

**C.V.**  
**AHMED MAHMOUD AZMY IBRAHIM**  
Cairo - Egypt  
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**PERSONAL DATA:**

Date / place of birth: January 27, 1961/ Cairo – EGYPT  
Nationality: Egyptian  
Material status: Married, with four children's  
Interests include: Computers and volleyball

**EDUCATION:**

Professor                      Supreme Council of Universities, 2010  
Associate Professor        Supreme Council of Universities, 2001

Ph.D., Civil Engineering, March 1991  
University of Maryland, College park, Maryland, USA  
Major: Structural Engineering  
Minor: Structural Uncertainty  
GPA: 3.785/4.0

M.Sc., Civil Engineering, December 1987  
University of Maryland, College park, Maryland, USA  
Major: Structural Engineering  
Minor: Structural Reliability  
GPA: 3.625/4.0

B.Sc., Civil Engineering, May 1982  
King Abdel-Aziz University, Jeddah, K.S.A.  
Major: Structural Engineering  
Area of specialization: computerized analysis and design of structures  
GPA: 4.3/5.0

**DOCTORAL DISSERTATION:**

“A Risk-Based Inspection Methodology for Structural Systems” The main objective of this research was to develop an inspection strategy for inspection of structural systems ( failure modes, components, subsystems and systems ) based on explicit consideration of risk of failure, consequences and the uncertainty associated with them. A new methodology was proposed and analytically investigated.

**MASTER'S THESIS:**

“Redundancy and Reliability of Prestressed Trusses”. The goal of the study was to rehabilitate the existing deficient truss bridges. A computer program was developed to perform the structural stiffness analysis of prestressed trusses. The effect of prestressing truss systems was evaluated and a comparison based on the efficiency ( reliability and redundancy ) of the tendons layout used for prestressing was addressed.



## **AWARDS AND SCHOLARSHIPS:**

- Scholarship from Maryland University to fulfill Master Degree;
- First Award from BEST-Center, USA for Bridge Construction;
- Scholarship from Maryland University to fulfill Doctoral Degree;
- Scholarship from CDG, Germany to fulfill Eng. Management Diploma.

## **PROFESSIONAL ACTIVITIES & MEMBERSHIPS:**

- Member of the Syndicate of Engineers,
- Member of the ASCE,
- Member of the ACI,
- Member of the Local organization committee of the First International Symposium on Uncertainty Modeling and Analysis, ISUMA' 90,
- Co-Chairs of the Technical program of ISUMA' 90,
- Member of the organization committee of the First International Conference on Operations Research and its Applications,
- Member of the Civil Engineering proposal Implementing Monitoring Committee for Engineering Education Development project,
- Member of the Egyptian Concrete Society,
- Member of the Engineering Committee of El-Zohour Club,
- Member of the Association for the Development of New Urban Communities,
- Editor and Member of the local organization committee of the International Conference on Parametric Optimization and Related Topics,
- Reviewer of the American Concrete Institute ACI,
- Supervisor of field training,
- Chairman of student union committee,
- Member of the HTI higher committee for educational quality assurance,
- Supervisor of graduate projects,
- Co-Chair persons of the Plenary Session of EMPOWER Tunisia 2013
- Supervisor for civil engineering laboratories.

## **TEACHING PHILOSOPHY:**

Civil engineering is one of the engineering fields that concerns with environment, its changes, and its developments to create an environment that satisfies their needs. My teaching vision is to prepare a generation of civil engineers distinguished with their belonging to their local society and environment, and the responsibility that they take over. They have their innovated and scientific thought in suggesting solutions to the problems that face them. This can be done through:

- Providing students with the fundamentals necessary to evolve in the profession in response to changing technology and societal needs and expectations.
- Enabling students to address complex and multi-faceted engineering problems.
- Offering the preparation and fostering of intellectual curiosity needed for studies and research.
- Finally using technical, teamwork, and communication skills, along with leadership principles.

