

Dr. Younis Khalid KHDIR
(Assistant Professor)

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Background Summary

- Ph.D. in Mechanic, Energy, Materials. Doctoral School of Engineering Sciences, University of Lille 1, Lille – France, Dissertation titled "Non-linear numerical homogenization: Application to elasto-plastic materials" 2014.
- M. Sc. In Mechanical Engineering. College of Engineering, University of Salahaddin Erbil-Iraq thesis titled "THE EFFECT OF CUTTING TOOL VIBRATION ON SURFACE FINISHING OF WORK PIECE IN TURNING OPERATION" 2005.
- B. Sc. In Mechanical Engineering. College of Engineering, University of Salahaddin Erbil-Iraq thesis titled "Design of heat exchanger – shell and tube type" 1998.
- More than 22 years experience working in the practical fields, University and Mechanical engineering.
- More that 20 years experience in the Experience more than ten years as a practical, technical and academic trainer, and as a trainer for trainees, in three Kurdish, Arab and English languages
- Very good spoken and written English and French. Excellent Arabic. And conversational.

Personnel

Nationality: Iraqi
Date of birth: 01 July 1974
Place of birth: Erbil
Marital state: Married
Mother Tongue: Kurdish

Current Employment

2007-2022 Erbil Technical Engineering College, Erbil Polytechnic University. Kurdistan Region Iraq, from January 2007 till now.

Rank: Assistant Professor

Achievements: Participate in the departments periodical meeting, member of the scientific committee of the department, member of examination committee, supervising the postgraduate and undergraduate student research, lecturing many subjects such as Factories (milling, welding, drilling, grinding, turning, casting, lapping, gear making and shaping) and Engineering drawing, Computer programs, Mechanics static and dynamic for 1st stage. Fluid mechanic, and Engineering materials for the 2nd stage, Theory of machine and Machine design 3rd stage, Finite element method 4th stage. Advanced numerical analysis and advanced finite elements for postgraduate students (Master degree), Approximate Methods in Mechanical Engineering for postgraduate PhD students.

Skilled Developed: A comprehensive deep review of some engineering subjects, teaching and contacting with engineering students, supervising engineering project, coordination, scientific research.

Previous Employment

2021-2022 Engineering Mechanical Designer, Interno Design For General Contracting & General Trading Ltd. from April 2021 till now as part time.

Rank: Senior Mechanical Designer

Achievements: Design different project such: air conditioning system, water supply project; firefighting, drain system, storm water design and management, sewerage system. Fire sprinkler system, water treatment plant, hot kitchen fire suppression system, grease trap selection calculation, car wash system, fuel supply system, including calculation for all mentioned system.

Skilled Developed: A comprehensive deep review of design engineering project, design calculation, international standards, drawing in AUTO CAD, and project specification engineering.

2014-2021 Engineering Mechanical Designer, Rawezh Consultant Engineering Bureau. from August 2014 to March 2021 as part time.

Rank: Senior Mechanical Designer

Achievements: Design different project such: air conditioning system, water supply project; firefighting, drain system, storm water design and management, sewerage system. Fire sprinkler system, water treatment plant, hot kitchen fire suppression system, grease trap selection calculation, car wash system, fuel supply system, including calculation for all mentioned system.

Skilled Developed: A comprehensive deep review of design engineering project, design calculation, international standards, drawing in AUTO CAD, and project specification engineering.

2007-2022 Engineering Mechanical Designer, from January 2007 till now.

Rank: Senior Mechanical Designer

Achievements: Design different project such: water supply project; firefighting, drain system, hospitals, buildings and storm water management, sewerage treatments.

Skilled Developed: A comprehensive deep review of many design engineering projects, design calculation, drawing in AUTO CAD, and other project engineering.

2000-2007 Directorate of Water Erbil (1st Jun 2000 to 15th Jan 2007)

Rank: Mechanical supervisor engineer

Achievements: Maintenance of supply water pipe system for Ifraz water project Erbil, installing motors, pumps, both vertical and submersible. Supervising maintenance of water network piping system in Erbil governorate.

Skilled developed: Personal skills development including motivation, leadership, team-working, effective communication and decision making, self-management self-awareness proactively

2007-2009 CC Beverage Ltd., Coca Iraq, 28th Feb 2007 to 15th Oct 2009, Part time.

