**Expert Opinion Letter (Confidential)**

Analysis of Positional Requirements for National Interest Waiver

Evaluator: **Mahmoud A. Abdallah, Ph.D., PE**

Evaluator Info: Professor, Chairman, Manufacturing Engineering Department

**AREAS OF EXPERTISE**

* Professor of Manufacturing Engineering since 1986
* Managed the development of a successful ABET self-study four times
* Expert in medical image processing
* Developed and received grants for research in Robotics
* Licensed Professional Engineer
* Received many awards and fellowships

**EMPLOYMENT**

**Academic Experience:**

* **MFE Program Coordinator,** 2019-Current
* **Chairman**, Manufacturing Engineering Department, 2000-2008
* **Professor**, Manufacturing Engineering, Central State University, Wilberforce, Ohio. 1986
* **Instructor**, Computer and Electronics Department, Ain Shams University, Egypt, 1977-80.

**Non-Academic experience:**

* **Radiology Computer Specialist**, Henry Ford Hospital Detroit, Michigan, 1985-1986.
* I**mage Analyst,** Medical College of Ohio, Toledo, Ohio, 1981-1984.

**Certifications:**

* Licensed Professional Engineer P.E. (State of Ohio Registration No. E-56783).

**EDUCATION**

**Doctor of Philosophy**, Electrical Engineering/Systems Theory and Engineering, The University of Toledo, Ohio 1986.

**Master of Science**, Electrical Engineering, The University of Rochester, Rochester, NY 1981.

**Master of Science**, Computers and Electronics, Ain Shams University, Cairo, Egypt 1980

**Bachelor of Science**, Electrical Engineering, Communication/Electronics, Ain Shams University, Cairo, Egypt, 1974.

**Current membership in professional organizations:**

* Member of the IEEE Computer Society
* Member of the IEEE Control Systems Society
* Member of the American Association for Artificial Intelligence (AAAI)
* Member of the American Association of University Professors (AAUP)
* Member of Sigma Xi, Pi Mu Epsilon and Eta Kappa Nu

**Honors and awards**

* Received Excellence Award in Research, Central State University. 2001
* AFRL/SNR, WPAFB, Research at the Sensor Directorate, Radar Branch, Summer 2001.
* AFRL/SNR, WPAFB, Research at the Sensor Directorate, Radar Branch, Summer 2000.
* US. NAVY-ASEE Summer Faculty Research Program, Pax River Station, MD., 1999.
* US. NAVY-ASEE Summer Faculty Research Program, Pax River Station, MD., 1998.
* US. NAVY-ASEE Summer Faculty Research Program, Pax River Station, MD., 1997.
* Best Ph.D. research award, UT Sigma Xi, 1984.
* Research Assistantship from the University of Toledo (UT), Ohio 1981
* Scholarship from the University of Rochester, NY 1980
* Scholarship from the University of Ottawa, Canada 1980

**Service activities**

· Provided workforce training workshops for PLC programming and interfacing.

· Provided work force training on robotics programming and interfacing based on Motoman and Fanuc robots

· Supervised senior design project to retrofit CNC lath and Mill with modern digital controllers.

· Co-PI on Intel sponsored microelectronics training program. Some of the activities include,

ASEE TV has produced three videos about SERP-CSU:

* A comprehensive video detailing the overall SERP initiative ([video-1\_ASEE\_SERP\_CSU\_FULL.mp4](https://centralstate-my.sharepoint.com/:v:/r/personal/mhadizadeh_centralstate_edu/Documents/Intel%20project/pictures_videos/ASEE_SERP_videos/video-1_ASEE_SERP_CSU_FULL.mp4?csf=1&web=1&e=iCTiQQ)).
* A concise video focusing on the program highlights, including our collaboration with Intel ([video-2\_SERP\_CSU\_short\_Hadizadeh\_Evers.mp4](https://centralstate-my.sharepoint.com/:v:/r/personal/mhadizadeh_centralstate_edu/Documents/Intel%20project/pictures_videos/ASEE_SERP_videos/video-2_SERP_CSU_short_Hadizadeh_Evers.mp4?csf=1&web=1&e=5oUKVD)).
* A video showcasing CSU's significant role in promoting diversity within STEM education ([video-3\_SERP\_CSU\_short\_Abdallah\_Kuti.mp4](https://centralstate-my.sharepoint.com/:v:/r/personal/mhadizadeh_centralstate_edu/Documents/Intel%20project/pictures_videos/ASEE_SERP_videos/video-3_SERP_CSU_short_Abdallah_Kuti.mp4?csf=1&web=1&e=Dh7MhJ)).

