M. Sanad AlTaher

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Experience

Graduate Research Assistant | University of Nevada, Reno – Reno, Nevada — Sept. 2026 – present

Continuing research on thermal management of RF devices. Recent developments include:

- *Immersion cooling test fixture that allows complete immersion of LUT.*
- *Swappable non-intrusive temperature sensing support board to integrate with fixture.*
- *Generalized trace similarity toolkit for all users of AEDT, which compares finds the best matching trace.*

Graduate Research Assistant | Oregon State University – Corvallis, Oregon — June 2024 – Sept. 2026

Focusing on RF engineering research and thermal management. The following have been designed and simulated:

- *Coplanar waveguides (CPWs) with non-intrusive temperature measurement.*
- *Planar antennas and waveguide probes to be used for high-power testing of the CPWs.*
- *Active liquid cooling test-fixtures for high-power planar transmission lines, which were also fabricated.*

Course Instructor | Oregon State University – Corvallis, Oregon — March 2025 – June 2025

Served as primary instructor for Transmission Lines (ECE 391), which had 105 students and two TAs. This role comprised: giving (in-person) lectures and preparing material, writing exams, holding office hours, grading, and overseeing the course progression and workload distribution on the instruction team.

Graduate Teaching Assistant | Oregon State University – Corvallis, Oregon — Sept. 2023 – June 2024

Assisted in teaching undergraduate-level courses by giving lectures, conducting recitation sessions, holding office hours, proctoring exams, and grading exams and assignments.

Research Internship | Manipal Institute of Technology – Manipal, India — July 2022 – Sept. 2022

Researched Smart Grid technologies, mainly: PMU–PDC communication, fault detection, and data prioritization, then conducted simulations in OMNeT++.

Student Assistant | Microcontrollers Lab – JUST — March 2021 – July 2021

Guided students in implementing experiments on simulation software, explained experiments during lab sessions, helped students with simulation software and circuit design, and assisted in developing a lab manual to be used in future semesters.

Education

PhD in Electrical Engineering | University of Nevada, Reno — Sept. 2026 – present

Recently transferred to continue working under the supervision of Prof. Tom Weller.

PhD in Electrical and Computer Engineering | Oregon State University — Sept. 2023 – Sept. 2026

Completed three years and the qualifier exam at the Corvallis campus, worked in the Integrated Electronics research group under the supervision of Prof. Tom Weller.

BSc in Electrical Engineering | Jordan University of Science and Technology — Sept. 2018 – July 2023

Completed the five-year ABET accredited degree, ranking 4^{th} in a cohort of 78 students. **CGPA: 3.92/4.0**

Academic Exchange | Istanbul Aydın University — Sept. 2021 – Jan. 2022

Studied in Istanbul for one semester under the Erasmus+ ICM academic exchange program. **GPA: 4.0/4.0**

PUBLICATIONS *(PDF available upon request)*

M. S. AlTaher and T. Weller, "Immersion Cooling Fixture for High Power Testing of Planar Microwave Transmission Lines," 2026 IEEE 35th Conference on Electrical Performance of Electronic Packaging and Systems (EPEPS), to be presented in Oct. 2026 and published after.

O. F. Firat, **M. S. AlTaher**, J. Gess and T. Weller, "Direct Contact Liquid Cooling for Thermal Management of Printed Coplanar Waveguide Lines," in IEEE Microwave and Wireless Technology Letters, doi: 10.1109/LMWT.2025.3598694.

AlTaher, M.S., Dib, N. Design and Simulation of Square Aperture Multi-hole Legendre Waveguide Directional Couplers. Iran J Sci Technol Trans Electr Eng 48, 595–610 (2024). https://doi.org/10.1007/s40998-023-00688-5

ACTIVITIES *(available upon request)*

Trace Similarity Toolkit | AEDT Extension

Developed and applied novel design approaches for waveguide directional couplers by simulating numerous couplers while incorporating recent trends like gap waveguides, under Prof. Nihad Dib's supervision.

Superformula Shape Creator | AEDT Extension

Developed and applied novel design approaches for waveguide directional couplers by simulating numerous couplers while incorporating recent trends like gap waveguides, under Prof. Nihad Dib's supervision.

Bachelor's Thesis | Jordan University of Science and Technology

Developed and applied novel design approaches for waveguide directional couplers by simulating numerous couplers while incorporating recent trends like gap waveguides, under Prof. Nihad Dib's supervision.

SKILLS

Lab:

- RF Measurement
- 3D printing
- CNC Machining

Simulation & Modeling:

- Ansys HFSS & Icepak
- Fusion
- Keysight ADS

Programming & Typsetting:

- MATLAB
- Python
- LaTeX