

## Prof. RAED M. SAMRA

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### Summary

- Dean, Faculty of Engineering and Technology, University of Jordan
- Professor of Structural Engineering
- Graduate of the University of Illinois at Urbana-Champaign, USA and American University of Beirut, Lebanon
- Actively involved in research, teaching and training since 1982
- Specializing in design of reinforced and prestressed concrete structures, modeling of structures, computer assisted design, repair and rehabilitation of structures, advanced materials for construction and repair
- Former Head of Department of Civil Engineering, Vice-Dean at University of Jordan, Amman, Jordan and Dean of Faculty of Engineering at Al-Balqa' Applied University, Salt, Jordan
- Recipient of Fulbright grant, as visiting scholar to University of California at Los-Angeles (UCLA), USA
- Provides consultancy, expert opinion and structural design services to engineering firms
- Consultant to M.K. associates, on the design of the Medical City, Khartoum, Sudan
- Chair of several committees, including chairing the committee, assembled by Jordan Engineers' Association, to establish criteria and guidelines for the award of excellence and merit based on outstanding work and accomplishment
- Author of several technical papers in the structural journal of the American Concrete Institute (ACI) and the journal of structural engineering of the American Society of Civil Engineers (ASCE)
- Technical Referee, Structural Journal of the American Society of Civil Engineers (ASCE)
- Chairman of the committee in charge of Campus Planning and Organization of Buildings, and the committee on Investment Projects, at the University of Jordan

### Education

- ☐ Ph.D. in Structures, 1982  
University of Illinois at Urbana-Champaign  
Urbana, IL 61801  
U.S.A.
- ☐ M.S. in Structures, 1979  
University of Illinois at Urbana-Champaign  
Urbana, IL 61801  
U.S.A.
- ☐ B.Sc. in Civil Engineering, 1976  
American University of Beirut  
Beirut, Lebanon.

## Areas of Specialization

Reinforced and prestressed concrete structures, modeling of structures, computer assisted design, maintenance and rehabilitation of structures, advanced materials for construction and repair.

## Areas of Interest

Steel structures, concrete technology.

## Professional Experience

- 2007-to-date    **Dean**  
Faculty of Engineering and Technology  
**University of Jordan**  
Amman-JORDAN
- 2004-to-date    Professor  
Faculty of Engineering and Technology  
University of Jordan  
Amman-JORDAN
- 2002-2004      **Dean**  
Faculty of Engineering  
**Al-Balqa' Applied University**  
Al-Salt, JORDAN
- 1999-2002      Associate Professor, then Professor  
Faculty of Engineering and Technology  
University of Jordan  
Amman-JORDAN
- 1998-1999      Associate Professor (on Sabbatical leave)  
Department of Civil Engineering  
Faculty of Engineering  
**Applied Science University**  
Amman-JORDAN
- 1997-1998      Associate Professor  
Faculty of Engineering and Technology  
University of Jordan  
Amman-JORDAN
- 1995-1997      **Vice-Dean**  
Faculty of Engineering and Technology  
**University of Jordan**  
Amman-JORDAN
- 1992-1995      **Head of Civil Engineering Department**  
Faculty of Engineering and Technology  
**University of Jordan**  
Amman-JORDAN
- 1991-1992      Visiting Scholar  
**Recipient of Fulbright Grant**  
**University of California at Los-Angeles**  
Los-Angeles, Ca 90024  
U.S.A.

- 1982-1991      Assistant, then Associate Professor  
 Department of Civil Engineering  
 Faculty of Engineering and Technology  
 University of Jordan  
 Amman-JORDAN
- 1977-1978      Teaching and Research Assistant  
 Department of Civil Engineering  
 Faculty of Engineering and Technology  
 University of Jordan  
 Amman-JORDAN
- 1977-1978      **Structural Design Engineer**  
 (Also)          **Engineering Office**  
 University of Jordan  
 Amman-JORDAN
- 1976-1977      **Site Engineer**  
**Project of 3<sup>rd</sup> Expansion of Jordan Oil Refinery**  
 Bureau of Engineering Services  
 Amman-JORDAN

**Academic Activities**-sample of which:

- Supervising Ph.D. dissertations and M.Sc. thesis for graduate students.
- Supervising final year undergraduate students taking projects in structural engineering.
- Member of examining committees of more than one hundred graduate students.
- Teaching courses to graduate students, including:
  1. Behavior of reinforced concrete elements
  2. Behavior of reinforced concrete structures
  3. Reinforced concrete slabs
  4. Matrix analysis of structures
  5. Prestressed concrete
- Teaching courses to undergraduate students, including:
  1. Statics
  2. Elementary structural analysis
  3. Indeterminate structural analysis
  4. Reinforced concrete 1, 2 & 3
  5. Steel
  6. Applied structures 1 & 2 (for students of Architecture)
- Member of many committees entrusted with appointment or promotion of faculty members, reviewing department curriculum, preparing specifications to upgrade equipment of heavy structures laboratory, assessing the future expansion needs of the faculty of engineering at Al-Hashemia University.

