


## Curriculum Vitae

<b>Family name/ Surname</b>	<b>Georgees</b>					
<b>First name</b>	<b>Banipal</b>					
<b>Middle name</b>	<b>Nanno</b>					
<b>Last Name</b>	<b>Yaqob</b>					
<b>E-mail</b>	<b>Banipal.yaqob@epu.edu.iq</b>					
<b>Date of Birth</b>	<b>5/1/1976</b>					
<b>Place of birth</b>	<b>Erbil-Iraq</b>					
<b>Academic title</b>	<b>Lecturer</b>					
<b>Address</b>	<b>Ankawa, Erbil, Iraqi Kurdistan Region</b>					
<b>Office Address</b>	<b>Mechanical and Energy Engineering Department / Erbil Technical Engineering College / Erbil Polytechnic University / Erbil-Kurdistan Region-Iraq</b>					
<b>Mobile</b>	<b>(00964) 750 745 6638</b>					
<b>Preparatory graduated from</b>	<b>Abdul Al-Malek Secondary School</b>	<b>governorate</b>	<b>Kirkuk</b>	<b>year</b>	<b>1992-1993</b>	
<b>Date of first assignment in university</b>	<b>1993-1994</b>					
<b>Academic attainments</b>	<b>Certificate</b>	<b>University</b>	<b>College</b>	<b>Department</b>	<b>Graduation year</b>	<b>Country</b>
	<b>B. Sc.</b>	<b>Tekrit</b>	<b>Engineering</b>	<b>Mechanical Engineering</b>	<b>1996-1997</b>	<b>Iraq/Tekrit</b>
	<b>M. Sc.</b>	<b>Technology</b>	<b>Engineering</b>	<b>Mechanical Engineering</b>	<b>2000</b>	<b>Iraq/Baghdad</b>
	<b>Ph. D.</b>	<b>Al-Mustansiriyah</b>	<b>Engineering</b>	<b>Mechanical Engineering</b>	<b>2007</b>	<b>Iraq/Baghdad</b>
<b>Academic title attained</b>	<b>Academic title</b>				<b>Date of attainment</b>	
	<b>Assistant Lecturer</b>				<b>9/8/2004</b>	
	<b>Lecturer</b>				<b>15/2/2007</b>	
	<b>Assistant Professor</b>				<b>31/10/2022</b>	
<b>General specialization</b>	<b>Mechanical Engineering – Thermal Power</b>					
<b>Specific specialization</b>	<b>Two-Phase Flow</b>					
<b>Ph.D. Thesis Title</b>	<b>A comparative study between the capacitor, auto-transformer, and transformer techniques for void fraction measurements in two-phase flow.</b>					
<b>Languages:</b>						
<b>English</b>	<b>High level (writing/speaking/reading)</b>					
<b>Kurdish</b>	<b>Fluent level (writing/speaking/reading)</b>					
<b>Arabic</b>	<b>Fluent level (writing/speaking/reading)</b>					
<b>Turkish</b>	<b>Medium level (speaking)</b>					
<b>Assyrian</b>	<b>Native tongue</b>					
<b>Assignment and posts:</b>						
<ol style="list-style-type: none"> <li>From 4/2000 to 8/2000 / military service period, working as maintenance engineering on military vehicles/ Electrical Instrument Engineering/Kirkuk.</li> <li>I worked in Kirkuk Technical College as a lecturer for the following subjects;</li> </ol>						

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- A. *Fluid Mechanics for 2<sup>nd</sup> stage in Refrigeration and Air-Conditioning Engineering Department (2000-2007) and in Fuel and Energy Engineering Department, (2000-2001).*
- B. *Power Plants for 4<sup>th</sup> stage in Refrigeration and Air-Conditioning Engineering Department, (2001-2007).*
- C. *Supervising on Summer Training in North Oil Company and Power Plant-DIBIS, (2003-2007).*
- D. *Teaching a course of Power Plant (Gas and Steam Power Plant), theoretically and experimentally, for the employer of the General Directorate of Electrical Production-Sallahadin-Brach-Kirkuk, for one month, (2006 and 2007).*
3. *Now I am an instructor in Erbil Technical Engineering College/Mechanical and Energy Engineering Department for the following subjects:*
  - a. *Fluid Mechanics for 2<sup>nd</sup> stage (2008-to present).*
  - b. *Computer application (MATLAB & FORTRAN) for 3<sup>rd</sup> stage (2009-2012).*
  - c. *Power Plant for 4<sup>th</sup> stage (2010-to present).*
  - d. *Fluid Mechanics for 2<sup>nd</sup> stage (2010-2011 and 2012-2013) for Civil Eng. Department.*
  - e. *Advanced Fluid Mechanics for M.Sc. students (2014-2015, 2017-2018, 2020-2021, 2023-2024).*
  - f. *Computational Fluid Dynamic (CFD) for Ph.D. students (2020-2021, 2023-2024).*
4. *Head of Refrigeration and Air-Conditioning Engineering Department / Erbil Technical Engineering College from (1/9/2012) to (1/10/2015)*

