Dr. Ahmed Attia M. DRAR

Associate Professor of Structural Engineering | Consultant Structural Engineer

Ph.D., Hokkaido University (Japan) · Egyptian Consultant Engineer (Concrete Structures)
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PROFESSIONAL PROFILE

Associate Professor of Structural Engineering and accredited Consultant Engineer with 17+ years spanning university teaching, applied research, and large-scale construction consulting. Holds a Ph.D. from Hokkaido University (Japan) with a specialization in the fatigue and service-life behaviour of reinforced-concrete bridge decks and FRP/FRCM strengthening. Combines a strong record of peer-reviewed publications in leading journals (including Engineering Structures and the Journal of Advanced Concrete Technology) with hands-on supervision of 200+ infrastructure projects. Seeking an Associate Professor position in a Gulf-region university to advance research-led teaching, postgraduate supervision, and industry-linked engineering programs.

KEY QUALIFICATIONS AT A GLANCE

Academic rank	Associate Professor of Structural Engineering
Highest degree	Ph.D., Hokkaido University, Japan (2016)
Specialisation	RC behaviour · fatigue · FRP/FRCM strengthening · FEA · bridges
Experience	17+ years across academia, research & consulting
Professional licence	Egyptian Consultant Engineer — Concrete Structures
Research impact	30+ peer-reviewed papers · ~74 Google Scholar citations

EDUCATION

Ph.D. in Structural Engineering — Hokkaido University, Sapporo, Japan **2013 – 2016**

- Dissertation: “Fatigue analysis of RC slabs with plain bars and FRP strengthening based on the bridging-stress-degradation concept.”
- Developed a computational fatigue-life prediction framework for RC slabs under moving load using Marc/Mentat with custom Fortran subroutines.
- Examination committee: Prof. T. Matsumoto (supervisor), Prof. H. Yokota, Prof. T. Kanie. Degree equivalency certified by the Egyptian Supreme Council of Universities.

M.Sc. in Structural Engineering — Assiut University, Egypt **2008 – 2012**

- Thesis: “Shear behaviour of high-strength fibre-reinforced concrete corbels” (experimental). General grade: Very Good (88%).

B.Sc. in Civil Engineering — Assiut University, Egypt **2002 – 2007**

- Graduated with Distinction with Honours (87.11%); ranked first in the Civil Engineering Department. Graduation project (RC structures): Excellent.

ACADEMIC & TEACHING EXPERIENCE

Associate Professor, Civil Engineering — Sohag University, Egypt **2023 – Present**

- Lead undergraduate and postgraduate instruction in Reinforced Concrete Design, Structural Analysis, and Bridge Engineering, emphasising design codes and practical application.
- Supervise graduate research on RC strengthening, fatigue, and finite-element modelling; mentor teaching assistants and contribute to curriculum modernisation and accreditation activities.

Assistant Professor, Civil Engineering — Sohag University, Egypt **2016 – 2023**

- Delivered core structural-engineering courses and developed updated course material aligned with international practice.
- Built a sustained research output on RC behaviour, FEA, structural strengthening, and steel-girder stability, published in national and international journals.

Teaching Assistant / Demonstrator — Sohag & Assiut Universities, Egypt **2007 – 2016**

- Supported teaching of reinforced-concrete design and civil-engineering subjects while completing M.Sc. and Ph.D. research and working as a practising structural designer.

PROFESSIONAL & CONSULTING EXPERIENCE

Chief Executive Officer — El-Watany Engineering Consulting Office, Egypt **2019 – 2025**

- Directed a full-service civil-engineering consultancy covering structural design, analysis, project management, and technical documentation, leading multidisciplinary teams to deliver projects on time and within budget.

Engineering Consultant to the Governor — Governorate of Sohag, Egypt **2019 – 2024**

- Served as engineering advisor to the Governor on public infrastructure, advising on technical review, compliance, cost-effectiveness, and quality control for governmental buildings, fire stations, markets, parking facilities, and bridges.
- Member of the Higher Committee for Urban Governance and Building-Permit Regulation in Sohag Governorate.

Civil Engineering Consultant — Engineering Consulting Office, Faculty of Engineering, Sohag University **2016 – Present**

- Oversee the full project lifecycle for hundreds of projects: geotechnical investigation, cost estimation, on-site quality control, and contract-compliance monitoring.

Structural Designer / Software Trainer — Assiut (Eng. Office of Prof. Y. Abdel-Azeem; JELCOM Training Center) **2007 – 2010**

- Produced professional structural designs and trained engineers in the CSI suite (SAP2000, SAFE, ETABS) through in-class and online delivery.

