

MEGAN ELIZABETH CHESAL

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EDUCATION

Louisiana State University, Baton Rouge

August 2018 - Present

Master's of Medical Physics

Department of Physics and Astronomy, Medical and Health Physics

Thesis: *"A Physiological Scalable Analog for Simulating the Non-Homogeneous Space Radiation Environment in a Laboratory Setting"*

Louisiana State University, Baton Rouge

August 2014 - May 2018

Bachelor's of Science, Physics

Minor in History

AWARDS AND HONORS

LASPACE Graduate Research Fellow (2020-2021)

TECHNICAL STRENGTHS

Computer Languages

Python, Matlab, Statistical Analysis Software (SAS)

Software & Tools

MS Office Products, PHITS, ITK-Snap, ImageJ, ROOT

RESEARCH EXPERIENCE

Louisiana State University, Baton Rouge

January 2020 - Present

Research Scientist and Graduate Lab Manager, Master's Thesis Research

- Joined the spaRTAN research group at Louisiana State University under Dr. Jeffery Chancellor. Currently engaged in research on using modulator blocks to imitate the space environment in terrestrial settings to investigate biological consequences of space radiation.

Louisiana State University, Baton Rouge

August 2018 - December 2018

Research

- Worked with Dr. Joyoni Dey on pre-processed lung image data-sets, including resizing and segmentation of the images, for future use in an object detection convolutional neural network.

Louisiana State University, Baton Rouge

September 2017 - May 2018

Research, Undergraduate Thesis Work

- Involved in research with Dr. Joyoni Dey that used 3D evolving meshes of CT, SPECT, and segmented images of mice tumors. Also completed research in feature analysis and classification of medical image with computer learning techniques.

TEACHING EXPERIENCE

Louisiana State University, Baton Rouge

August 2018 - August 2019

Teaching Assistant

- Worked as a teaching assistant in the department of Physics and Astronomy, working in freshmen physics labs (PHYS 1208-9) and physics classes (PHYS 1201-2) as an instructor and a tutor.

OUTSIDE OF WORK EXPERIENCE

Attended and volunteered at the Annual 2020 meeting of the Southwest Chapter of the AAPM (SWAAPM)

Attended a Proton Radiotherapy Workshop at Willis Knighton Cancer Center in Shreveport, LA in November of 2019.

PROFESSIONAL EXPERIENCE

Louisiana State University, Baton Rouge

January 2020 - Present

Graduate Lab Manager

- Working as the Lab Manager for the spaRTAN physics laboratory at Louisiana State University
- Helped manage selection and purchasing of lab equipment for research
- In charge of communication between lab members for events and meetings

PRESENTATIONS

Physiologically Scalable Analog for Simulating the Non-Homogeneous Space Radiation Environment in a Laboratory Setting - Astrophysics Lunch Seminar, Baton Rouge, LA, October 13, 2020

PAPERS AND PUBLICATIONS

Jeffery Chancellor, Craig Nowadly, Jacqueline Williams, Serena Aunon-Chancellor, Megan Chesal, Jayme Looper and Wayne Newhauser (2021) *Everything you wanted to know about space radiation but were afraid to ask*, Journal of Environmental Science and Health, Part C, 39:2, 113-128, DOI: 10.1080/26896583.2021.1897273

Chesal, Megan. (2018). *Radiomic Feature Analysis and Classification of Tumors for Serial Pre-Clinical SPECT/CT Data* (Unpublished Undergraduate Thesis). Louisiana State University, Baton Rouge, LA

I. Hidrovo, J. Dey, M. E. Chesal, D. Shumilov, N. Bhusal and J. M. Mathis, *Experimental Method and Statistical Analysis to Fit Tumor Growth Model Using SPECT/CT Imaging: A Preclinical Study*, Quant Imaging in Med and Surg, vol. 7, no. 3, pp. 299-309, June 2017, doi: 10.21037/qims.2017.06.05

PROFESSIONAL AFFILIATIONS

American Association of Physicists in Medicine (2018)

American College of Radiology (2020)

REFERENCES

Jamie G. Smith, MSPT., ATC., CSCS.

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Terry Wu, Ph.D

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Joyoni Dey, Ph.D

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Email: deyj@lsu.edu

Kelly Lankford, Ph.D

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