

### SUMMARY

Over ten years of experience in research and academic settings,  
More than 22 years of traffic survey, traffic studies, pavement design/evaluation,  
and road geometric design experience using Autodesk Civil 3D.  
Advanced team-based experience reinforced by a strong work ethic and efficient  
project management skills

### EDUCATION

**Rutgers University, New Brunswick, NJ**  
Ph.D. in Civil and Environmental Engineering Department, 2018  
**Mustainsiriyah University, Baghdad, Iraq**  
M.Sc. in Highway and Transportation Engineering Department, 2005  
**Mustainsiriyah University, Baghdad, Iraq**  
B.Sc. in Highway and Transportation Engineering Department, 2002

### RELEVANT COURSES

Advanced Pavement Material & Modeling	Design Water Treatment Works
Advance Water Sup & Sewerage	Finite Element Methods Civil engineering
Advanced Geometric Design of Highway	Improvement and Stabilization of Soil
Advanced Highway Materials	Mechanistic Pavement Design
Advanced Pavement Design	Pavement Management, Preservation & Rehabilitation
Advanced Traffic engineering	Route Location and Economics of Highways
Airports and Railways Engineering	Soils Engineering
Applied Statistics	Statistical Engineering
Design Of Experiment	Transportation Planning

### PROJECTS AND WORK EXPERIENCE

- 1. VIAP (Versar International Assistance Program) Air Force Center for Environmental Excellence USA Sulaymaniyah-Iraq (18Jun 2006- 23 Feb 2008 )**
  - QA Engineer for construction Iraqi-Iranian point of entry in Bashmakh – Sulaymaniyah City, which includes Construction Rigid road and parking area and Bashmakh Bridge
  - QA Engineer for construction K-span in (H3) Al-Qaim city in Anbar.
- 2. Al-Hadatha Company for General Design - Baghdad, Iraq (May 2007 – Aug. 2007).**
  - Traffic survey and preparing traffic study of two main intersections within Baghdad city Al-Zuhoor and Haifa intersection within Baghdad city.
- 3. Al-Sadeem Design Company- Baghdad, Iraq (May 2006 –May 2007)**
  - Designing vertical and horizontal alignment Kut Bridge in the south of Iraq
  - Designing vertical and horizontal alignment of road and three overpasses in Al-Sumawa city (in the south of Iraq).
  - Designing vertical and horizontal alignment of six kilometers road Maymoon city in Al-Sumawa city ( in the south of Iraq)
- 4. Al-Mustainsiriyah University, Member of Engineering Consultancy Bureau, College of Engineering- Baghdad, Iraq (January 2007-Feb. 2008)**

Traffic Study and Designing vertical and horizontal alignment of

  - Al-Mustainsiriyah Square within Baghdad city (geometric design)
  - North of Al-Nasiriyah Bridge and 8 Km Road in the south of Iraq

- (geometric design).
- Al-Haj AlBarry Highway (240 Km Road) (geometric design).

This next work started with a traffic survey and preparing the final traffic study using O-D survey. My role is very complicated to cover around 65% of the whole assignment, while the other 35% related to soil investigation, feasibility study and bridge structural design.

- Al-Eshaqi bridge and its approaches, including three bridges and 9 km Road (geometric design and rout location).
- Tikrit new bridges and its approaches, including three bridges and 9 km Road (geometric design and rout location).
- Biji bridges and its Approaches in Tikrit city including eight bridges and 20 km Road) (geometric design and route location)

**5. Al-Qadisiyah University, Member in Engineering Consultancy Bureau, College of Engineering, Iraq- Qadisiyah (January 2011-January 2012)**

- Al-Rehab highway in Samawa city geometric design (124 Km Road)
- Kut-Badra Highway with 12 Bridges and two flyovers geometric design (58 km Road).
- Dibouni –Jassan Highway with three flyovers geometric (57 Km Road).

**6. Private work**

- Al-Tarbiya multi-layer bridge in al Basra city –geometric design (two levels)-2012
- Designing roads inside Al- Nahrin university - geometric design (2.25 km)-2012
- Al-Qaim main road design including 4 km road and one overpass (geometric design)-2019.
- Baghdad Gate project including 1 km road and one bridge (geometric design)-2020.
- Traffic study of Expressway No.1 (R9 section A) (*ongoing*) Republic of Iraq- Ministry of Construction and Housing- Roads and Bridges Directorate/Project Management Team/ Transport Corridors Project.
- Bodour Baghdad Compound traffic study and Geometric design (ongoing)

**RESEARCH EXPERIENCE**

**Rutgers University, New Brunswick, NJ**

*Research Assistant*, September 2016 – May 2018

- Manage the publication process, as a first author, compiling and organizing data for the principal investigator
- Studied new pavement energy harvesting techniques.

