

CURRICULUM VITAE

Saja Teeti
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EDUCATION

- 2017-2023. **Mississippi State University** Mississippi State 39762, USA
Ph.D. in nuclear physics (May 12, 2023) (GPA 3.9)
Project: “Global study of separable pairing interaction in covariant density functional theory”
Project: “Rotation induced extension of nuclear landscape and rotating proton halos in proton rich nuclei”
Advisor: Prof. Anatoli Afanasjev
- 2017-2022. **Mississippi State University** Mississippi State 39762, USA
Master of Science, physics major (Fall 2022)
Non-thesis master
- 2014-2017. **Birzeit University** Ramallah, Palestine
Master in theoretical physics (June 2017)
Thesis: “Time odd mean field theory with density dependent meson interaction”
- 2009-2013 **Palestine Polytechnic University** Hebron, Palestine
Bachelor’s in applied physics (June 2013)

APPOINTMENTS

- Visiting Assistant Professor, Department of Physics and Astronomy, Mississippi State University, August 2023 – June 2024.
- Intermittent worker, Department of Physics and Astronomy, Mississippi State University, July 01 - August 15, 2023.
- Lecturer, Department of Physics and Astronomy, Mississippi State University, June 2023.
- Research Assistant, Department of Physics and Astronomy, Mississippi State University, 2019-2023.
- Teaching Assistant, Department of Physics and Astronomy, Mississippi State University, 2017-2023.
- Teaching Assistant, Department of Physics, Birzeit University, 2014-2017.

TEACHING EXPERIENCE

- June 2024 **Lecturer**
Mississippi State University, Mississippi State 39762
Teaching general physics course (PH1113).
- 08/16/2023-05/13/2024 **Visiting Assistant Professor**
Mississippi State University, Mississippi State 39762
Teaching calculus-based and algebra-based introductory physics courses (PH1113, PH1123).
- June 2023 **Lecturer**
Mississippi State University, Mississippi State 39762
Teaching general physics course (PH2213).
- (07/01 – 08/15)2023 **Intermittent worker**
Mississippi State University, Mississippi State 39762.

Duties: Development and Creating new lab manuals for general physics lab II.

Spring 2023	Senior Teaching Assistant Mississippi State University, Mississippi State 39762 Substitute teacher for one lecturer on paternity leave. Teaching calculus-based and algebra-based introductory physics courses (PH2213, PH1133, PH1013).
July- December 2022	Lab improvement project Mississippi State University, Mississippi State 39762 Updating the lab manuals for General physics I.
(31/8-15/12/2022)	Senior Teaching Assistant Mississippi State University, Mississippi State 39762 Schedule, organize, setup, and lead the pre-lab meeting (General physics I).
2017– 2023	Teaching Assistant Mississippi State University, Mississippi State 39762 Teaching physics lab (General physics I, General physics II). Preparing solutions and grading homework problems for over 80 undergraduate students for calculus-based physics III course. Grading the homework for Electromagnetic physics class. Present occasional lectures for general physics I and II when some professors are out of town or on leave.
2014 – 2017	Teaching Assistant Birzeit University, Ramallah, Palestine Teaching physics labs (PHYS111, PHYS112).

CERTIFICATES, COURSES, AND TRAINING

- **Communities of Practice:** Practical Teaching, Mississippi State University, Spring 2024.
Description: An asynchronous online course at the Center of Teaching and Learning (CTL) at Mississippi State University. This community of practice course explores essential teaching issues and challenges with practical and timely suggestions for implementation throughout the semester. An official badge from the CTL will be earned upon the completion of the course.
- **Great Expectations: Crafting Learning Outcomes,** Mississippi State University, Spring 2024.
Description: An asynchronous online course at the Center for Distance Education at Mississippi State University. This course aims to teach how to write learning outcomes and objectives for online courses
- **OptimaEd Engage Training,** Mississippi State University, College of Education, July 2023 - August 2023.
Description: 5-week professional training at the College of Education at Mississippi State University. The training aims to provide essential skills related to using the ENGAGE metaverse platform designed for professionals and educators to build their virtual worlds to offer metaverse lessons to the students.

