

Research Posters for Assessment of Quantitative Reasoning & Scientific Literacy

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Overview

- Lynn University's core curriculum, the Dialogues, includes five key thematic areas including scientific literacy and quantitative reasoning
- Students are required to take either standalone or embedded courses each year
- These courses traditionally require both oral and written communication assignments
- We recently added the option to replace the traditional assignments with a research poster, to garner the skills specific to research communication

Requirements & Rubric

Requirements

- 1) Write or present a brief research proposal
- 2) Make a professional-style research poster
- 3) Present in an elevator-pitch style and field a question and answer session

Example Rubric Requirements

- Proposal includes relevant background, hypothesis, proposed methods, and/or anticipated results
- Introduction contains sufficient, relevant background referencing peer-reviewed sources
- Introduction narrows appropriately to clearly stated hypothesis; hypothesis is justified based on provided background
- Experimental method is clearly stated without unnecessary detail; described for audience using a diagram, figure, or photograph as appropriate
- Figures of results (graphs, tables, photographs, etc.) are included and are properly labeled, statistics are properly formatted
- In the discussion section, conclusions are stated clearly and are justified based on presented results; Future research questions and/or limitations are identified
- Poster is written with clear, concise text, and uses bullets where appropriate. Writing is free of errors in grammar, spelling, and usage, and uses discipline-specific vocabulary. Sources are correctly cited in discipline-specific style
- Poster has appealing and organized layout; legible font; effective use of white space; all required components (title, author(s), introduction, methods, results, discussion, references) are present
- Presentation is professionally delivered with clear explanation of all components using discipline-specific vocabulary; elevator speech fits within 2-3 minute time frame and presenter does not read from poster but refers to diagrams and figures as necessary
- Presenter(s) can answer questions about research; presenter(s) handles critique well

Forensics Example

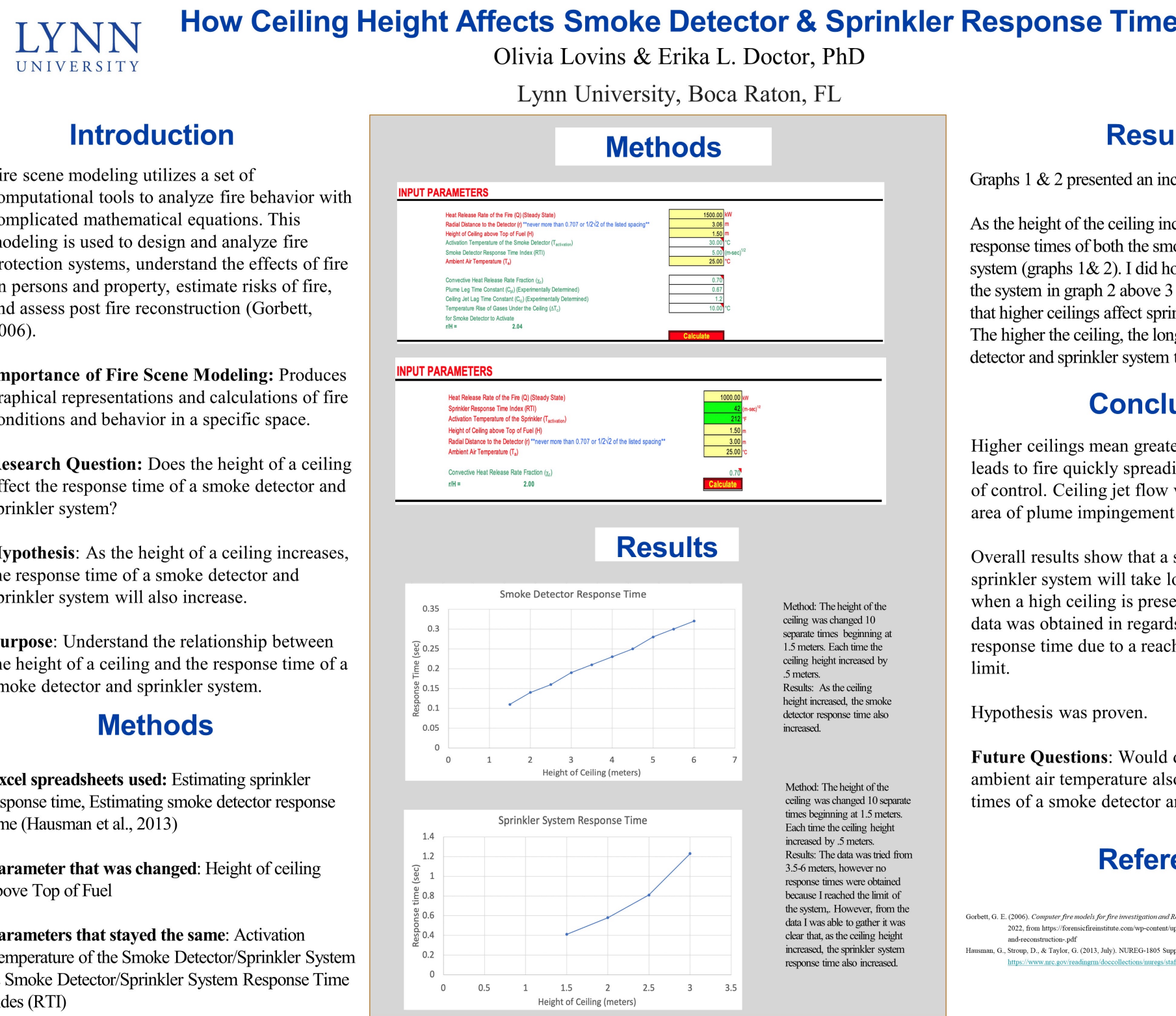
Course

- FOR 395: Arson and Explosive Scene Investigations
- 3rd year course focusing on the interpretation and reconstruction of arson and explosive scenes
- Course meets university's quantitative reasoning requirements