**Publications:** Most recent

* Gamal Geweid and Mahmoud A. Abdallah, "A Novel Approach for Breast Cancer Investigation and Recognition Using M-Level Set-Based Optimization Functions, IEEE Access, December 2019, V7 ISSUE 1, Pages 136343-136357.
* Gamal Geweid and Mahmoud A. Abdallah, “A New Automatic Identification Method of Heart Failure Using Improved Support Vector Machine Based on Duality Optimization Technique", IEEE Access, December 2019, V7 ISSUE 1, Pages 149595-149611.
* Gamal Geweid and Mahmoud A. Abdallah, “Improved Malignant Diagnosis Using Fuzzy C-Means Based on Histopathological of PET-CT Lung Images”, ICNT 2020 April 14-16, 2020, Paper ID: E2003, Cairo, Egypt.
* Gamal Geweid, Mahmoud A. Abdallah and Ayman Hassan, “Early Detection of Hepatocellular Carcinoma in PET/CT Images using Improved K-Means Techniques Based on Pixel Density”, AIRC '19: Proceedings of the 2019 International Conference on Artificial Intelligence, Robotics and Control December 2019, pp 68–74, <https://doi.org/10.1145/3388218.3388519>.
* GGN Geweid, MA Abdallah, V Minakova, A Pryakhin, [Optimizing dialysis water treatment based on medical planning requirements](https://scholar.google.com/scholar?oi=bibs&cluster=17659992496671649613&btnI=1&hl=en),Expert Systems with Applications, 2024

**Professional Development**

* Lincoln Electric Welding Training Simulator, 2 hrs. Spring 2020
* Fanuc CNC Controller Simulator Trainer, 2 hrs. Spring 2020
* Hexagon Metrology, Portable and Foldable Coordinate Measuring Machine (CMM) Demonstration, Jenkins Hall, Fall 2019.
* Faro Portable and Foldable Coordinate Measuring Machine (CMM) Demonstration, Jenkins Hall, Spring 2020.
* Keyence of America Coordinate Measuring Machine (CMM) Demonstration, Jenkins Hall, Spring 2020.

To briefly introduce myself, I am the current chairman of the Manufacturing Engineering Department at Central State University. This program is accredited by the Accreditation Board of Engineering and Technology (ABET) continuously since 1991. My academic credentials include a Bachelor of Science in Electrical Engineering with specialization in Communication and Electronics; a Master of Science with a specialization in Computers and Electronics both from Ain Shams University, Cairo, Egypt; a Master of Science Degree in Electrical Engineering from University of Rochester, NY; and a Doctorate of Systems Engineering from the University of Toledo, Ohio.

I am a Professor of Manufacturing Engineering at Central State University, Wilberforce, Ohio. It is Ohio's 1890 Land-Grant University, is regionally accredited by the Higher Learning Commission which is located at 230 South LaSalle Street, Suite 7-500, Chicago, IL. I am a licensed professional engineer registered in the state of Ohio. I have published several journal articles in different areas of Manufacturing Engineering, Medical Imaging, Artificial Intelligence and Deep Learning, Robotics and Control as well as have given numerous presentations on Manufacturing engineering-related topics at professional and academic conferences. I have received numerous awards and was selected to receive several summer faculty fellowships with NASA, US Air Force and US Navy. I am an active member with professional societies and as a publications reviewer.

As an evaluator, I am responsible for reviewing academic and experiential qualifications to form part of a candidate’s credential evaluation report, providing a detailed analysis of the academic background and occupational experience that a person has received outside the United States.

Sincerely,

A close up of a logo

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Mahmoud A. Abdallah, Ph.D., PE

Professor, Chairman

Manufacturing Engineering Department

Central State University