Rank: Technical Support Supervisor.

Achievements: Supervising maintenance department, cooler department and fleet department. Supervising maintenance of vehicles, cars, trucks, forklifts and other machines in the factory, and distributing coolers with controlling spare-parts.

Skills development: personnel skill development including team working, supervising, leading peoples, making decisions, solving problems, management under bad situation and controlling the team based on the international environments.

2005-2006 K-Water, Republic of South Korea water

Rank: Project coordinator

Achievements: Arranging the activities between K-Water Korea water organization and Ministry of municipality of Kurdistan regional government (meeting, reporting, contracts, and implementing for Ifraz Water Project in Erbil.

Skilled developed: Personnel skills development including team-working, effective communication and decision making, and managing the meeting and making contracts, especially project coordination.

2005 1st Jun 2005 to 10th Aug 2005, IRC Iraqi Reconstruction Company.

Rank: Mechanical engineer / supervisor.

Achievements: Supervising repairing duct system, air handling units, heating and cooling piping system for maternity and pediatric hospital, Erbil.

Skilled developed: Personnel skills development including team-working and decision making with maintenance of central air conditioning system

2003-2005 From 23rd September 2003 to 30th June 2004 Master Science Courses. From 20th July 2004 to 14th May 2005, completing M. Sc. research.

2000-2003 UNDP United Nations Development program, 20th Oct 2000 to 23rd Nov 2003.

Rank: Mechanical engineer supervisor / maintenance team leader

Achievements: Installing diesel generators, repairing and overhaul the diesel engines, types; such as Cummins, Volvo, John Deer, Man, and Perkins, with supervising maintenance of all diesel generator parts.

Skilled developed: Effective interaction at all levels of the international organization, and working in multi cultural environments and work

independently, technical experience, and negotiation. Inter-personal skills oral communication and leadership, preparing time schedule for regular servicing maintenance of mechanical and electrical parts.

1998-2000 Windows Computer Center, 1st Oct 1998 to 25th May 2000.

Rank: Supervisor assistant and trainer

Achievements: Assisting the supervisor for managing the center, and training the students. Types of trains are Microsoft operating system and Microsoft office.

Skilled developed: Learning Microsoft office programs and my personal skills developed including team-working, effective communication, self-management.

Educational

2010-2014 PhD. In Mechanic, Energy, Materials. Doctoral School of Engineering Sciences, University of Lille 1, Lille – France, Dissertation titled "Non-linear numerical homogenization: Application to elasto-plastic materials"

2002-2005 M. Sc. In Mechanical Engineering. College of Engineering, University of Salahaddin Erbil-Iraq thesis titled "The effect of cutting tool vibration on surface finishing of work piece in turning operation"

1994-1998 B. Sc. in Mechanical Engineering. College of Engineering, University of Salahaddin Erbil- Iraq.

Publications

2007 "The Effect of Cutting Tool Vibration on Surface Roughness of Workpiece in Dry Turning Operation". *Engineering & Technology*, Vol. 25, No. 7, 2007. 879-889. Younis Khalid Khdir, Safin Kassab.

2013 "Computational homogenization of elastic–plastic composites". *International Journal of Solids and Structures*, Volume 50, Issue 18, Pages 2829-2835. Younis Khalid Khdir, T. Kanit, F. Zaïri, M. Naït-Abdelaziz.

2014 "Computational homogenization of plastic porous media with two populations of voids". *Materials Science and Engineering: A*, Volume 597, Pages 324-330. Younis-Khalid Khdir, Toufik Kanit, Fahmi Zaïri, Moussa Naït-Abdelaziz.