## **LIST OF TAUGHT COURSES:**

### *Under graduate Courses:*

- Strength of Materials;
- Mechanics for Civil Engineering;
- Structural Analysis ( 5 Levels);
- Computer Programming;
- Auto-Cad Applications;

### *Advanced Courses:*

- Modern Techniques for Structural Analysis;
- Computer Applications in Civil Engineering;
- Advanced Strength of Materials;
- Finite Element Methods;
- Selected Topics in Civil Engineering;
- Engineering Analysis

## ACADEMIC POSITION HELD:

- **Chairman**  
Civil Engineering Department  
Higher Technological Institute  
6<sup>th</sup> of October City Branch  
2019- Present
- **Vice Dean for Community Service and Environmental Development**  
Higher Technological Institute  
10<sup>th</sup> Ramadan City  
2018 - 2019
- **Chairman**  
Civil Engineering Department  
Higher Technological Institute  
6<sup>th</sup> of October City Branch  
2015- 2018
- **Dean**  
Higher Technological Institute  
6<sup>th</sup> of October City - Branch  
2014 - 2015
- **Professor (Mechanics and Structural Analysis)**  
Civil Engineering Department  
Higher Technological Institute  
10<sup>th</sup> Ramadan City  
2012- 2014
- **Dean**  
Faculty of Engineering  
El-Asher University  
Badr City  
2011- 2012
- **Chairman**  
Civil Engineering Department

Higher Technological Institute  
10<sup>th</sup> Ramadan City  
2003- 2011

- ***Associate Professor***

Civil Engineering Department  
Higher Technological Institute  
10<sup>th</sup> Ramadan City  
2001- 2003

- ***Assistant Professor***

Civil Engineering Department  
Higher Technological Institute  
10<sup>th</sup> Ramadan City  
1993-2001

- ***Head of Education Planning and Management Dep.***

Higher Technological Institute  
10<sup>th</sup> Ramadan City  
1993-1993

- ***Assistant Professor & Acting Chairman***

Civil Engineering Department  
Higher Technological Institute  
10<sup>th</sup> Ramadan City  
1991-1993

- ***Part Time Assistant Professor***

Banha High Institute of Technology  
Banha  
1991-1993

- ***Research Associate***

Department of Civil Engineering  
University of Maryland, Maryland, USA  
1987-1991

**POSTGRADUATE SUPERVISION:**



- Supervisor for M.Sc. Degree at Cairo University, Faculty of computers & Information. "A non linear closed form optimization for design of reinforced concrete columns" January 2006, Cairo, Egypt.
- Supervisor for M.Sc. Degree at AL-Azhar University, Faculty of Engineering. "Material effect of concrete properties" May 2007, Cairo, Egypt.
- Supervisor for PhD. Degree at Helwan University, Faculty of Physical Education for Girls. Department of sports Management and Reaction. "Evaluation of sport facilities at the university Education in New Urban Communities in light of the New Urban Quality Standards" September 2012, Cairo, Egypt.
- Supervisor for M.Sc. Degree at AL-Azhar University, Faculty of Engineering. "Effect of different CFRP wrapping schemes on the properties of concentric short reinforced square columns" March 2015, Cairo, Egypt.

**PRACTICAL POSITION HELD:**

- ***Certified Design Consultant***  
for Reinforced Concrete Structural Projects.  
2001 – present
- ***Certified Supervising Consultant***  
for Reinforced Concrete Structural Projects.  
2000 – present
- ***Civil Engineering Consultant for Higher Technological Institute***  
for Structural Projects.  
2003 – 2011
- ***Consultant & Managing Director***  
Future Consultant Office for Design & Contracting  
1995- 2003
- ***Structural Design Engineer***  
Dorra Space Consultants  
1985-1986
- ***First Lieutenant Engineer***