- **New Faculty Teaching Academy**, Mississippi State University, July 2023 - August 2023.
Description: 3-week asynchronous online training at the Center teaching and learning (CTL) at Mississippi State University. The course discusses effective teaching strategies, identifying and addressing common challenges, and course design principles. An official **badge** from the CTL has been earned upon the completion of the course.
- **Preparing Future Faculty workshop**, Mississippi State University, MS 39762, 2022/2023.
Description: year-long certificate program that introduces graduate students to faculty roles and responsibilities in order to help prepare them for future faculty positions. Much of the focus is on university teaching, but research, balancing faculty responsibilities, and even some elements of the job search are part of the program.
- **Online Teaching 101: Best Practices in Online Instruction**, Mississippi State University, April 2023.
Description: An online **course** over one month at the Center of teaching and learning (CTL) at Mississippi State University. The course addressed the critical issues in online delivery that are key elements of quality instruction. An official **badge** from the CTL has been earned upon the completion of the course.
- **Teaching Portfolio workshop**, Mississippi State University, 12/12/2022-01/24/2023.
Description: An online **workshop** at the Center for Distance Education at Mississippi State University. The goal of the workshop is to assist participants in developing concise and clear evidence of teaching effectiveness. An official **badge** from the CTL has been earned upon the completion of the course.

RESEARCH EXPERIENCE

2018 – May2023	<p>Research Assistant Mississippi State University, Mississippi State 39762.</p> <p>Project: “Global study of separable pairing interaction in covariant density functional theory” Project: “Rotation induced extension of nuclear landscape and rotating proton halos in proton rich nuclei”</p>
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AWARDS

- Research Assistantship, Mississippi State University, 2017 – present.
- Second place award in the Fall Graduate Student Research Symposium, Mississippi State University, October 22, 2022.
- Third place award in the 18th annual Graduate Student Research Symposium, Mississippi State University, February 27, 2021.
- Teaching Assistantship, Mississippi State University, 2017 – present.

SKILLS

- **Operational systems:** Linux, Windows, Mac OS.
- **Programming languages:** Fortran, MATLAB
- **Software (typesetting, plotting, and presentation):** Microsoft office, LATEX, GNUPLOT, XMGRACE, MATLAB.
- High Performance Computing (HPC) and Parallel Computing (Open MPI).
- Effective communication, adaptability, and teamwork.
- Problem-solving, critical thinking, and mentorship.
- Virtual reality (VR)

LANGUAGE

- Arabic (Mother tongue).
- English (Fluent).

AFFILIATIONS

- Member, American Physical Society (APS), 2018 – present.
- Member, National Center for Faculty Development & Diversity (NCFDD), 2023-present.

PUBLICATIONS

1. **S. Teeti**, and A. V. Afanasjev, Global performance and optimization of separable pairing in covariant density functional theory. *Physical Review C*, Vol. 103, article 034310, 19 pages (2021).
2. **S. Teeti**, A. Afanasjev, and A. Taninah, Rotation induced extension of nuclear landscape and giant proton halos in rotating proton rich nuclei. *Phys. Scr*, 99, article 06531, 2024 .
3. **S. Teeti**, A. Afanasjev, and A. Taninah, Rotation of very proton-rich nuclei: new physical features, in preparation.
4. A. Taninah, B. Osei, A. V. Afanasjev, U. C. Perera, and **S. Teeti**, Towards accurate nuclear mass tables in covariant density functional theory. *Phys. Rev. C* **109**, 024321 – Published 23 February 2024.