**EXPERIENCE IN UNIVERSITY**

**1. Mustainsiriyah University / College of Engineering - Baghdad, Iraq (Sept. June 2018 – present)**

Asst. Prof. at Highway and Transportation Department teaching the following courses:

- ME Pavement Design
- Highway programming
- Highway Geometric design
- Advanced Geometric Design of Highway

**2. Mustainsiriyah University / College of Engineering - Baghdad, Iraq (Sept. 2002 – Aug. 2012 )**

Lecturer at Highway and Transportation Department of the following:

- Transportation engineering
- Asphalt Technology
- Highway Maintenance

3. **Mustansiriyah University / College of Engineering - Baghdad, Iraq (Sep. 2004- May 2005)**

Lecturer of "Transportation Engineering" at the Civil Engineering Department

MEMBERSHIPS

- Member in Iraqi Engineering Syndicate since 2003 (ID No. 115577)
- Member in the Kurdistan Engineers Union since 2010 (ID No. 10149)
- Member of the ACI (American Concrete Institute) since 2007 (ID No. 01109997)
- Associate Member of the American Society of Civil Engineers (ASCE) since 2017 (ID No. 10764545)

HONORS & ACTIVITIES

The first student in the college award (2002) by The Ministry of Education  
Ph.D. Scholarship awarded from HCED Iraq- Prime Minister Office (Aug 2011)  
2016 Best Poster Award (October 2016). The 18th Annual NJDOT Research Showcase (2016) Best Poster Award.  
ASCE 2017 Innovation Award (Honorable Mention) (June 2017). ASCE 2017 Innovation award as an Honorable Mention for my work "Self-Sustained Roadway through Innovative Energy Harvesting Solutions."

CERTIFICATIONS

ACI (American Concrete Institute) [www.aci.org](http://www.aci.org)  
VIAP (Versar International Assistance Program) "Two Certification" [www.viap.org](http://www.viap.org)  
OSHA 10-Hour On-Line Training Course (<http://metrosafety.360training.com>)

SKILLS

Statistical Programs (SAS and STATISTICA), Microsoft office (Word, Excel, PowerPoint Visio), Grapher, Autodesk land development, Autodesk Civil 3D, COMSOL, ABAQUS, AASHTO ware, HCS 2010, SIDRA, TRANSIT7F.

RELEASED PAPERS

1. Hamed Alani, Namir G.Ahmed, **Abbas F. Jassim**, " *Development of Statistical Model for the Prediction Permanent Deformation in Paving Materials*," Alhandasah Magazine, Baghdad University, No.2, volume12, June 2006.
2. Khalaf T.Mohammed, Namir G.Ahmed, **Abbas F. Jassim**, " *Improvement of Traffic capacity for Al-Mutanabi Square in Kut City*," Alhandasah Magazine, Baghdad University, No.3, volume13, September 2006.
3. **Abbas F. Jasim**, " *Traffic Studies Importance in the Projects of New Highway Construction, Case Study Al-Eshaqi Highway*," Engineering and Development Journal, College of Engineering, Al-Mustansiriya University, No. 2, Volume 15, page 1 ISSN 1813-7822, June 2011.
4. Ahmed I. Ahmed, **Abbas F. Jasim**, " *Improvement of Traffic capacity for stadium intersection in Al-Samawah City*," Iraqi Journal of Civil Engineering, University of Al-Anbar, No.3, volume13, September 2011.
5. Albusoda, B. S., Al-Saadi, A. F., and **Jasim, A. F.** (2018). " *An experimental study and numerical modeling of laterally loaded regular and finned pile foundations in sandy soils*." Computers and Geotechnics, 102, 102-110.
6. **Jasim, A.**, Wang, H., Yesner, G., Safari, A., and Maher, A. (2017). " *Optimized design of layered bridge transducer for piezoelectric energy harvesting from roadway*." Energy, 141, 1133-1145.
7. **Jasim, A.**, Yesner, G., Wang, H., Safari, A., Maher, A., and Basily, B. (2018). " *Laboratory testing and numerical simulation of piezoelectric energy harvester for roadway applications*." Applied Energy, 224, 438-447.
8. **Jasim, A. F.**, Wang, H., Yesner, G., Safari, A., & Szary, P. (2019). *Performance Analysis of Piezoelectric Energy Harvesting in Pavement: Laboratory Testing and Field Simulation. Transportation Research Record, 2673(3), 115-124. <https://doi.org/10.1177/0361198119830308>*
9. Wang, H., Al-Saadi, I., Lu, P., and **Jasim, A.** (2019). " *Quantifying greenhouse gas emission of asphalt pavement preservation at construction and use stages using life-cycle assessment*." International Journal of Sustainable Transportation, 1-10.
10. Wang, H., **Jasim, A.**, and Chen, X. (2018). " *Energy harvesting technologies in*