Egyptian Army  
Engineering Division  
1983-1985

- ***Engineer Trainee***  
Arab Builders Company  
Jeddah, K.S.A.  
1982-1983

### **PRACTICAL EXPERIENCE:**

- Develop a Truss Rating and Analysis prestressed program (TRAP), for The Federal Highway Administration, Department of Transportation, Maryland, USA, 1987.
- Experimental and analytical studies performed on a prestressed concrete distribution panel for Potomac Electric Power Company, Maryland, USA, 1988.
- Develop a Sign Bridge program (SBP for The State Highway Administration, Bureau of Traffic Engineering, Maryland, USA, 1989.
- Develop a DESCUS I&II programs versions on IBM computers for The Federal Highway Administration, Department of Transportation, Maryland, USA, 1991.
- Complete Architectural, Civil, Electrical & Plumbing Design works and Supervision for Building of Future owner corporation (2 under-ground-floors +ground+9 repeated floors), Cairo, 1995.
- Complete Architectural, Civil, Electrical & Plumbing Design works and Supervision for Building of Eng. Mohamed Hassan (1 under-ground-floors +ground+9 repeated floors), Cairo, 1997.
- Complete Architectural, Civil, Electrical & Plumbing Design works and Supervision for Building of of Mr. Khalid AbdElhady (ground+4 repeated floors), Alexandria, 2000.
- Complete Architectural, Civil, Electrical & Plumbing Design works and Supervision for Lessee school (ground & top floor), Cairo, 2001.

- Civil Design works for Commercial residential tower (1 under-ground-floor +ground+10 repeated floors), Cairo, 2001.
- Civil Design works and Supervision for MITI Compound Project (200000 m<sup>2</sup>) for MITI Company, Ras-Sidr, 2007.
- Architectural Planning Works for Tourist Village (300000 m<sup>2</sup>) for MITI Company, Matroh, 2009.
- Civil Design works for Foundation of “Hommeiat” Hospital for Medical Insurance Organization, Kom-Ombo, 2010.

### **PUBLICATIONS:**

- Ahmed Azmy ( 1987 ). “Redundancy and Reliability of prestressed Trusses, “Master’s.Thesis, University of Maryland.
- Ayyub, Bilal M., and Ahmed Azmy ( 1988 ) “Reliability-Based Design of prestressed Truss Bridges, “Symposium on Reliability-Based Design in Civil Engineering, Lausanne, Switzerland, Sponsored by : Swiss Federal Institute of Technology, Department of Civil Engineering.
- Ayyub, Bilal M., and Ahmed Azmy ( 1988 ) “Reliability and Redundancy Assessment of prestressed Truss Bridges,” Symposium on Bridge Research in progress, Des Moines, Iowa , Sponsored by: The National Science Foundation.
- Ayyub, Bilal M., and Ahmed Azmy ( 1989 ) Poster Session “Post-Tensioned Steel Bridges,” 1989 National Steel Construction Conference, Nashville, Tennessee, Sponsored by: The American Institute of Steel Construction.
- Ayyub, Bilal M., and Ahmed Azmy ( 1989 ) “Reliability and Redundancy Assessment of prestressed Truss Bridges,” 5<sup>th</sup> International Conference on Structural Safety and Reliability, San Francisco, California, Sponsored by : International Association for Structural Safety and Reliability.
- Ayyub, Bilal M., and Ahmed Azmy and Schelling, David ( 1990 ). “Post-Tensioned Trusses : Analysis and Design,” J. Structural Eng., ASCE,116 (6).
- Ayyub, Bilal M., and Ahmed Azmy ( 1990 ). “Post-Tensioned Trusses : Reliability and Redundancy,” J. Structural Eng., ASCE,116 (6).
- Ahmed Azmy and Ayyub, Bilal M. ( 1990 ). “Modeling Judgment Uncertainty in Inspection of Industrial Facilities,” The First International Symposium on Uncertainty



Modeling and Analysis. Proceedings of ISUMA '90 University of Maryland, College Park, Maryland, USA. December 3-5.