- 2015** **"A computational homogenization of random porous media: Effect of void shape and void content on the overall yield surface"**. *European Journal of Mechanics - A/Solids*, Volume 49, January–February 2015, Pages 137-145. Younis-Khalid Khdir, Toufik Kanit, Fahmi Zairi, Moussa Nait-Abdelaziz.
- 2016** **"Estimates for Linear hardening and Effective Yield Stress of Nano-Porous Media with Non-Uniform Distribution of Voids"**. *ZANCO Journal of Pure and Applied Sciences*. The official scientific journal of Salahaddin University-Erbil, ZJPAS (2016) 28 (2); Pages 396-405. Younis Khalid Khdir.
- 2018** **"Use of Different Graded Brass Debris in Epoxy-Resin Composites for Improving Mechanical Properties"**. *Eurasian Journal of Science and Engineering*. ISSN 2409-6997, doi:10.23918/iec2018.28. Younis Khalid Khdir, Gailan Ismail Hassan.
- 2018** **"Contact Stress Analysis of Spur Gear under the different Rotational Speed by Theoretical and Finite Element Method"**. *Academic Journal of Nawroz University 7 (4)*, 213-222. Under Press. Jwan Khalil Mohammed, Younis Khalid Khdir, Safeen Yaseen Kasab.
- 2018** **"Effect of Rotary Friction Welding Parameters on the Mechanical Behavior ABS/PE Polymers"**. *Academic Journal of Nawroz University 7 (4)*, 104-112. Under Press. Gailan Ismail Hassan, Younis Khalid Khdir.
- 2019** **"Analytical and Numerical Investigation of Hardening Behavior of Porous Media"**. *Polytechnic Journal 9 (2)*, 1-10, Younis Khalid Khdir.
- 2020** **"Study of Welding Dissimilar Metals-Low Carbon Steel AISI 1018 and Austenitic Stainless Steel AISI 304"**. *Polytechnic Journal 10 (1)*, Younis Khalid Khdir; Salim Azeez Kako; Ramadhan H. Gardi.
- 2020** **"Experimental Investigation of Earth Tube Heat Exchanger (ETHE) for Controlled Ventilation in Erbil"**. *6th International Engineering Conference "Sustainable Technology and Development, IEC2020 Conference, www.tiu.edu.iq/conf/iec*, Dastan Zrar Ghafoor; Younis Khalid Khdir.
- 2020** **"The Determination of the Stress Intensity Factors of a Steel Plate with different thickness using FEM"**. *International Conference on Recent Innovations in Engineering (ICRIE)*, Younis Khalid Khdir.
- 2021** **"Computational Fluid Dynamic Optimization of Supply and Return Duct Position for Zone Air Distribution"**. *Polytechnic Journal Vol. 11 No. 2: 69-78 (2021)*, Bashir E. Kareem; Younis Khalid Khdir.

2022 "Effect of crack length on stresses in a plate with a hole". *Al-Nahrain Journal for Engineering Sciences NJES 25 (1) 28-34, 2022, Thaker Saleh Dawood, Younis Khalid Khdir.*

2022 "CFD Study of Pressure loss of Oil Products in T-junction". *Eurasian Journal of Science and Engineering (Vol. 7, No. 1, June 2021), Samara Aneis, Iyd Eqqab Maree, Younis Khalid Khdir.*

Trainings and other courses

1998 English language examination, 29th Jul 1998, College of Art, University of Salahaddin, Erbil, Certificate

1998 Computer Course, Computer Center, 8th Jul 1998 – 8th Sep 1998, Erbil, Windows operating system, Word, Excel, and Access, certificate.

2000-2001 English language course, 15th Oct. 2000 – 15th Jun 2001, Erbil, certificate.

2002 Computer Science examination, 12th Aug 2002, Erbil certificate.

2006 Project Management International Training Course, in Republic of South Korea, Certificate.

2006 English Language Course, 7th of Nov 2006, Training Learning Center, belong to Ministry of Municipalities and Public Work, Erbil, Certificate.

2007 Teaching method, 60 hours, 20th – 30th August 2007 Presidency of Technical Education Foundation Kurdistan Region Iraq, Certificate.

2008 Finance for non finance, 7th May 2008 Coca Cola – Iraq, CC beverage Ltd, Certificate

2009 French language, 80 hours, Center Culturel Francais d'Erbil, Certificate.

2011 Redaction scientific papers in English, 10 January – 14 February. Villeneuve d'ascq – France.

2018 Training of trainers on entrepreneurship development, 7 October – 8 November. 120 training hours, conducted by United Nations Industrial Development Organization UNIDO, Erbil – Iraq.