- roadway and bridge for different applications—A comprehensive review." *Applied Energy*, 212, 1083-1094.
11. Yesner, G., Jasim, A., Wang, H., Basily, B., Maher, A., and Safari, A. (2018). "Energy Harvesting and Evaluation of a Novel Piezoelectric Bridge Transducer." *Sensors and Actuators A: Physical*.
  12. Yesner, G., Kuciej, M., Safari, A., Jasim, A., Wang, H., and Maher, A. "Piezoelectric energy harvesting using a novel cymbal transducer design." Proc., Applications of Ferroelectrics, European Conference on Application of Polar Dielectrics, and Piezoelectric Force Microscopy Workshop (ISAF/ECAPD/PFM), 2016 Joint IEEE International Symposium on the IEEE, 1-4.
  13. Yesner, G., Safari, A., Jasim, A., Wang, H., Basily, B., and Maher, A. "Evaluation of a novel piezoelectric bridge transducer." Proc., Applications of Ferroelectric (ISAF)/International Workshop on Acoustic Transduction Materials and Devices (IWATMD)/Piezoresponse Force Microscopy (PFM), 2017 Joint IEEE International Symposium on the IEEE, 113-115.
  14. Jasim, A. F., Wang, H., Thomas Bennert (2019). *Evaluation of Clustered Traffic Inputs for Mechanistic-Empirical Pavement Design: Case Study in New Jersey*. Transportation Research Record
  15. Yousif, R. A., Tayh, S. A., & Jasim, A. F. (2019, August). *Trip Distribution Gravity Model of Al-Diwaniyah City: A Case Study*. In AWAM International Conference on Civil Engineering (pp. 105-117). Springer, Cham.
  16. Abbas F. Jasim, Israa Al-Saadi, and Anmar Al-Saadi (2018). "Evaluation of the Impact of Existing Condition and Overlay Characteristics on Asphalt Overlay Design and Performance based on a Mechanistic-Empirical Approach". *International Journal of Engineering & Technology* Vol. 7 Issue 4.20. pp 351-355.
  17. Basim H. Al-Humeidawi and Abbas F. Jasim Huda A. Kadhim (2018). "Performance Evaluation of Conventional and High Modulus Asphalt Concrete with Novolac Polymer Modifier Using AASHTOware Software". *International Journal of Engineering & Technology* Vol. 7 Issue 4.20. pp 386-389.
  18. Jasim, A. F., Fattah, M. Y., Al-Saadi, I. F., & Abbas, A. S. (2020). Geogrid reinforcement optimal location under different tire contact stress assumptions. *International Journal of Pavement Research and Technology*, 1-9.
  19. Abdulwahab, A. M., Torki, H. A., & Jaism, A. F. (2020, June). *The Environmental Impact Reduction of Highway Traffic Congestion using Sustainable Tool*. In IOP Conference Series: Materials Science and Engineering (Vol. 870, No. 1, p. 012076). IOP Publishing.
  20. Ismael, M. Q., Fattah, M. Y., & Jasim, A. F. (2021). Improving the rutting resistance of asphalt pavement modified with the carbon nanotubes additive. *Ain Shams Engineering Journal*, 12(4), 3619-3627.
  21. Ismael, M., Fattah, M. Y., & Jasim, A. F. (2022). Permanent Deformation Characterization of Stone Matrix Asphalt Reinforced by Different Types of Fibers. *Journal of Engineering*, 28(2), 99-116.
  22. Yousif, R. A., Tayh, S. A., Al-Saadi, I. F., & Jasim, A. F. (2022). Physical and Rheological Properties of Asphalt Binder Modified with Recycled Fibers. *Advances in Civil Engineering*, 2022.
  23. Al, A. H., Jasim, A. F., & Rashed, A. M. (2022). Mechanistic analysis and durability of thiophene paving mixtures. *Journal of Materials in Civil Engineering*, 34(7), 06022002.
  24. Hasan, W. M., Yousif, R. A., Jasim, A. F., & Tayh, S. A. (2023). Enhancing Bitumen Properties through Worm Mix Asphalt Additives: A Study on Physical and Rheological Characteristics. In *E3S Web of Conferences* (Vol. 427, p. 03027). EDP Sciences.
  25. Khalaf, S. F., Yousif, R. A., Tayh, S. A., & Jasim, A. F. (2023). The Impact of Crumb-Rubber on the Mechanical Characteristics of Modified Asphalt Mixture. In *E3S Web of Conferences* (Vol. 427, p. 03042). EDP Sciences.

