



## Curriculum Vitae (CV)

### Personal Information:

**Full Name :** Manal Amin Ramadan Elsaïd Gazar  
**Academic Rank:** Associate Professor  
**Department:** - Mechanical Engineering department  
**Specialization:** Composite material ,Heat treatments ,Metal matrix composite,Nano composite  
**Google Scholar:** [https://scholar.google.com/citations?view\\_op=list\\_works&hl=ar&user=iCXZyJcAAAAJ](https://scholar.google.com/citations?view_op=list_works&hl=ar&user=iCXZyJcAAAAJ)  
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### Education:

Degree	Discipline	Institution	Year
Ph.D.	MINING, PETROLEUM AND METALLURGICAL DEPARTMENT	CAIRO UNIVERSITY, FACULTY OF ENGINEERING ,	2010
M.Sc.	MINING, PETROLEUM AND METALLURGICAL DEPARTMENT	CAIRO UNIVERSITY, FACULTY OF ENGINEERING ,	2004
B.Sc.	department of mechanical engineering.	HIGHER TECHNOLOGICAL INSTITUTE, TENTH OF RAMADAN CITY	1999

### Academic Experience

Higher Technological Institute, 10th of Ramadan City

- Associate Professor (2019–Present)
- Assistant Professor (2010–2019)
- Research Assistant (2000–2004)

### **Research Interests**

Composite Materials

Heat Treatments & Metallurgy

Metal Matrix Composites (MMCs)

Nanocomposites & Advanced Materials

### **- Teaching Experience:**

**Higher technological institute 10 th of Ramadan city from 2000 till present**

### **Courses Taught**

- Principles of Material Science & Engineering
- Material Testing & Characterization
- Advanced Material Science
- Heat Treatments & Metallurgy
- Smart Materials & Applications
- Welding Metallurgy & Inspection
- Solidification of Metals
- Engineering Drawing & Material Selection
- Diploma/Graduation Project Supervision

### **Professional Affiliations & Review Activities**

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Peer reviewer for materials science journals (upon request)

### Training courses and workshops

	Title	Place of implementation	date
1	Knowledge Bank Course	Faculty and Leadership Development Center - Cairo University	April 2025
2	Sustainable Development in Higher Education	Faculty and Leadership Development Center - Cairo University	July 2024
3	Internal audits on laboratory quality systems	National Calibration Institute	July 2024
4	University management	Faculty and Leadership Development Center - Cairo University	July 2024
5	Digital transformation	Faculty and Leadership Development Center - Cairo University	February 2024
6	Effective teaching and learning strategies	National Authority for Quality Assurance of Education	September 2022
7	Visual Testing	Metals Research and Development Center (MRDC)	November 2022
8	Liquid Penetrant Test	Metals Research and Development Center (MRDC)	November 2022
9	Magnetic Particles Testing	Metals Research and Development Center (MRDC)	November 2022
10	ToT Proposal Writing	DAAD Kairo AKademi	June 2022
11	Funderaising Skills and Best Practices	DAAD Kairo AKademi	June 2022
12	Constructive Assessment for learning	DAAD Kairo AKademi	November 2021
13	Examination and student evaluation systems for colleges and institutes of higher education	National Authority for Quality Assurance of Education	November 2021
14	Promoting your research capabilities -the modern knowledge cycle	ELSEVIER	November 2020
15	Describing programs and courses and assessing learning outcomes.	National Authority for Quality Assurance of Education	August 2019