2009-2019 Working as trainer with many local and international organizations such as Islamic Relief, UNDP, UNIDO and many other companies and training centers.

Computer Skills

AutoCAD, Microsoft Office "Word, Excel, Power point, and Access" , Adop photo shop, Internet explorer. MS Nastran, MS ANSYS, Fortran, MATLAB, Zebulon finite element program, Linux system, OpenSUSE, and ParaView.

Conferences and Other Activities

- 2000** 25th June – 20th Nov, member in supervising committee of implementing Soran water project in Soran-Iraq.
- 2005** 25th Jan – 30 June, member in supervising committee of installing 3rd line of Ifraz water project in Erbil-Iraq.
- 2005** 1st Sep – 30th Nov Direct manager of installing Khabor water project in Zakho-Iraq.
- 2008** 1st Jan – 31st Dec, member in supervising committee of installing first beverage factory in Erbil-Iraq.
- 2008** From 30th may 2008 membership in Contracting, Engineering and Design Organization, K-CEDO.
- 2008** 27-29 May 2008, participating in a first conference of Contracting, Engineering and Design Organization, K-CEDO in Erbil.
- 2000-2009** Writing engineering articles (engineering essays) with all the numbers of Engineer magazine belong to Kurdistan Engineers Union.
- 2011** le métier d'enseignant chercheur ; the conférence in French language.
- 2011** la création d'entreprise par les docteurs ; the conference in French language.
- 2012** les réseaux sociaux professionnels. Comment en faire bon usage ; the conference in French language.
- 2012** Intelligence économique et dynamique de l'innovation ; the conference in French language.
- 2012** 26th Jun 2012, participating in conference of (5^{ème} Journée des docteurs), Ecole des Mines de DOUAI, France.
- 2012** 13th November 2012, participating in conference of (DocEmploi, forum de l'emploi des docteurs). Lille, France.
- 2013** 26-28 June 2013, 3rd International Conference of Engineering Against Failure, Kos, GREECE.

- 2014** 3rd Jun 2014, participating in conference of i-MOCCA, Lille, France.
- 2015** DAAD-Workshop Modern Measuring Methods in the Laboratory (software and Hardware) October 20-21, 2015.
- 2016** 1st Symposium on The Role of Scientific Research and Publications in University Ranking. March 8-9, 2016.
- 2016** 1st International Conference on Engineering and Innovative Technology April 12-14, 2016 Erbil, Kurdistan.
- 2017** 2nd Symposium on Internationalization of researches in Kurdistan. May 2-3, 2017.
- 2018** Polytechnic Research Center Workshop titled "The Importance of Writing and Publishing High Profile Scientific Researches" 12 hours, at EPU Scientific Research Center.
- 2018** 4th International Engineering Conference on Developments in Civil & Computer Engineering Applications. Erbil, Kurdistan, Iraq on February 26-27, 2018.
- 2020** 6th International Engineering Conference "Sustainable Technology and Development". Erbil, Kurdistan, Iraq on February 26-27, 2020.

Mechanical Designed Projects

- Kor Mor Construction Camp & Offices project in Sulaymania: Calculation, Design, Drawing, and technical reports. Belong Pearl Petroleum, Crescent Petroleum for the total 1500 persons camp, such as air conditioning system, water supply project; firefighting, drain system, storm water design and management, sewerage system. Fire sprinkler system, water treatment plant, ventilation, hot kitchen fire suppression system, grease trap selection calculation, car wash system, fuel supply system.
- OPF Camps for Seismic Operations at Batil in Duhok: Calculation, Design, Drawing, and technical reports. Belong RN-Batil Pte. Ltd., for the total 187 persons camp, such as air conditioning system, water supply project; firefighting, drain system, storm water design and management, sewerage system. Fire sprinkler system, water treatment plant, ventilation, grease trap selection calculation, waste water leach field design drawing and calculation, fuel supply system.
- Zring apartment (7 floors with basement) project in Erbil: Calculation, Design, Drawing, and technical reports for the project, such as air conditioning system, water supply, firefighting, storm water design, ventilation, drain system, and fire sprinkler system.