- B. M. Ayyub and Ahmed Azmy ( 1991 ). “Risk-Based Inspection -Development of Guidelines,” Vol. 1 General Document, CRTD-Vol. 20-1, ASME.
- Ahmed Azmy ( 1991 ). “A Risk-Based Inspection Methodology for Structural Systems,” Ph.D. Dissertation, University of Maryland.
- Ahmed Azmy and B M. Ayyub, ( 1992 ) “Uncertainty in risk-based inspection of complex systems,” in : B M. Ayyub, M.M. Gupta and L.N. Kanal, eds, Analysis And Management of Uncertainty : Theory and Applications, North-holland, Amesterdam.
- Ahmed Azmy (1993). "Risk-based Ranking in inspection of facilities," Al-Azhar Engineering Third International Conference.
- Ahmed Azmy (1994). “Multi-criteria ranking of components according to their priority for inspection,” The First International Conference on Operations Research and its Applications.
- Ahmed Azmy and M. Eid, (1999). “Cost-optimum Design for Shear Reinforced Concrete Beams,” ACI, Structural Journal Vol. 96 No. 1
- Ahmed Azmy and M. Eid, (1999). “Cost-optimum Design of Reinforced Concrete Beams based on Strength & Ductility & Serviceability Requirements and Practical Consideration,” Journal of Engineering and Applied Science, Vol. 46, No. 3
- Ahmed Azmy and M. Eid, (2000). “Minimum Cost for Complete Design of Reinforced Concrete Beams based on ACI Requirements and Architectural Considerations,” Journal of Engineering and Applied Science, Vol. 47, No. 3
- Ahmed Azmy (2001). “Exact & Simplified analysis of Pin-Ended Girder,” Civil Engineering Research Magazine, Vol. 23, No. 1
- Ahmed Azmy (2001). “Flexibility and Stiffness of Non-Prismatic Member,” Civil Engineering Research Magazine, Vol. 23, No. 1
- Ahmed Azmy and M. Eid (2001). “Multi-Criteria Optimum Design Based for Reinforced Concrete Isolated Footing,” International Conference on Multiple Criteria Decision Making, HTI, 10<sup>th</sup> of Ramadan City
- Ahmed Azmy (2002). “Steel Structure Design and Optimization,” Civil Engineering Research Magazine, Vol. 24, No. 2

- Ahmed Azmy (2002). "Closed Form Analysis of Two-Span Continuous Girders Subjected to Concentrated Loads," Civil Engineering Research Magazine, Vol. 24, No. 3
- Ahmed Azmy (2002). "Optimization of Concrete Structures," Civil Engineering Research Magazine, Vol. 24, No. 4
- Ahmed Azmy and Esam Khalifa (2005). "An experimental Study on Strengthening of High-Strength Reinforced Concrete Columns Using Contacted and Non-Contacted Steel Jacket," Civil Engineering Research Magazine, Vol. 27, No. 1
- Ahmed Azmy and Mohamed Elmetwally (2006). "Investigation of the Effectiveness of Full and Partial Jacketing for Reinforced Concrete Columns," Civil Engineering Research Magazine, Vol. 28, No. 3
- Hossam E.M. Sallam, Ahmed Azmy, Amr S. Sherbini, and Mohamed I. El-Barbary (2007). "Effect of Volume Fraction of Fine Aggregate on the Mechanical Properties and Impact Resistance of HSC and FRC," Al-Azhar Engineering Ninth International Conference, April 12-14.
- M. Alshihri, Ahmed Azmy and Mousa S. El-Bisy (2007). "Application of Neural Networks in the Prediction of Compressive Strength of High Strength Concrete," Civil Engineering Research Magazine, Vol. 29, No. 2
- Sallam, Hossam E.M., Ahmed Azmy and Sayed, Saad A.A (2007). "Failure Analysis of Polyester Matrix Composite Under Static and Cyclic Loadings," 9<sup>th</sup> Arab International Conference on Polymer Science & Technology, November 18-22.
- M. Alshihri, Ahmed Azmy and Ibrahim S. El-Bisy (2007). "Stability and Collapse Analysis of Braced Domes," Civil Engineering Research Magazine, Vol. 29, No. 3
- Ahmed Azmy, A. A. Tharwat, B. S. Nofal (2008). " A Closed Form Solution for Optimum Cost Design of Short Tied Reinforced Concrete Columns Subjected to Axially Concentrated Load," Civil Eng. Research Magazine Vol. 30, No. 3
- Marai M. Alshihri, Ahmed Azmy and Mousa S. El-Bisy (2009). " Neural Networks for Predicting Compressive Strength of Structural Light Weight Concrete," ScienceDirect, Elsevier Editorial System(tm) for Construction and Building Materials 23
- Ramy Moustafa, Ahmed Azmy, Hosam Sallam and Said Elkholy (2010). "Assessment of mode II fracture toughness of concrete containing waste materials " Ain Shams Journal of Civil Engineering Vol. 2

