



ALI HAMMOUD

1. Name and academic rank

Ali Hammoud, Professor in fluid mechanics & Hydraulic Machin, Chairman of Mechanical Department.

2. Education – degree, discipline, institution, year

- Ph.D., Mechanical Engineering, Wales University, U.K., 1990.
- M.Sc., Mechanical Engineering, Riga University, Russia 1982.
- B.E., Mechanical Engineering, Riga University, Russia, 1979

3. Academic and Professional experience

3.1. Academic experience

- Beirut Arab University, Professor, 2016- 2024 (chairman of Mechanical Engineering Department)
- Beirut Arab University, Professor, 2006- 2024, full time
- Beirut Arab University, Associate Professor, 2002- 2006 full time (Chairman of Mechanical Engineering Department)
- Beirut Arab University, Assistant Professor, 1993- 2001 full time
- Beirut Arab University, Assistant Professor, 1992-1993- part time

3.2. Non-academic experience

- Electro-Mechanical Projects' Consultant and Trainer, 1985-2017. More than 30 years working as a consultant in the following fields: Firefighting, Plumbing, Solar energy systems, and HVAC.
- Professional in Pipeline engineering, Water distribution systems, Water hammers, Pump stations, and Thermal fluid systems.
- Expert in designing laboratory experiments.

4. Professional credentials, certificates, or licensing

- Order of Engineers and Architects – Beirut, member since 1985.
- Advisor & member of ASME, ASHRAE, Marine Pollution Society & Arwatex Arab World Water.

5. Professional development activities

- Plumbing training course 2024 Center for Continuing and Professional Education (CCPE) BAU
- Firefighting Training course fall 2024 Center for Continuing and Professional Education (CCPE) BAU

6. Contribution to the discipline

6.1. Service activities

- Preparing “Renewable Energy Engineering” as a new Program within Mechanical Engineering Department at BAU, preparing program catalogue, syllabuses, and study plan.
- Chair of the ABET committee in the Mechanical Engineering department.
- Member of the Faculty of engineering council
- Member of the postgraduate committee for the academic year 2015-2024.
- Technical Committee for Standards on Portable Fire Extinguishers, LIBNOR, 2002-2011
- Consulting in mechanical services for the buildings.
- Group leader in the HPF group (HVAC, Plumbing & firefighting).