- CPS Office building (2 floors with basement) project in Khurmala Erbil: belong KAR Group company Calculation, Design, ventilation, Drawing, and technical reports for the project, such as air conditioning system, water supply system, drain system and firefighting.
- Infirmary building (2 floors with basement) project in Erbil: belong KAR Group company Calculation, Design, Drawing, and technical reports for the project, such as air conditioning system, drain system, ventilation, water supply project; and firefighting.
- Dijla Land Project (12 floors with basement – 3 towers with 25 villas and sport center with swimming pool) project in Baghdad: Calculation, Design, Drawing, and technical reports for the project, such as air conditioning system, water supply, firefighting, storm water design, ventilation, drain system, fire sprinkler system, and swimming pool design, LPG system and car parking design ventilation.
- SB building (2 floors) project in Erbil: Calculation, Design, Drawing, and technical reports for the project, such as air conditioning system, drain system, ventilation, water supply project; and firefighting system.
- Mass City Mousque with houses project in Erbil: belong Mass Group; Calculation, Design, Drawing, and technical reports for the project, such as air conditioning system, drain system, ventilation, water supply project; and firefighting system.
- Large Fountain design in Mass City: belong Mass Group; Calculation, Design, Drawing, and technical reports for the project.
- Oil Serve KIU Consolidated Service Center (Complex camp including 12 building and several workshops with other required service centers) project in Erbil: Calculation, Design, Drawing, and technical reports for the project, such as air conditioning system, water supply, firefighting, storm water design, ventilation, drain system, fire sprinkler system, and workshop design, industrial air supply system, and car parking design.
- Market Center #5 project in Erbil: belong Parosh company Calculation, Design, Drawing, and technical reports for the project, such as air conditioning system, water supply, firefighting, storm water design, ventilation, drain system, fire sprinkler system, and car parking design.
- Market Center #3 with large restaurant project in Erbil: belong Parosh company Calculation, Design, Drawing, and technical reports for the project, such as air conditioning system, water supply, firefighting, storm water design, ventilation, drain system, fire sprinkler system, and car parking design.
- Swimming Pool project in Erbil: belong Parosh company Calculation, Design, Drawing, and technical reports for the project, such as air conditioning system, water supply, firefighting, storm water design, ventilation, drain system, fire sprinkler system, water treatment plant, and car parking design.

- Pir-Rash Mousque in Pir-Rash-Erbil: Calculation, Design, Drawing, and technical reports for the project, such as air conditioning system, water supply, firefighting, storm water system, ventilation, drain system, and car parking design.
- Holland Village project in Erbil: Calculation, Design, Drawing, and technical reports for the project, such as air conditioning system, water supply, firefighting, storm water design, ventilation, drain system, fire sprinkler system, and car parking design.
- Raparin Hospital in Erbil: Calculation, Design, Drawing, and technical reports for the project, such as air conditioning system, water supply, firefighting, storm water design, ventilation, drain system, and workshop design, medical air, O₂, etc. supply system.
- Remas City Project in Erbil: Calculation, Design, Drawing, and technical reports for the project, potable water supply system, raw water system, selection of water well location and estimation of total water consumption for the total city. And also simulation for the water distribution system using Epanet program.
- Waste water treatment plant Project inside Erbil International airport: Calculation, Design, Drawing, and technical reports for the project, waste water treatment project.
- HAVALAN building (3 floors) project in Erbil: Calculation, Design, Drawing, and technical reports for the project, such as air conditioning system using central ducting system.
- Wahat-Al-Aumara City Project in Najaf: Calculation, Design, Drawing, and technical reports for the project, potable water supply system, raw water system, selection of water well location and estimation of total water consumption for the total city. And also simulation for the water distribution system using Epanet program.
- Swimming Pool project in Erbil: belong Rain company Calculation, Design, Drawing, and technical reports for the project, such as air conditioning system, water supply, firefighting, storm water design, ventilation, drain system, fire sprinkler system, water treatment plant, and car parking design.
- Peshmarga Main Building (5 floors 3 building) project in Erbil: Calculation, Design, Drawing, and technical reports for the project, such as air conditioning system using central ducting system.
- Mariwan Hotel (13 floors with basement) project in Shaqlawa-Erbil: Calculation, Design, Drawing, and technical reports for the project, such as air conditioning system, drain system, ventilation, water supply project; and firefighting system.
- Asaad School complex (4 floors with basement) project in Erbil: Calculation, Design, Drawing, and technical reports for the project, such as air conditioning system, drain system, ventilation, water supply project; and firefighting system.

