

ALI HAMMOUD

1. Name and academic rank.

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

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 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

4. 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.

5. Certifications or professional registrations

Authorization to practice engineering profession in Lebanon, since 1985.
ASME, AEE, ASHRE

6. Current membership in professional organizations

- Order of Engineers and Architects – Beirut, member since 1985.
- Adviser & member ASME, ASHRAE and Marine Pollution Society.

7. Honors and awards

- Research grant funded by the European Union for the project entitled “A cheap easy to- handle desalination approach for crop irrigation under Mediterranean conditions”. IRRISEASOIL – Contract Number 5756, 2003
Fund value: € 200 000.

8. Service activities.

- Chairman of Mechanical Engineering Department, 2016 -2024 BAU
- Departmental Committee - Students' Affairs, 2008 - 2024
- Faculty of Engineering Committee - Student engineering day Committee 2000-2024
- Chair of the ABET committee in the Mechanical Engineering department.
- Member of the Faculty of engineering council
- Member of the students affairs committee

- Member of the postgraduate committee for the academic year 2015-2024. Service activities.
- Technical Committee for Standards on Portable Fire Extinguishers, LIBNOR, 2002-2011
- Adviser & member ASME, ASHRAE & Syndicate of Engineers, Beirut - Lebanon, Marine Pollution Society & Arwatex Arab World Water
- Consulting in Mechanical Services for the Buildings.
- Presented a number of seminars to graduate students in the fields of plumbing, firefighting and HVAC application, water turbine Systems.
- Group leader in the HPF group (HVAC, Plumbing & firefighting).

9. Publications and presentations

Publications Related to Marine Oil Spill:

- **Ali Hammud and M.F.Khalil**, “Hydrodynamic Characteristic of Belt Skimmer for removing Oils from seawater surfabe”. MEDOSC Proceedings of the Second International Conference on Oil Spill in the Mediterranean and Black Sea Regions, 31 October – 3 November 2000, Istanbul , Turkey, pp 125- 135.
- **Ali Hammoud and M.F.Khalil**, “Influence of design and operation parameters on disk skimmer performance”. MEDOSC Proceedings of the Second International Conference on Oil Spill in the Mediterranean and Black Sea Regions, 31 October – 3 November 2000, Istanbul , Turkey, pp 137-152. Sponsored by “The National Council for Scientific Research”, Beirut-Lebanon.
- **Ali Hammoud and M.F.Khalil**, “Effect of Disk Material on Disk Skimmer Performance”. MEDOSC Proceedings of the Second International Conference on Oil Spill in the Mediterranean and Black Sea Regions, 31 October – 3 November 2000, Istanbul Turkey, pp 153-164. Sponsored by “The National Council for Scientific Research”, Beirut-Lebanon.
- **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.
- **Ali Hammoud, W.C. Assaf and M.F.Khalil**, “Performance of Rotating Coarse Brush Skimmer in Oil Spill Recovery”. MEDOS Proceedings of Third International Conference on Oil Spills, Oil Pollution and Remediation, 16-18 September 2003 , Istanbul Turkey, pp 139-153, Sponsored by “The National Council for Scientific Research”, Beirut-Lebanon.

Journal Publications:

- **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.

- **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**, “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, 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**, “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
- **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, & 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. 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

Conference Proceedings:

- **A.H.Hammoud, A.Gubran and S.Kassab**, “Experimental evaluation of the performance of 90 elbows”, Proceedings of the International Conference on integrated water resources management (HID), 1998, pp 189-198
- **Ali Hammoud**, “Oil spill recovery rate using the weir skimmer”, the 6th Biennial Fresh water spills symposium”. FSS conference in Portland,

Ouragan 2-4 may 2006 USA, CD. Sponsored by “The National Council for Scientific Research”, Beirut-Lebanon. LNCSR

- **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 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.
- **M. Kahil, G. Younes, A. Hammoud and K. Baghdady** “Modeling chlorine propagation in water networks northern suburb of Beirut –Mtaileb Rabieh region ”, International Conference on Water and Wastewater, Europe Fira de Barcelona, Spain , May 25-27, 2004,pp150-167
- **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.
- **Samir. R. Traboulsi, A.H.Hammoud, M.F.Khalil**, 2009, Air Curtain Integrity When Misusing the Refrigerated Display Cabinets, WSEAS Transactions on Fluid Mechanics, Journals/Fluid, 32-254, Worldses, Greece.
- **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.
- **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.
- **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
- **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.
- **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. 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. El Khatib and A. Hammoud**, "Retrofitting and Transients Protection of Nabatieh-Kfarremman Pump Station," in Second Annual Scientific Research Workshop, BAU, Lebanon, 2017.
- **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 and A. Hammoud**, "Design, Construction and Validation of an Open-Circuit Sub-Sonic Wind Tunnel," in Third Annual Scientific Research Workshop, BAU, Lebanon, 2018.

- **Abdul Hamid Jabadoa, Mouhammad El Hassanb, Hassan H. Assouma, Ali Hammouda**, “A review of cavity heat transfer under separated/reattached flow conditions” 23 October 2021
- **Abdul Hamid Jabadoa, Mouhammad El Hassanb, Hassan H. Assouma, Ali Hammouda**, “A Review-Heat Transfer Inside Cavity Flows Trends” 2021
- **A. El Khatib, A. Miaari, A. Hammoud**, “Aero-Acoustic Response of Flat Plates at Sub-Sonic Flow”, Physica Scripta, 4, 2021

10. Most recent professional development activities

Preparing “Renewable Energy Engineering” as a new Program within Mechanical Engineering Department at BAU, preparing program catalogue, syllabuses, and study plan