6.2. Publications

6.2.1. Journal publications

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- Riad El-Abed , Ali Hammoud , Mohamed El-Gohary , Bilal Taher , “Recent optimization methods and techniques in residential home energy management systems” Results in Engineering Volume 29, March 2026, 108974 Q1 Scopus
- Lama Fayad, Hoda Yusef · Ali Hammoud · Ranya Amer Electrifying waste: Lebanese olive cake as novel bioenergy substrate in microbial fuel cells . Research World Journal of Microbiology and Biotechnology (2025) 41:380
- El Khatib, Atef, Ahmad Al Miaari, Hassan Assoum, Ahmad Salem, and Ali Hammoud "A Review on Flow Regimes and Aeroacoustic Coupling in Subsonic Flow Around Flat Plates." Arabian Journal for Science and Engineering, Jan. 2025: 1-25, <https://doi.org/10.1007/s13369-024-09937-z>
- Abdul Hamid Jabado; Hassan Hasan Assoum, Ali Hammoud” Aero-Acoustic coupling in rectangular deep cavities: Passive Control and Flow Dynamics” Ain Shams Engineering Journal 2024
- A. El Khatib, A. Miaari, A. Hammoud, “Sources of Resonant Vortices in Aeroacoustic Resonance from Tandem Flat Plates Systems”, BAU Journal – Science and Technology, 2022
- Lama A. Fayad L, Ranya A. Amer, Ahmad Abd El Nabi, Ali Hammoud, and Hoda H. Yusef, “Isolation and Characterization Of Cellulose Degrading Microorganisms Generating Electricity Using Microbial Fuel Cell”, BAU journal - Science and Technology-2022
- A.H.Hammoud ,Jihad kassamani & F.Moukalled “Buoyancy-Induced Flow and Heat Transfer in a Porous Annulus Between Concentric Horizontal Circular and Square”. Numerical heat transfers An international journal of computation and methodology. Submitted and revised June 26,2015
- A.H.Hammoud, & Samir Traboulsi “Effect of jet inclination Angle and other parameters on air curtain performance” FEDSM2009-78010.ASME journal of fluids engineering of ASME, pp. 302-306, 2009
- A.H.Hammoud, & Samir Traboulsi” Air curtain Integrity when misusing the refrigerated display cabinet” WSEAS transactions on fluid mechanics pp 389-403,2008
- A.H.Hammoud, “Enhanced oil spill recovery rate using the weir skimmer”. European Journal of scientific research ISSN 1450-216 X , Volume 15, N1, pp 122-139, 2006
- A.H. Hammoud and M.Hayek, “Numerical versus experimental and analytical predictions of liquid jet pump overall performance”. Journal of transactions on fluid mechanics WSEAS Issue 5, Volume 1, (May 2006), pp 399-406
- A.H.Hammoud and M.F.Khalil “Performance characteristics of centrifugal pump handling stable oil-in water emulsions”. European Journal of scientific research ISSN 1450-216 X , Volume 15, N2, October 2006 , pp 159-168
- A.H.Hammoud, “Effect of design and operational parameters on jet pump performance”. WSEAS Transaction on the heat and mass transfer Issue 3 .vol 1. ,ISSN: 1740-5044 ,pp. 356-363 March 2006
- M.F.Khalil and Ali Hammoud “Performance of Rotating Drum Skimmer in Oil Spill Recovery”. Jr. of Process Mechanical Engineering, Proceedings of the



Institution of Mechanical Engineers, Vol.217, pp 49-57, London, England, 2003. Sponsored by "The National Council for Scientific Research", Beirut-Lebanon.

- A.H.Hammoud, "Transient behaviors of a centrifugal pump operating under air-entraining vortices", Alexandria Engineering Journal, Vol.39, 2000, No2, pp 241-254. Sponsored by "The National Council for Scientific Research", Beirut-Lebanon. LNCSR
- A.H.Hammoud, "Effect of pump intake geometry on vortex suppression", Alexandria Engineering Journal, Vol.39, 2000, No4, pp 525-541. Sponsored by "The National Council for Scientific Research", Beirut-Lebanon. LNCSR
- A.H.Hammoud, S.Stoneman and Ralf Parker, "Vortex shedding from flat plates under the influence of an acoustic resonance", J. Of Wind Engineering, 50(1993), pp 129-138.

6.2.2.Conference Proceedings

- Matar M, El Hassan M., Bukharin N., Sakout A., Hammoud A., Assoum H. H. "Turbulent flow and heat transfer characteristics of resonant impinging jets. State of the Art Review," AIGE-IIETA International conference 2024
- A.A. Abdel-Naby and A.H. Hammoud, "Oily Wastewater Separator Enhancement Using Hybrid System Drum Skimmer Integrated with Air Injection & Surface Air Stream", ISER-32th International Conference on Chemical and Environmental Science (ICCES) Sharjah, UAE, 2-3 March, 2018.
- A. El Khatib, A. Abdel-Naby and A. Hammoud, "Water Hammer Control Using Surge Vessels and/or a Flywheel during Start-up and Power Failure Transients," in 12th International Conference of Fluid Dynamics, Cairo, Egypt, 2016.
- A. El Khatib and A.Hammoud. A. Abdel-Naby, "The Effect of Suction Pipe Length and Diameter on the Effectiveness of Flywheel as a Transient Control Device," in 12th International Conference of Fluid Dynamics, Cairo, Egypt, 2016
- A.H. Hammoud, M. F. Khalil ."Pneumatic Sand Lifting during dredging process", AES-ATEMA' 2011International Conference on Advances and Trends in Engineering and their Applications. Riga, Latvia: July 11 - 15, 2011.
- K.C.Yassine, A.H.Hammoud, M.F.Khalil, 2010, Experimental Investigation for Centrifugal Slurry Pump Performance: ICFD10-EG-3061, American Society of Mechanical engineers, ASME, Proceedings of ICFD10: Tenth International Congress of Fluid Dynamics, December 16-19, 2010, Stella Di Mare Sea Club Hotel, Ain Soukhna, Red Sea, Egypt.
- A.H.Hammoud, K.C.Yassine, M.F.Khalil, 2010, Effect of Oil-in-water Concentration on the performance of centrifugal pump: ICFD10-EG-3067, American Society of Mechanical engineers, ASME, Proceedings of ICFD10: Tenth International Congress of Fluid Dynamics, December 16-19, 2010, Stella Di Mare Sea, Ain Soukhna, Red Sea, Egypt.
- A.H. Hammoud, M. F. Ghaziri, M. F. Khalil, 2010, Experimental Study On Air-Lift Pump Handling Slurry Flow: ICFD10-EG-3060, American Society of Mechanical engineers, ASME, Proceedings of ICFD10: Tenth International Congress of Fluid Dynamics, December 16-19, 2010, Stella Di Mare Sea Club Hotel, Ain Soukhna, Red Sea, Egypt.