**Professional Activities**-sample of which:

Consultant for a number of engineering works including:

- M. K. Associates: design of Medical City, Khartoum, Sudan, March - June 2008.
- The Hashemite University: expert opinion on the causes of lift off and dismantling of gymnasium steel roof cladding, Zarqa, 2008.
- Kayyali and Fasheh-Architects and Engineers: upgrading structural engineering services through training and transfer of know how to structural engineers at company. Lessons employed directly to design at hand of the UNRWA head office building, Amman, 2005.
- Ministry of Public Works: investigating and submitting a technical report identifying the causes leading to the partial collapse of a (cast-in-situ/precast concrete) building in the Northern Jordan Valley, Jordan, 2002.

- Dar Al Omran (formerly Shbeilat-Badran & Associates): design of Museum of Islamic Arts, Doha, Qatar, 1998-1999.
- Consolidated Consultants: evaluation and rehabilitation of the Shidiya railway link, Jordan, 1996.
- Arab Center for Engineering Studies: design of raft and pile foundations of multistory buildings, Yemen, 1994.
- Greater Amman Municipality: investigation of the collapse of a multistory building under construction in Nazzal quarter, Amman, 1993.
- Greater Amman Municipality: investigation of the collapse of Safeway bridge/tunnel intersection during construction, Amman, 1993.
- Da'ud Toukan Establishment: rehabilitation of Al-Yasmin Wings hotel, Amman, 1992.
- Sigma Engineering Company: review of structural design of Al-Awqaf 23-story commercial market, Amman, 1990.
- Al-Amal Cancer Center: supervision of construction and repair work, Amman, 1989.

#### **Miscellaneous Activities**-sample of which:

##### A. (outside university)

- Chair, committee entrusted with the task of establishing criteria and guidelines for the award of excellence and merit based on outstanding work and accomplishment, organized by Jordan Engineers Association (JEA), Amman, 2007.
- Chair, steering committee, 4<sup>th</sup> Jordanian Civil Engineering Conference, organized by Jordan Engineers Association (JEA), Amman, 2006.
- Member, committee for upgrading educational services at Al-Asriya school, Amman, 2005-ongoing.
- Member, committee for Accreditation of Civil Engineering programs at Jordanian Universities, established by the Ministry of Higher Education and Scientific Research, Amman, 2004.
- Member, editorial board, Jordanian Civil Engineering Journal, established by the Ministry of Higher Education and Scientific Research, Amman, 2004-to-date.
- Member, board of trustees, Jordan Academy for Music, Amman, 1999-to-date.
- Referee, American Society of Civil Engineers (ASCE), journal of structural engineering, 1997-to-date.
- Member, Jordan Concrete Society, 1987-to-date.
- Member, Jordan Engineers Association, 1976-to-date.
- Member, American Concrete Society (ACI), 1982-1993.
- Member, Friends of Archeology Society, 1995-to-date.
- Technical director, PROJACS International, course on "Building Preventive Maintenance for Executive Managers-Standards and Procedures", Dubai, 15-19 March 09.
- Technical director, PROJACS International, course on "Structural Analysis and Design for Concrete Buildings ", Amman, 26-30 July 08.
- Technical director, PROJACS International, course on "Advanced Materials for Construction and Repair of Concrete Structures", Dubai, 20-24 April 08.
- Technical director, PROJACS International, course on "Design & Construction Requirement for Repair-Free Buildings", Kuwait, 23-27 March 08.
- Technical director, PROJACS International, course on "Assessment of Site Conditions for Concrete Structures and Evaluation of Repair and Rehabilitation Strategies", Abu Dhabi, 21-25 Oct. 07.
- Technical director, PROJACS International, in-house course on "Advanced Concrete Design", conducted in Abu Dhabi to ADMA (Abu Dhabi Marine Co.), 12-16 Nov. 06.
- Lecturer, PROJACS International, 2-hr session on "Overview of Design Philosophies of Reinforced Concrete", Amman, 2002.
- Lecturer, Jordan Concrete Society, 2-hr session on Structural Design Using Different Materials-Similarities and Differences, Amman, 2002.
- Lecturer, Jordan Engineers Association, 25-hr course on Analysis and Design of Reinforced Concrete Structures, Amman, 1990.