Assignment

- 1) Proposal of project using the Fire Dynamic Tools spreadsheet models from the nuclear regulatory commission
- 2) Students collect data changing a parameter on the chosen spreadsheet to observe how it changes the outcome value including finding limits to their chosen model
- 3) Students present poster to class

Example



Environmental Science Example

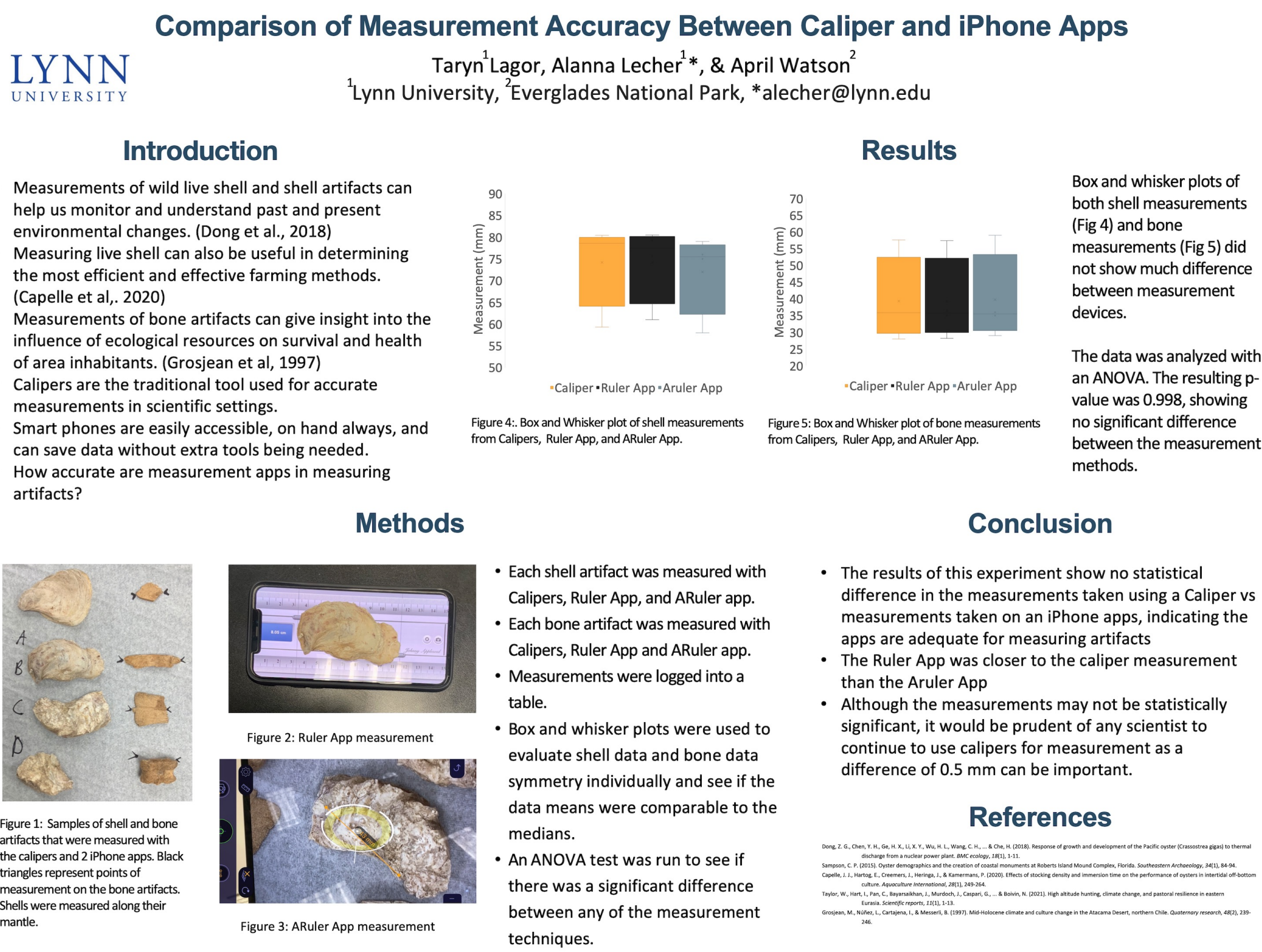
Course

- ENV 340: Environmental Statistics
- 3rd year course focusing on inferential statistics using authentic environmental data from government databases
- Course meets university's quantitative reasoning and scientific literacy requirements

Assignment

- 1) Annotated Bibliography of 5 peer-reviewed articles relevant to topic
- 2) Gallery walk of research proposals
- 3) Students collect data on their own or from a database and perform inferential statistics
- 4) Students present poster to class

Example



*This student poster was later presented at the Florida Anthropological Society Annual Conference