIENCE

Virginia Polytechnic Institute and State University

Graduate Teaching Scholar

Fall 2019 – Present

Taking one teaching and pedagogy course per semester, observing classes taught by experienced faculty, and planning to act as instructor of record for “Principles of Sensory Evaluation” in Spring 2022.

Teaching Assistant – To Professor Lahne in “Principles of Sensory Evaluation”

Spring 2020

Assisted with design and grading of labs, exams, team projects, and other assignments. Planned lab work and coordinated a team of graduate students for setup.

Teaching Assistant – To Professor Stewart in “Functional Foods for Health”

Fall 2019

Assisted with planning of syllabus and course structure, assisted with development of homework assignments and assessments, developed and presented three guest lectures, and acted as primary administrator of grades for all assignments.

Teaching Assistant – To Professor Hurley in “Food Analysis”

Spring 2019

Collaborated on lab setup and cleanup, created and gave short presentations on lab skills and concepts, assisted students with operation of equipment and troubleshooting during labs, and graded lab reports and quizzes.

Tutor – Undergraduate “Food Chemistry”

Fall 2018

Tutored one undergraduate student twice per week in content and study skills for a food chemistry course.

North Carolina State University

Tutor – Undergraduate Math and Chemistry

January 2015 – April 2016

Acted as a tutor for a variety of students in undergraduate math courses through calculus and undergraduate chemistry courses covering general and organic chemistry, identifying areas of difficulty, assisting with study skills, and helping to guide students towards understanding of concepts. Primarily tutored organic chemistry, as there were few available tutors in that subject area.

SKILLS

Programming in R, Python, VBA, C#, HTML, CSS, PHP, and JavaScript
 Organizing, tracking, and visualizing large datasets
 Conducting basic and multivariate statistical analysis
 Managing laboratory personnel and club volunteers
 Conducting safety training, general job training, and technical training
 Writing technical papers, reports, manuscripts, standard operating procedures, and other documentation

LEADERSHIP AND PROFESSIONAL MEMBERSHIP

Institute of Food Technologists Student Association – Excellence in Leadership Chair	2019 – Present
Phi Tau Sigma Honor Society	2019 – Present
Virginia Tech Food Science Club Member	2018 – Present
Institute of Food Technologists Student Member	2015 – Present
Virginia Tech Food Science Club Competitions Liaison	2018 – 2019
North Carolina State Food Science Club Fundraising Coordinator	2016 – 2017
North Carolina State Food Science Club Member	2014 – 2017
North Carolina State Food Science Club Executive Board	2015 – 2016

North Carolina State University Scholars Program

2013 – 2016