- Ramy Moustafa, Ahmed Azmy, Hosam Sallam and Said Elkholy (2010). "Analysis of mixed mode fracture in concrete " 12<sup>th</sup> International Conference on Non-conventional Materials and Technologies “Materials & Technologies for Sustainable Infrastructure Systems” (IC-NOCMAT 2010) HBRC
- Rasha El Gohary, Ahmed Azmy (2012). “Water Projects and New Methodology for Managing Non-Conventional Water Sources in Egypt” Exceed Regional Expert Workshop on Water Losses Management in Water Supply Systems - Antalya, Turkey
- Rasha El Gohary, Ahmed Azmy (2013). “In-Stream Wetland as a Low Cost Wastewater Treatment Technique” International Symposium on Emerging Pollutants in water resources used for irrigation, their origins, fate, potential risks and tools for mitigation held in Hammamat, November 25-28, Tunis
- Ahmed Azmy (2014). “Implementation of Sustainable Water Management Curriculum at Private Engineering Institutes - a case study from Egypt” Regional Expert Workshop on: Implementation of Sustainable Water Management Curriculum at University Level in Africa. May 26<sup>th</sup> – June 1<sup>st</sup>, 2014 / Ouagadougou, Burkina Faso
- El Kholy S.A., Azmy A.M. , Al-tersawy S.H, Eldeeb M.M (2015) “Effect of different CFRP wrapping schemes on the properties of concentric short reinforced square columns “Civil Engineering Research Magazine, Vol. 37 , No. 2
- Ahmed Azmy (2017) ‘Environmental and Sustainable Guidelines for Integrated Municipal Solid Waste Management in Egypt’ International Conference 2017 On Advanced Technology in Waste Water and Waste Management for Extractive Industries. October 23-24, 2017 / Nusa Dua, Bali – Indonesia

#### **CONFERENCES ATTENDED:**

- Symposium on Reliability Based Design in Civil Eng. In Switzerland, 1988.
- Symposium on Bridge Research in progress, in USA, 1989
- National Steel Construction Conference, In USA, 1989.
- International Conference on Structural Safety and Reliability, in USA, 1989.
- International Symposium on Uncertainty Modeling and Analysis, USA, 1990.
- Al-Azhar Engineering Third International Conference, Cairo, 1993.
- International Conference on Operation Research and its applications, Cairo, 1994.
- International Conference on M C D M. HTI - Cairo, 2001.

- 4<sup>th</sup> International Conference on Civil and Architecture Engineering, Military Technical College – Cairo, 2002
- 10<sup>th</sup> International Colloquium on Structural and Geotechnical Engineering, Ain Shams University - Cairo, 2003
- Al-Azhar 7<sup>th</sup> international conference – Cairo, 2003
- 38<sup>th</sup> Conference on Statistics & Computer Science and Operations Research, Cairo, 2003
- International Conference on Parametric Optimization and Related Topics, HTI - Cairo, 2005
- Al-Azhar Engineering Ninth International Conference, Cairo, 2007
- 9<sup>th</sup> Arab International Conference on Polymer Science & Technology, Cairo, 2007
- Expert Seminar on Sustainable Flood Risk Analysis and Management 19. – 30. September 2011, Bahir Dar /Ethiopia
- Workshop on Water Footprint and Transboundary Water in Middle East Countries, Mansoura, Egypt, April 13-17, 2012
- Exceed Regional Expert Workshop on Water Losses Management in Water Supply Systems held in Antalya, Turkey, September 25-29, 2012
- International Symposium on Emerging Pollutants in water resources used for irrigation, their origins, fate, potential risks and tools for mitigation held in Tunis, November 25-28, 2013
- The international Conference in Water and Energy in the Nile Basin, Possibility of Integration and Development, February 26-27, 2014, Cairo/Egypt
- Regional Expert Workshop on: Implementation of Sustainable Water Management Curriculum at University Level in Africa. May 26<sup>th</sup> – June 1<sup>st</sup>, 2014 / Ouagadougou, Burkina Faso
- The 3<sup>rd</sup> International Conference on Rainwater Catchment Systems which will be held in Birjand (Iran) on 18-19 February, 2015.
- International Conference 2017 on Advanced Technology in Waste Water and Waste Management for Extractive Industries. October 23-24, 2017 / Nusa Dua, Bali - Indonesia