SELECTED PROJECTS & KEY ASSIGNMENTS

- Designed and supervised 36+ projects with the Egyptian Armed Forces under the national “Haya Karima” (Decent Life) initiative in Sohag.
- Full structural design of El-Foaad International Language School, Sohag; design and supervision of 8 fire stations, 5 urban markets, and 7 multi-storey car parks across Sohag.
- Structural design and supervision of an Olympic-standard stadium and several faculty buildings at Sohag University.
- Supervision of the reinforced-concrete Thaqfa–Sohag bridge and the Akhmim Correctional & Rehabilitation Center.
- Established and oversaw 11+ materials-testing laboratories for Haya Karima projects; authorised by the Armed Forces for soil-boring and quality-control activities on government infrastructure.

SELECTED PEER-REVIEWED PUBLICATIONS

Author of journal and conference papers on RC fatigue, strengthening, and steel-structure stability (Google Scholar: ~74 citations). Selected works:

1. Drar, A. A. M., & Matsumoto, T. (2016). *Fatigue analysis of RC slabs reinforced with plain bars based on the bridging stress degradation concept.* Journal of Advanced Concrete Technology, 14(1), 21–34.
2. Qureshi, A. E. K., Tohamy, S. A., Saddek, A. B., & Drar, A. A. M. (2021). *Numerical study of the flange buckling behaviour of trapezoidally corrugated web girders.* Engineering Structures, 247, 113120.
3. Tawfic, Y. R., Hassanean, Y., El-Hamdy, M. A., & Drar, A. A. M. (2026). *Fatigue performance of one-way RC slabs strengthened in flexure with NSM steel and FRP bars.* Civil and Environmental Engineering.
4. Drar, A. A. M., & Matsumoto, T. (2017). *Fatigue analysis of FRP-strengthened RC slabs reinforced with plain bars under moving load.* In Sustainable Civil Infrastructures: Innovative Infrastructure Geotechnology. Springer.
5. Nagah, M., Arafa, A., Drar, A. A. M., & Hassanean, Y. (2020). *Nonlinear finite-element analysis for RC beams strengthened with fabric-reinforced cementitious matrix.* JES: Journal of Engineering Sciences, 48(4), 554–576.
6. Drar, A. A. M., Nagah, M., Arafa, A. N., & Hassanean, A. (2022). *Numerical parametric study of RC beams strengthened with fabric-reinforced cementitious matrix (FRCM).* Sohag Engineering Journal, 2(2), 120–137.
7. Ahmed, M. M., Diab, H., & Drar, A. A. M. (2012). *Shear behaviour of high-strength fibre-reinforced concrete corbels.* JES: Journal of Engineering Sciences, 40(4), 969–987.
8. Abdelsamie, K., Drar, A. A. M., Mohamed, G. G., & Ismail, S. H. (2021). *Preference of using nano-silica/magnetite core–shell on enhancing mechanical and morphological properties of cement mortar.* International Journal of Applied Engineering Research, 16(1), 53–66.

A full publication list (including conference proceedings presented in Japan, Vietnam, and Egypt) is available on request or via Google Scholar.

CORE COMPETENCIES & TECHNICAL SKILLS

- Reinforced concrete & prestressed design
- Fatigue & service-life of RC bridge decks
- Structural analysis & stability of steel girders
- Bridge engineering & infrastructure design
- Construction supervision & quality control
- SAP2000 · SAFE · ETABS · AutoCAD
- Curriculum development & accreditation support
- Finite-element modelling (Marc/Mentat, FEA)
- FRP / FRCM & NSM strengthening systems
- Structural health assessment & damage evaluation
- Geotechnical investigation & soil boring
- Cost estimation & contract compliance
- Fortran · MATLAB-style numerical scripting
- Postgraduate supervision & research mentoring

CERTIFICATIONS, MEMBERSHIPS & APPROVALS

- Consultant Engineer — Design of Concrete Structures, Egyptian Syndicate of Engineers (Consultant Engineer No. 515/34; Engineering Branch 7333/1).
- Associate Professor (academic rank) in Structural/Civil Engineering, approved by the Egyptian Supreme Council of Universities.
- Officially authorised by the Egyptian Armed Forces for soil-boring works and for quality-control activities on national projects.
- Appointed Engineering Consultant to the Governor of Sohag for infrastructure assignments.
- Professional development: digital-transformation, e-course design, anti-corruption awareness, and program/course specification (ROCs) certificates, Sohag University.

SELECTED ACHIEVEMENTS

- Ranked 1st in the Civil Engineering Department, Assiut University (B.Sc., 2007).
- Awarded a fully funded Ph.D. scholarship to Hokkaido University, Japan (2013).
- Supervised 200+ construction projects across residential, commercial, institutional, and infrastructure sectors.

LANGUAGES

Arabic (native) · **English** (professional — instruction & publication) · **Japanese** (basic, from Ph.D. residency).

REFERENCES

Prof. Takashi Matsumoto — *Ph.D. supervisor*
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Prof. Talaat Ali — *Academic referee*
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