### Academic Publications

- 1- M. Amin. GODA ,A study of bronze & micro alloyed steel composite , ICCE 12 , Aug. 16, 2005 Tenerife Spain.
- 2- M. Amin,M. GOUDA , A.A.Hussein, E. ELBANA , ,” The effect of heat treatment on the wear behavior of Copper Aluminum alloys / stainless steel fiber Composites”, MS&T2009 pp 1836-1847
- 3- M. Amin ,” Effect of Nano Carbon tubes - Nano Aluminum oxide particles on electrical conductivity of Copper matrix and Nano Aluminum oxide Nano carbon tubes composites “,15th International Workshop on Research and Education in Mechatronics (REM), Elgouna, 9-11, September, 2014 Egypt
- 4- M. Amin,” Synthesis of Egyptian Rice straw composites”, Egyptian journal of solids,Vol. 38,2015,PP.107-118.
- 5- M. Amin , M. K. El-Fawakhry , Taha Mattar,” Enhancing the properties and performance of low alloy steel by silicon carbide nano inoculation”, Egyptian journal of applied sciences, vol.30,2015,pp160-170.
- 6- M. Amin,” Abrasive Wear of Nano-Al<sub>2</sub>O<sub>3</sub> Particles and Cnts Strengthened 2024 Aluminum Alloy Composites Manufactured by Powder Metallurgy”, Mansoura Engineering Journal,Vol. 40,Issue 4 part II,PP79-85.
- 7- M. Amin, A.M.Hosny, M.M. Sadawy, K.M. Zohdy, A. A.Atlam,” Effect of heat treatment on corrosion and electrochemical behavior of Aluminum bronze alloy in 1M H<sub>2</sub>SO<sub>4</sub> solution”, 5th International Conference (33rd Annual) on Corrosion Mitigation and Surface protection Technologies12-15 December, 2016, LUXOR, Egypt.
- 8- M. Amin,” Synthesis and characterization of sintered hybrid aluminum bronze matrixcomposites reinforced with nano aluminum oxide (n-Al<sub>2</sub>O<sub>3</sub>)particles -Nano Carbon Tubes(NCTs)”, Egyptian journal of applied sciences,Vol.32,PP.89-102.
- 9- M.E. Moussa, M.A. Waly, M.Amin,” Effect of high intensity ultrasonic treatment on microstructural modification and hardness of a nickel-aluminum bronze alloy “,Journal of Alloys and Compounds, Vol. 741,PP 804-813.

- 10-E. A. Eid, M.Amin, A. B. El Basaty," Enhancing the Creep Resistance of Sn-9.0Zn-0.5Al Lead-Free Solder Alloy by Small Additions of Sb Element", Engineering", Vol. 10,PP 21-34.
- 11-Moussa, M.E., Amin, M. & Ibrahim, K.M. Effect of Ultrasonic Vibration Treatment on Microstructure, Tensile Properties, Hardness and Wear Behaviour of Brass Alloy. Inter Metalcast 17, 305–313 (2023). <https://doi.org/10.1007/s40962-021-00748-8>
- 12-Eid, E.A., Fawzy, A., Mansour, M.M. et al. Microstructural Examination and Thermodynamic Analysis of Sn-1.5Ag-0.5Cu-x mass% Ni Lead-Free Solder Alloys. J Therm Anal Calorim 149, 4313–4331 (2024). <https://doi.org/10.1007/s10973-024-13018-6>
- 13- M Amin and H N Soliman. Microstructural, mechanical, and wear properties of Sn-based solder alloy modified with graphite nanoparticles. Physica Scripta99, Number 10 ,1402-4896 , 2024. <https://doi.org/10.1088/1402-4896/ad75c2>.
- 14-Eid, E.A., Fawzy, A., Mansour, M.M. et al. The role of Ni minor additions on the mechanical characteristics of Sn-1.5Ag-0.5 wt.% Cu (SAC155) Pb-free solder alloy. J Mater Sci: Mater Electron 35, 2092 (2024). <https://doi.org/10.1007/s10854-024-13876-8>
- 15-Soliman, H.N., El-Taher, A.M., Ragab, M. et al. Optimizing the performance of Sn–Cu alloys via microalloying with Ni and Zn: a study on microstructure, thermal, and mechanical properties. J Mater Sci: Mater Electron 36, 134 (2025). <https://doi.org/10.1007/s10854-024-14118-7>
- 16-El-Tahawy, M., Soliman, H.N., Hammad, A.E. et al. Exploring the Effect of Carbon Addition on the Mechanical and Thermal Behavior of Cu-11Al-5Ni Shape Memory Alloy. JOM 77, 4807–4817 (2025). <https://doi.org/10.1007/s11837-025-07313-2>
- 17- Moussa, M., Ibrahim, K., ramadan, M. (2025). 'The Combined effect of Nb and Fe additions on the microstructure, mechanical characteristics and corrosion resistance of Ni-Ti shape memory alloy', Egyptian Journal of Solids, 47(1), pp. 1-16.  
<https://doi:10.21608/ejs.2025.361299.1056>
- 18-Soliman, H., Amin, M. (2025). 'Impact of carbon nanotubes (CNTs) inclusion on the microstructural, mechanical, and wear characteristics of Aluminium 6009 alloy', Egyptian Journal of Solids, 47(1), pp. 17-40. <https://doi:10.21608/ejs.2025.365832.1060>

19-M. Amin, H.N. Soliman, A.M. El-Taher, K.B. Mashaly, M. Ragab, Investigating the role of multi-walled carbon nanotubes in microstructural evolution, thermal stability, and mechanical performance of Sn-Ag lead-free solder alloys for advanced electronic applications, Materials Today Communications, Volume 46, 2025, 112681, ISSN 2352-4928, <https://doi.org/10.1016/j.mtcomm.2025.112681>.