- Dream Mall complex project (3 floors with basement) in Erbil: Calculation, Design, Drawing, and technical reports for the project, such as air conditioning system, drain system, ventilation, water supply project; and firefighting system.
- LAWK Institute project (3 floors with basement) in Erbil: Calculation, Design, Drawing, and technical reports for the project, such as air conditioning system, drain system, ventilation, water supply project; and firefighting system.
- Water treatment Factory project (2 floors) in Erbil: belong alfajr company Calculation, Design, Drawing, and technical reports for the project, such as air conditioning system, drain system, ventilation, water supply project; and firefighting system.
- Commercial Building project (4 floors with basement) in Erbil: Calculation, Design, Drawing, and technical reports for the project, such as air conditioning system, drain system, ventilation, water supply project; and firefighting system.
- Large hydraulic gate project in Erbil: Calculation, Design, Drawing, and technical reports for the project, such as drain system, ventilation, water supply project, firefighting system, and hydraulic system.
- Unique Towers Project in Erbil (Shaqlawar Road) (36 Floors): Calculation, Design, Drawing, and technical reports for the project, such as air conditioning system, water supply, firefighting, storm water design, ventilation, drain system, fire sprinkler system, and swimming pool design, LPG system, and car parking design ventilation.
- Candle Kempinski Hotel and Towers in Erbil (41 Floors): Participating the part of the Calculation, Design, Drawing, and technical reports for the project, such as air conditioning system, water supply, firefighting, storm water design, ventilation, drain system, fire sprinkler system, and swimming pool design, LPG system, and car parking design ventilation.
- Peshmarga Camp (more than 30 building different military services): Calculation, Design, Drawing, and technical reports for the project, such as air conditioning system, water supply, firefighting, storm water design, ventilation, drain system, fire sprinkler system, and swimming pool design, LPG system, and car parking design ventilation.
- And more than 50 other projects participated in the designing and supervising such as 3 large hospitals (Shifa, Arzheen, Dohok), 5 schools, 8 villas, 4 camps, 30 private houses,

Supervising execution or participating with the supervision team

Supervising the execution of more than 20 engineering project such as water treatment plants (15), buildings (6), Accommodation Camp (1), air conditioning (3), Hospitals (1), Waste Water Treatment Plant (1), Commercial Building (2), Schools (1).

Other Activities

- After many years of experience as a trainer and TOT, a non governmental organization founded in 2018 with name of ZER Organization for Science and Research Development, and I became the head of the organization up to now. We have a very good practical and academic staff to manage many training courses and also TOT.
- Member of Carrier Development Center board of the Erbil Polytechnic University under the UNICEF organization. Since Jan 2018 up to now. Our activities are to develop the practical parts of the university.
- Member of editorial board of Polytechnic Journal. Polytechnic Journal (Polytechnic J.) is a biannual academic journal with e-ISSN: [2707-7799](https://www.issn.org/issn/2707-7799) & p-ISSN: [2313-5727](https://www.issn.org/issn/2313-5727) and published by Erbil Polytechnic University, Erbil, KRG, Iraq. Polytechnic J. <https://journals.epu.edu.iq/index.php/polytechnic/about/editorialTeam> .
- Co-Founder of Qala engineering consultant. <https://www.qalaec.com> , <https://www.qalaec.com/younis>.
- Membership in Kurdistan Engineers Union, KEU.
- President of ZER Organization for Science and Research NGO.
- Member in Flower Organization for the development of herbal medicine culture NGO.
- Member of Editorial team – Polytechnic Journal – Erbil Polytechnic University.
- Member of higher education scientific committee at Erbil Polytechnic University.
- Member of student association committee at Erbil Polytechnic University.
- Member of exam objection’s committee at Erbil Polytechnic University.

Interests & Achievements:

Traveling around Europe and Republic of South Korea helped develop my communication skills through meeting a variety of people in the international environments.

Best Regards
YOUNIS KHALID KHDIR

Jan, 2024