### *Committees participated in the college and university:*

- 1- *Examination committee member (from 2005 to 2006) / Ref. & Air-Cond. Eng. Dept. / Kirkuk Technical College/Foundation of Technical Education.*
- 2- *Scientific committee member (from 2007 to 2020, 2021-2022, 2023-to present) / Mechanical & Energy Eng. Dept. / Erbil Technical Engineering College/ Erbil Polytechnic University.*
- 3- *Head of quality assurance committee (from 2010 to 2012) / Mechanical & Energy Eng. Dept. / Erbil Engineering College/ Erbil Polytechnic University.*
- 4- *Examination committee member (from 2011 to 2018) & (2020 to present) / Mechanical & Energy Eng. Dept. / Erbil Technical Engineering College/ Erbil Polytechnic University.*
- 5- *Head of examination committee (from 2012 to 2017) / Mechanical & Energy Eng. Dept. / Erbil Technical Engineering College/ Erbil Polytechnic University.*
- 6- *Postgraduate committee member (from 2015 to 2020, 2021-2022, 2023-to present) / Mechanical & Energy Eng. Dept. / Erbil Technical Engineering College/ Erbil Polytechnic University.*
- 7- *Inference research committee member in Erbil Polytechnic University (from 2016 to 2020).*
- 8- *Head of Fourth Grade Graduation Projects committee in Erbil Polytechnic University/Mechanical & Energy Eng. Department (from 2020 to present).*

### Published Researches :

- 1- Abdulla A. Kendoush, Ghanim K. Abdul-Sada, and **Banipal N. Yaqob**, (A Nonintrusive Auto-Transformer Technique for Measuring Phase Volume Ration in Oil-Water Two-Phase Stratified Flow). *Journal of Petroleum Science and Engineering*, 54 (2006) 25-33.
- 2- **Banipal N. Yaqob** and Ehsan F. Abbas, (Effect of Crude Oil-Water Two-Phase Flow on Pump Performance). *Eng. & Tech. Journal*, 27 (9) (2009) 1766-1774.
- 3- **Banipal N. Yaqob** and Handreen A. Saber, (Investigation of the Overall Efficiency of Steam Jet Ejector over a Range of Working Conditions). *Zanco Journal of Pure Applied and Science*, 29 (1) (2017) 120-126.
- 4- Reenas Oraha Cannon, Nazar Faraj Antwan, and **Banipal Nanno Yaqob**, (Investigation of Solar Water Heating System in Erbil City: An Experimental and Numerical Study). *International Journal of Renewable Energy and Research*, 12 (3) (2022): 1225-1233.
- 5- Bahzad Darwesh Darwesh, Idres Azzat Hamakhan, and **Banipal Nanno Yaqob**, (Thermal Enhancement of Solar Energy Storage Using Phase Change Materials), *International Journal of Heat and Technology*, 40 (3) (2022): 758-766.
- 6- Bashir E. Kareem, Ahmed M. Adham, and **Banipal N. Yaqob**, (Performance Enhancement of a Ventilation System in Hot and Dry Climate Using Air-PCM Heat Exchanger). *International Journal of Heat and Technology*, 40 (3) (2022): 773-780.
- 7- Zhyran F. Hassan, **Banipal N. Yaqob**, & Ranj S. Abdullah, (A Study of Greenhouse Thermal Management by Flat Plate Solar Collector Using  $Al_2O_3$ -Water Nanofluid). *International Journal of Energy Production and Management*, 8 (2) (2023): 71-79.
- 8- Bashir E. Kareem, Ahmed M. Adham, and **Banipal N. Yaqob**, (Design and Optimization of Air to PCM Heat Exchanger Using CFD). *Arabian Journal for Science and Engineering*, Published online: 13 October 2022.
- 9- **Banipal N. Yaqob** (Gas-Liquid Two-Phase Flow Pressure Drop in Flattened Tubes: An Experimental and Numerical Study), *Journal of Thermal Engineering*, Accepted paper, 2022.
- 10- Aveen T. Mohsin and **Banipal N. Yaqob**, (Experimental Investigation on Improving Lifetime of Peripheral Pump Impeller under Cavitation Using Different Techniques). *International Journal of Heat and Technology*, 40 (5) (2022): 1258-1264.
- 11- Bashir E. Kareem, Ahmed M. Adham, and **Banipal N. Yaqob**, (Experimental analysis of air-multiple PCM heat exchanger in evaporative cooling systems for supply air temperature stabilization). *Journal of Building Engineering*, 82, 1 April 2024, 108269.
- 12- Bashir E. Kareem, Ahmed M. Adham, and **Banipal N. Yaqob**, (Experimental and numerical investigation of a real-scale air to multiple PCM heat exchanger). *Journal of Building Engineering*, Volume 89, 15 July 2024, 109323.

- 13- Ahmed Ibraheem Raheem, Seyed Mehdi Pesteei, **Banipal Nanno Yaqob**, (Experimental study on thermocline behavior and management in phase change material-enhanced thermal energy storage: Implications for charging and discharging cycles). *Energy Conversion and Management*: X, Volume 24, 2024, 100816, <https://doi.org/10.1016/j.ecmx.2024.100816>.