- Samir. R. Traboulsi, A.H.Hammoud, M.F.Khalil, 2009, Effects of Negatively Sloped Jet Inclination Angle and Other Parameters on Air Curtain Performance, American Society of Mechanical Engineers, ASME, Proceedings of Fluid Engineering Division, FEDSM2009-78010, 26-1, Vail, Colorado, U.S.A.
- Samir. R. Traboulsi, A.H.Hammoud, M.F.Khalil, 2009, Effects of Jet Inclination Angle and Geometrical Parameters on Air Curtain Performance, American Society of Heating, Refrigerating and Air Conditioning Engineers, ASHRAE, Proceedings of Research on Commercial Food Display and Storage Equipment, LO-09-058, Vol. 115, Part 2, Louisville, KY, U.S.A.
- A.A.A. Mostafa & A.H. Hammoud "A numerical simulation of impact force on a heaved floating body with moving boundaries". International conference of 'numerical analysis and applied mathematics (ICNAAM 2008), pp50-55
- M.F.Khalil and A.H.Hammoud, "Experimental Investigation of Hydraulic Capsule Pipe with Drag Reducing surfactant", Eighth International Congress of Fluid Dynamics & Propulsion, Sharm El-Shiekh, Sinai, Egypt, (December 14-17, 2006), ASME Sharm El-Shiekh, Egypt, ICFDP8-EG-133
- M.Hayek and A.H.Hammoud, "Prediction of Liquid Jet Pump Performance, Using Computational Fluid Dynamics". Proceedings of the 4th IASME/WSEAS International conference in Greece, 2-4 August, 2006 pp148-153
- A.H.Hammoud, and A.A. Abd el Naby "Slurry Jet Pump Performance under Different Design and Operational parameters". Proceedings of the 4th IASME/WSEAS International conference in Greece- 2-4 August, 2006, code 538-161, pp 237-244
- A.H. Hammoud and M.F. Khalil " Upward and Downward Inclination Hydraulic Capsule Pipeline". Eighth International Congress of Fluid Dynamics & Propulsion" December 14-17, 2006, ASME Sharm El-Shiekh, Egypt, ICFDP8-EG-132
- H.H. Hammoud, A. Namor and A.H.Hammoud, "Overview of Water Quality in Lebanon, Water treatment using silicates bounded to cyclodextrin", WATMED 3 Proceeding of the third international conference on water resources in Mediterranean basin, Tripoli-Lebanon 1-3 November 2006, pp149 -156 Sponsored by European union.
- A.H.Hammoud, "Effect of design and operational parameters on jet pump performance". Proceedings of the 4th IASME/WSEAS International conference in Greece, 2-4 August, 2006, Code 538-122, pp245-252.