

Ahmed Sameer Mohamed Ramadan

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EDUCATION

- **M.Sc. in Mechanical Engineering, Assiut University, Egypt.** Jan 2019 – May 2023
 - **Final grade:**4/4
 - **Thesis title:**Mathematical Modeling of Radiative Heat Transfer in Human Head Exposed to Mobile Phone Radiation
 - **Thesis summary:**The thesis aimed at constructing a realistic mathematical model that describes the complex biothermal processes and events resulting from the interaction of the microwave radiation of the mobile phone (especially fifth-generation frequencies) with the human head. We Carried out a coupled and thorough electromagnetic and thermal analyses where Maxwell equations and Penne bioheat equation were employed. Different parameters such as antenna position relative to the head, multiple microwave frequencies, and aging effect (the variation of the dielectric properties with age) were considered.
- **B.Sc. Mechanical Engineering, Assiut University, Egypt.** Transcript Sep 2013 – Jun 2018
 - **Cumulative average grade:** "Distinction with Honors" with percent 90.13% (Ranked the first out of 135 students). Detailed Courses Transcript Here
 - **Graduation Project:** "Analysis of The Performance of Hybrid Mechanical Compression Refrigeration-Solar Thermal Assisted System in Hot Arid Areas" : Grade "Distinction"

WORK EXPERIENCE

- **Research and Teaching Assistant, Assiut University, Egypt** Apr 2019 – Present
 - Researcher at the heat transfer laboratory
 - Responsible for assisting faculty members and professors in teaching duties to the undergraduate students. solves examples during tutorials, Proctors exams, grades midterm tests and homework, and records grades in grade books. Assigns material in class as needed.
 - Assigned courses: Heat and Mass Transfer, Heat Exchangers, Engineering Analysis, Fluid Mechanics, Thermodynamics, Engineering Economics, Environmental Engineering, Technical Reports Writing, Engineering Drawing
- **Executive Director of Innovative students projects Unit, Assiut University** Sep 2019 – Present
 - Oversees the filtering process of the proposed projects, the financial funding of the accepted projects, and provides technical support when needed.
 - Supervises the administrative affairs of the unit.
 - Represents the Unit in conferences and events.
 - Led engineering teams in projects such as design of mechanical ventilator and green hydrogen generators.
- **Chairman of American Society of Mechanical Engineers (ASME) - Egypt Sec.** Jul 2021 –Present
 - Leading the section in organizing academic and industrial sessions and webinars, organize events, competitions and conferences related to mechanical engineering specifically and engineering in general.

PUBLICATIONS

- **Published Articles**
 - Ahmed Ramadan, H. Shafey, Nabil Abdelshafe, Ali K. Abdel-Rahman. Realistic Computational Modeling of Biothermal Effects Inside Human Head Exposed to Mobile Phone Radiation. JES. Journal of Engineering Sciences, 51, 2, 2023, 16-36. <https://www.doi.org/10.21608/jesaun.2023.177825.1186>
- **Under Review Articles**
 - Ahmed S. Ramadan, H. M. Shafey, Nabil Y. Abdelshafe, Ali K. Abdel-Rahman. Realistic Modeling of Exposure to Sub-6 GHz Fifth-Generation Mobile Phone Radiation in Anatomical Child Head Model. Authorea. November 09, 2023. <https://www.doi.org/10.22541/au.169956822.22451476/v1>
 - Ahmed S. Ramadan. Influence of Ambient Conditions on Induce Temperature Distributions Inside Human Head Model Irradiated by Microwave Radiation.

PROJECTS

- **A Mechanical Ventilator for COVID 19 Patients**
 - Led the team responsible for the design of the pneumatic circuit and helped design its control circuit as well as the mechanical design of different parts.
 - The device was simple, maintainable, and easy-to-manufacture with a limited budget of 4500 USD. The design and prototype were selected as One of the best 3 ventilators in Egypt.
- **Design of Green Hydrogen Generators**
 - Sizing and designing the green HHO and H2 generator for different application including producing fuel for home ovens and fuel cells. Responsible for thermodynamic and electrical analysis.
- **Design and Implementation of Commercial Foot-scan**

- Responsible for the mechanical design of a pressure distribution measuring device, The device is used in Biomedical engineering field in order to detect Diabetic foot.
- **Minesweeper Robot 2016, 2017**
 - Designed and built a minesweeper robot that detected mines and provide a map of the detected mines.
- **RC plane and UAV, AUN, Egypt**
 - Academic Advisor for Assiut University team which designed and manufactured 2 Aircrafts, one of Quadcopter which operates autonomously and the other is Fix-wing plane which operates via radio controller. The team participated in The 7th International Competition of the Egyptian Military Technical College for the UAV, and the SAE Aero Design competition for RC planes in USA.

CERTIFICATES AND AWARDS

- **Introduction to Mobile Robotics**
- **Certificate of Recognition and Appreciation from Assiut University**
- **Dean's List as Ranked 1st of 130 students**
- **First-class honours in Mechanical Engineering - Syndicate of Egyptian Engineers**
- **B.Sc. Graduation project Fund 60K EGP-Academy of Scientific Research and Technology (ASRT)**

PROFESSIONAL MEMBERSHIPS

- **American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)** Jan 2018 –Jan 2019
- **American Society of Mechanical Engineers (ASME)** Jul 2019 –Present
- **World society of sustainable energy technologies (WSSET)** Jul 2019 –Present

VOLUNTEER EXPERIENCE

- **Assiut Robotics Lab, Assiut University, Egypt** Jul 2015 – Jul 2017
 - Mentor a group of 15 members to teach them the basic technical skills needed in robotics.
 - Led HR committee
- **Life Makers Foundation, Assiut, Egypt** Jun 2016
 - Participated in a campaign demonstrating to the individuals the importance of ethics and the social values in order to build a better society.
- **The Egyptian Researchers, Social Media** Jul 2015 – Jul 2016
 - Worked as article translator and editor in the Engineering and Technology section.
- **The Aliens, Social Media** Jul 2016 – Jul 2017
 - Worked as article translator and editor in the Engineering and Technology department.
- **Assiut ASHRAE Student Chapter, Egypt** Oct 2017 – Jul 2018
 - Co-founder.
 - Organized workshops, webinars, and various events to introduce the students of my department to ASHRAE: its Standards and Applications.

SKILLS

- **Software Skills:** COMSOL, CST MWS, ANSYS, SOLIDWORKS, AutoCAD.
- **Programming Languages:** C++, MATLAB, Fortran, LATEX.
- **Soft skills:** Good time management, very good communication skills, leadership, and problem solving.

LANGUAGES

- **English:**
 - **CEFR:** C2
 - **IELTS score** Overall: 8.5 Listening: 9 Reading: 9 Writing: 7 Speaking: 8 TRF:2310008085RAMA1IHA
- **Arabic: Native speaker**

REFERENCES

- Prof. Mohamed Mahmoud Abdelghany** Google Scholar
- Professor Emeritus, Mechanical Engineering Department, Assiut University.
 - Email: mag@aun.edu.eg
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- Dr. Nabil Yassin Abdelshafy Mohammed** Google Scholar
- M.Sc. Supervisor, Associate Professor, Mechanical Engineering Department, Assiut University.
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