- Lecturer, Jordan Engineers Association, on Time-Dependent Behavior of Reinforced Concrete Columns, Amman, 1990.

#### B. (inside university)

- Chairman of the committee in charge of Campus Planning and Organization of Buildings, at the University of Jordan, 2008.
- Chairman of the committee on Investment Projects, at the University of Jordan, 2008.
- Chair, committee to examine the tenders for the construction of Hamdi Mango center for scientific research, 2002.
- Member, committee to brainstorm launching a distance-learning center, 2001.
- Chair, committee to assess/approve the building of faculty of educational sciences, from the contractor, 1992.

#### Research Publications and Conferences- sample of which:

- Raed M. Samra, "*Engineering Natural Structures*", 4<sup>th</sup> International Conference on Conceptual Approaches to Structural Design (CDS07), organized by CI-Premier Ltd, 27-29 June 2007, Venice, Italy.
- Hassan S. Saffarini, and Raed M. Samra, "*Repair of a chemical industry jetty in Aqaba-Jordan*," materials and structures, Rilem, Vol. 34, April 2001, 178-185.
- Raed M. Samra, and Hassan S. Saffarini, "*Importance of increase in axle load on bridges: case of Aqaba railway (2)*," Dirasat, Vol. 28, engineering sciences, No. 1, April 2001, 1-14.
- Raed M. Samra, and Hassan S. Saffarini, "*Maintenance and repair scheme for bridges: case of Aqaba railway (1)*," Dirasat, Vol. 27, engineering sciences, No. 2, Oct. 2000, 300-311.
- Raed M. Samra, "*Renewed assessment of creep and shrinkage effects in reinforced concrete beams*," structural journal, American Concrete Institute, Vol. 94, No. 6, Nov.-Dec. 1997, 745-751.
- Raed M. Samra, "*Time-dependent deflections of reinforced concrete beams revisited*," journal of structural engineering, ASCE, Vol. 123, No. 6, June 1997, 823-830.
- Raed M. Samra, Nidal A. Deeb and Usama R. Madi, "*Transverse steel content in spiral concrete columns subject to eccentric loading*," structural journal, American Concrete Institute, Vol. 93, No. 4, Jul.-Aug. 1996, 412-419.
- Raed M. Samra, "*New analysis for creep behavior in concrete columns*," journal of structural engineering, ASCE, Vol. 121, No. 3, March 1995, 399-407.
- Usama R. Madi, and Raed M. Samra, "*Idealizing the concrete compressive stress profile in predicting the behavior of reinforced concrete members*," Dirasat, Vol. 22(B), No. 4, 1995, 1055-1069.
- Raed M. Samra, "*Ductility analysis of confined columns*," journal of structural engineering, ASCE, Vol. 116, No. 11, Nov. 1990, 3148-3161.
- Raed M. Samra, "*Predicting deflections of reinforced concrete beams analytically*," journal of structural engineering, ASCE, Vol. 115, No. 5, May 1989, 1158-1168.
- Raed M. Samra, Samih S. Qaqish and Bassam Abu Ghazaleh, "*The use of foamed concrete as a thermal insulating material in Jordan*," Dirasat, Vol. 16, No. 5, May 1989, 7-20.
- Raed M. Samra, "*Creep model for reinforced concrete columns*," structural journal, American Concrete Institute, Vol. 86, No. 1, Jan.-Feb. 1989, 77-82.
- Raed M. Samra, and W.L. Gamble "*Time-dependent behavior of reinforced concrete columns*," SP-117, Long Term Serviceability of Concrete Structures, American Concrete Institute, Detroit, 1989, 113-145.
- Usama R. Madi, and Raed M. Samra, "*On the repair of concrete structures in Jordan*," proceedings, first Arab conference on structural engineering, Cairo, 1986, 540-547.
- Raed M. Samra, "*An assessment of structures using concrete, steel or timber materials: a designer's perspective*," submitted for publication.