### Conferences:

- 1- Ghanim K. Abdul-Sada and **Banipal N. Yaqob**, (Water turbidity effect upon performance of solar pond), Sharjah Solar Energy Conference, Sharjah, UAE, 19-22 February 2001: incorporating the 7th Arab International Solar Energy Conference and Regional World Renewable Energy Congress.
- 2- Abdulla A. Kendoush and **Banipal N. Yaqob**, (A Comparative Study between the Methods of Measuring Void Fraction in Air-Water Two-Phase Flow), ASME Fluids Engineering Division Summer Conference, August 10-14, 2008, Jacksonville, Florida, USA.
- 3- **Banipal N. Yaqob** and Iyd E. Maree (Effect of Clarity of Water upon Performance of Solar Pond in Iraq). 1<sup>st</sup> Scientific Research Conference of Technical Education, 20-21 October 2010, Duhok, Kurdistan Region, Iraq.
- 4- **Banipal N. Yaqob** (Experimentally Investigation the Effect of Oil-Water Phase Inversion on Pump Performance) 7<sup>th</sup> International Conference on Computational Heat and Mass Transfer, July 18-22, 2011, Istanbul, Turkey.
- 5- **Banipal N. Yaqob** (Experimental Investigation of Two-Phase Flow Pressure Drop In Flattened Tube), 9<sup>th</sup> European Fluid Mechanics Conference, 9-12 September 2012, Rome, Italia.

### Postgraduate Supervision:

1. *Experimental and theoretical study of solar water heating system in Erbil city.* **Reenas (M. Sc. Thesis) 2016-2017.**
2. *Thermal Enhancement of Solar Energy Storage Using Phase Change Materials.* **Bahzad (M. Sc. Thesis) 2021-2022.**
3. *A Comprehensive Analysis of Cavitation Effect on a Centrifugal Pump Performance and Impeller Lifetime Under Different Operation Conditions.* **Aveen (M. Sc. Thesis) 2021-2022.**
4. *Thermal Performance Analysis of a Flat Plate Solar Collector for Greenhouse Heating System Using Nano-Fluid.* **Zhyan (M. Sc. Thesis) 2021-2022.**
5. *Investigation of Using PCMs in Residential Building for Improving Indoor Thermal Comfort in Hot and Dry Climate.* **Bashir (Ph.D. Student) 2021-2023.**
6. *Experimental and Numerical Study on Thermal Performance and Thermocline Structure Optimization of Thermal Storage Tank with PCM Included.* **Ahmed (International Ph.D. student), 2023-**

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7. *Analysis of Phase Inversion and Emulsion Behavior in Crude Oil-Water Two-Phase Flow: Experimental and Computational Approaches.* **Nabaz (M.Sc.Student) 2024-**
8. *Drag reduction Using Polymers in Turbulent Flow: A Study on Degradation and Pipe Geometry Impact).* **Renas Qader (M.Sc.Student) 2024-**
9. *Thermal and Hydrodynamic Performances of Nanofluids Flowing Inside Ducts with Different Geometries.* **Ahmed Aswad (Ph.D. Student) 2023-**

### Evaluation committee of M.Sc. or Ph.D. Theses :

1. Sirwan Farouq Omer "Wind Turbine Driven Heat Pump System", M.Sc. Thesis, 16-9-2020.
2. Sawan Hawro Khaleel "Thermodynamic Optimization of Solar Water Heating System in Erbil City", M.Sc. Thesis, 16-6-2022.
3. Saman Jalal Saleh "Enhancement of Automobile Cabin Using An Auxillary Solar Assisted Lithium-Bromide Absorption Air Cooling System", M.Sc. Thesis, 16-4-2023.
4. Darawan Bazyan Dhahir "Performance Enhancement of a Household Refrigeration System Using Phase Change Materials (PCMs) and Nanoparticles", M.Sc. Thesis, 17-5-2023.
5. Sally Afram Polus "Performance Enhancement of Photovoltaic (PV) Using Solar Tracking System and Cooling Panel Surface.", Ph.D. Dissertation, 19-10-2023.
6. Shaswar Omer Osman "Experimental and Numerical Analysis of the Mixed Convection Heat Transfer from Two Aligned Horizontal Heated Cylinders in a Vented Square Enclosure." M.Sc. Thesis, 11-01-2024.
7. Kawa AbdulAlkhany Abdullah "Study of Thermal Plume of VRF Air Conditioners for Cooling Season in Semi-Closed Spaces in High-Rise Buildings." Ph.D. Dissertation, April 2, 2024. (Scientific evaluation).

### Computer and Software Skills:

- 1- Proficiency with Microsoft software (Word, Excel, Power point)
- 2- Proficiency with Auto CAD, Matlab, and FORTRAN language.

### Memberships:

- 1- Member of Iraqi Engineers Union, ID No. 82844
- 2- Member of Kurdistan Engineers Union, ID No. 6479
- 3- Member of Kurdistan Teachers Union, ID No. 11041

### Interests:

1. Sport in general (football, basketball, tennis ... est.)
2. Reading scientific papers and spiritual books.