PRESENTATIONS

1. “The Global study of separable pairing interaction in covariant density functional theory”, Fall 2022 Meeting of the APS Division of Nuclear Physics, New Orleans, October 30, 2022.
2. “Rotating Proton Rich Nuclei: The Birth of Proton Bound Rotational Bands and Rotation induced extension of nuclear landscape” Fall 2022 Graduate Student Research Symposium, Mississippi State University, October 23, 2021
3. “The impact of isospin dependence of separable pairing on fission barriers in very neutron rich nuclei”, **Poster**, University of Notre Dame, June 8, 2022.
4. “Extension of the nuclear landscape beyond spin-zero limits: rotation in extremely proton-rich nuclei”, **Invited colloquium**, Mississippi State University, March 25, 2022.
5. “Extension of the nuclear landscape beyond spin-zero limits: rotation in extremely proton-rich nuclei”, 88th Annual Meeting of the APS Southeastern Section, Florida State University, November 19, 2021.
6. “Extended giant proton halos in rotating extremely proton-rich nuclei”, Fall 2021 Graduate Student Research Symposium, Mississippi State University, October 23, 2021
7. “Rotation induced extension of nuclear landscape and rotating proton halos in proton rich nuclei”, 2021 Fall Meeting of the APS Division of Nuclear Physics, virtual meeting, October 13, 2021.
8. “Extrapolation of neutron rich nuclei properties using separable pairing interaction in covariant density functional theory”, 2021 Spring Graduate Research Symposium, Mississippi State University, February 27, 2021.
9. “Fitting protocols of separable pairing interaction in covariant density functional theory”, 87th annual meeting of the Southeastern Section of the APS, virtual conference, November 07, 2020.
10. “The Global study of separable pairing interaction in covariant density functional theory”, 2020 Fall Meeting of the APS Division of Nuclear Physics, virtual meeting, November 01, 2020.
11. “Time odd mean field theory with density dependent meson interaction”, Master graduation project, Birzeit University, Palestine, May 29, 2017.

CONFERENCES AND WORKSHOPS

Teaching Portfolio workshop

- Winter 2022 Mississippi State University, MS 39762
Description: The goal of the workshop is to assist participants in developing concise and clear evidence of teaching effectiveness.
- 10/ (27-30) /2022 2022 Fall Meeting of the APS Division of Nuclear Physics
New Orleans, Louisiana state
Description: Four days including several lectures in theoretical and experimental nuclear physics and poster presentation session.
- 10/ 22 /2022 **2022 Fall annual Graduate Research Symposium**
Mississippi State University, Mississippi State, MS 39762
Description: Graduate student symposium organized by office of the graduate school and the graduate student association (in-person).
- 10/ 17 /2022 **Science Communications training**
Mississippi State University, Mississippi State, MS 39762
Description: one day training in which scientists learn and practice effective strategies for communicating with public audiences about the value/importance of their work and science more generally.
- 06/ (6-10) /2022 Exotic Beam Summer school
University of Notre Dame, Notre Dame, IN 46556
Description: One week including series of lectures in theoretical and experimental nuclear physics, different hands-on-activities.
- 11/ (18-20) /2021 88th annual meeting of the Southeastern Section of the APS
Florida State University, Tallahassee, FL 32306
Description: two days including several presentations in theoretical and experimental physics
- 10/ 23 /2021 2021 Fall annual Graduate Research Symposium
Mississippi State University, Mississippi State, MS 39762
Description: Graduate student symposium organized by office of the graduate school and the graduate student association (virtual symposium).
- 10/ (11-14) /2021 2021 Fall Meeting of the APS Division of Nuclear Physics
Virtual due to COVID.19
Description: Four days including several lectures in theoretical and experimental nuclear physics and poster presentation session.
- 02/ 27 /2021 2021 Spring Graduate Research Symposium
Mississippi State University, Mississippi State, MS 39762
Description: Graduate student symposium organized by office of the graduate school and the graduate student association (virtual symposium).
- 11/ (5 - 6) /2020 87th annual meeting of the Southeastern Section of the APS
Virtual due to COVID.19
Description: two days including several lectures in theoretical and experimental physics.
- (10/29-11/01) /2020 2020 Fall Meeting of the APS Division of Nuclear Physics
Virtual due to COVID.19

Description: Four days including several lectures in theoretical and experimental nuclear physics and poster presentation session.

02/ 27 /2021 2020 Spring Graduate Research Symposium
Mississippi State University, Mississippi State, MS 39762
Description: Graduate student symposium organized by office of the graduate school and the graduate student association (virtual symposium).

11/ (05 - 06) /2020 86th annual meeting of the Southeastern Section of the APS
Virtual due to COVID.19
Description: two days including several lectures in theoretical and experimental physics.

(10/29-11/01) /2020 2020 Fall Meeting of the APS Division of Nuclear Physics
Virtual due to COVID.19
Description: Four days including several lectures in theoretical and experimental nuclear physics and poster presentation session.