26. Ezzat, E. N., Al-Saadi, I. F., & Jasim, A. F. (2023). Effect of Multiple-Walled Carbon Nanotubes (MWCNTs) on Asphalt Binder Rheological Properties and Performance. *Advances in Civil Engineering*, 2023.
27. Yousif, R. A., Tayh, S. A., & Jasim, A. F. (2023). The Effect of Coconut Powder on Asphalt Binder Performance under Laboratory Conditions. *Journal of Engineering & Technological Sciences*, 55(5).
28. Al-Ghalibi, E. A., Al-Saadi, I. F., Mohamad, S. A., & Jasim, A. F. (2022, February). Experimental Study of HMA Absorption According to Aggregate Types and Asphalt Grade. In *AWAM International Conference on Civil Engineering* (pp. 3-14). Singapore: Springer Nature Singapore.
29. Al-Najati, I. A., Jasim, A. F., Chan, K. W., & Pung, S. Y. (2024). The future of tire energy: a novel one-end cap structure for sustainable energy harvesting. *Materials for Renewable and Sustainable Energy*, 1-28.
30. Al-Najati, I., Chan, K. W., Jasim, A. F., & Pung, S. Y. (2024). Development and Optimization of a New End-Cap Tire-Strain Piezoelectric Energy Harvester (TSPEH). *Energy Conversion and Management*, 303, 118109.

## LANGUAGES

Arabic (Native) and English

  
الأستاذ المساعد الدكتور  
عزت ع. ن.  
معاون العميد للشؤون العامة

  
الأستاذ الدكتور  
محمد هاشم محمد  
رئيس قسم هندسة الطرق والنقل

## السيرة الذاتية

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### ملخص تعريفي:

- اللقب العلمي: استاذ مساعد
- اللغات: الانكليزية, العربية.
- مجال الاهتمام: هندسة الطرق والنقل, التبليط الاسفلتي, برامجيات الطرق والنقل

### الشهادات الدراسية:

- Ph.D. هندسة مدنية/طرق ونقل: جامعة رنكرز- الولايات المتحدة الامريكية , (2018).
- M.Sc. هندسة طرق ونقل/ طرق ونقل:كلية الهندسة, الجامعة المستنصرية, العراق (2005)
- B.Sc. هندسة طرق ونقل,كلية الهندسة, الجامعة المستنصرية , العراق (2002)

### الجوائز والتكريم الاكاديمي:

- 10 شكر وتقدير, عميد كلية الهندسة, الجامعة المستنصرية, العراق
- 3 :: شكر وتقدير, رئيس الجامعة المستنصرية

### الخبرة الاكاديمية والتدريس:

- سنوات الخبرة : 23 سنة

### المقررات الدراسية التي تم تدريسها:

الدراسات العليا	الدراسات الاولية
	برمجة لغة اساس(المرحلة الاولى)
	مختبرات تربة (المرحلة الثالثة)
	برامجيات الطرق (المرحلة الرابعة)
	التصميم الهندسي للطرق (المرحلة الرابعة)
	التصميم الهندسي للطرق (الدراسات العليا)

### الانتساب المهني والجمعيات:

- لجان (عضو او رئيس لجان دائمية ومؤقتة في القسم بالاضافة الى لجان جامعية)
- عضو لجنة امتحانية
- عضو نقابة المهندسين العراقية
- عضو جمعية المهندسين العراقية

- Hamed Alani, Namir G.Ahmed, Abbas F. Jassim," *Development of Statistical Model for the Prediction Permanent Deformation in Paving Materials*," Alhandasah Magazine, Baghdad University, No.2, volume12, June 2006.
- Khalaf T.Mohammed, Namir G.Ahmed, Abbas F. Jassim," *Improvement of Traffic capacity for Al-Mutanabi Square in Kut City*," Alhandasah Magazine, Baghdad University, No.3, volume13, September 2006.
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- Yesner, G., Safari, A., Jasim, A., Wang, H., Basily, B., and Maher, A. "Evaluation of a novel piezoelectric bridge transducer." *Proc., Applications of Ferroelectric (ISAF)/International Workshop on Acoustic Transduction Materials and Devices (IWATMD)/Piezoresponse Force Microscopy (PFM), 2017 Joint IEEE International Symposium on the IEEE*, 113-115.
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- **Yousif, R. A., Tayh, S. A., Al-Saadi, I. F., & Jasim, A. F. (2022).** Physical and Rheological Properties of Asphalt Binder Modified with Recycled Fibers. *Advances in Civil Engineering*, 2022.

#### تطوير المهارات:

- شهادات لغة انكليزية (IC3)
- مؤتمرات
- ورش عمل

الاستاذ الدكتور  
**محمد هاشم محمد**  
رئيس قسم هندسة الطرق والنقل