

One-Page CV

Mohamed Maalej, PhD, P.Eng. (Ontario)
Professor

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Google Scholar Profile: <http://scholar.google.ca/citations?user=ND-bXioAAAAJ&hl=en&oi=ao>

Researchgate Profile: https://www.researchgate.net/profile/M_Maalej

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Academic/Professional Background

Education

PhD	Civil Engineering	Univ. Michigan	1994
M.S.	Civil Engineering	MIT	1991
B.S.	Civil Engineering	Col. State Univ.	1989
Minor	Mathematics	Col. State Univ.	1989

Academic Positions (Dates: MM/YY)

02/11-Present Professor, Department of Civil & Env. Engineering, University of Sharjah, UAE

08/06-01/11 Associate Prof., Department of Civil & Env. Engineering, University of Sharjah, UAE

07/04-06/06 Associate Prof., Department of Civil Eng., National University of Singapore, Singapore

08/99-06/04 Assistant Prof., Department of Civil Eng., National University of Singapore, Singapore

Administrative Positions (Dates: MM/YY)

09/19- Present Vice Dean, College of Engineering, University of Sharjah, UAE

09/17- 03/18 Founding Director, Office of International Relations, University of Sharjah, UAE

02/16- 08/17 Acting Dean, College of Engineering, University of Sharjah, UAE

09/14-01/16 Chair, Dept. of Civil & Environmental Engineering, University of Sharjah, UAE

03/11-08/13 Vice Dean, College of Engineering, University of Sharjah, UAE

06/09-02/11 Acting Dean, College of Engineering, University of Sharjah, UAE

09/07-06/09 Vice Dean, College of Engineering, University of Sharjah, UAE

Membership of Professional Bodies

Professional Engineers Ontario, Member since 1998

Research Training

Supervised & Trained 10 PhD Students, 14 MSc/MEng Students, 2 Postdoctoral Fellows

Research Interests

- High Performance Fiber Reinforced Cementitious Composites (HPFRCC)
- Impact/blast resistance of HPFRCC
- Micromechanics of fibrous composites
- Corrosion durability of reinforced concrete
- Structural repair and retrofitting
- Structural health monitoring

Technology/Expertise

Publications

65 Articles in International Refereed Journals
 45 Conference/Workshop Articles
 3 Books/Book Chapters
 1 Patent

Citations

More than **5600** citations as per Google Scholar Data, [Google Scholar](#) h-index: **38**, [SCOPUS](#) h-index: **33**

Technology/Expertise Application

- Analysis and Design of Protective Structures
- Structural Health Monitoring
- Structural Repair and Retrofitting

Consultancy

- Security study of key Installations (KIns), Singapore
- Structural health monitoring of HDB building estates, Singapore

Representative Research Projects

- Integration of Ground Penetrating Radar and Remote Sensing Technologies to Detect Reinforced Concrete Deterioration: Laboratory Controlled Testing Setup (Targeted Research Project No. 19020401133), University Research Board, University of Sharjah (2019-2021); AED 78,000.
- Engineered Cementitious Composites For Blast-Resistant Structures, Defense Science and Technology Agency, Singapore (R-379-000-002-422); (2002-2006); \$ 1,513,000.

Patents

Kuang, S.C.K.; Quek, S.T. & **Maalej, M.** "Plastic optical fiber sensor," US Patent No. 7,496,247 (February 2009).

Short Courses

- Design of High-Performance Fiber Reinforced Cementitious Composites
- Fracture and Fatigue

Awards

Annual Incentives Award for Distinguished Faculty Members in Scientific Research for AY 2008/2009

CURRICULUM VITAE

Mohamed Maalej

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Department of Civil & Environmental Engineering
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1. ACADEMIC/PROFESSIONAL PARTICULARS

Field of Specialization: Materials & Structural Engineering

(a) Academic Qualifications

Ph.D. in Civil Engineering, April 1994, University of Michigan, Ann Arbor, MI
Dissertation Title: "Fracture Resistance of Engineered Fiber Cementitious Composites and Implications to Structural Behavior." (GPA: 8.38/9.00)

M.S. in Civil Engineering, June 1991, MIT, Cambridge, MA Dissertation Title:
"Design of Joints for Sandwich Panels." (GPA: 5.00/5.00)

B.S. in Civil Engineering, May 1989, Colorado State University, Fort Collins, CO
Dissertation Title: "Cache La Poudre Water and Power Project." (GPA: 3.95/4.00)

(b) Academic Honors and Awards

- Best Paper Award ISuCOS 2018 for the paper entitled "Experimental Study on the out-of-plane strengthening of unreinforced masonry walls using cement-based fiber composites," presented at the 2nd International Symposium on Civil and Environmental Engineering (ISCEE'18), Kuala Lumpur, Malaysia, 3-4 December 2018.
- Annual Incentive Award for Distinguished Faculty Members in Scientific Research for AY 2008/2009
- KKCNN Choi Award, 17th KKCNN Symposium on Civil Engineering, Ayutthaya, Thailand, 13-15 December 2004
- University of Michigan Rackham Pre-Doctoral Fellowship (1993-1994)
- Presidential Prize (Tunisia, July 1991)
- Golden Key National Honor Society (inducted in 1988)
- Who's Who Among Students in American Universities and Colleges (1988-1989)
- Dean's Honor List at Colorado State University (6 semesters)
- Bachelor of Science with Highest Distinctions (May 1989)

(c) Membership of Professional Bodies

Professional Engineers Ontario, Member since 1998

2. CAREER DETAILS

(a) Academic Positions Held (Dates: MM/YY)

02/11-present Professor, Department of Civil & Environmental Engineering, University of Sharjah, Sharjah, UAE

08/06-01/11 Associate Professor, Department of Civil & Environmental Engineering, University of Sharjah, Sharjah, UAE

07/04-06/06 Associate Professor, Department of Civil Engineering, National University of Singapore (NUS), Singapore

08/99-06/04 Assistant Professor, Department of Civil Engineering, National University of Singapore (NUS), Singapore

03/96-08/99 Postdoctoral Fellow, Department of Civil Engineering, University of Toronto, Toronto, Ontario

Fall 1997 Special Lecturer, Department of Civil Engineering, University of Toronto, Toronto, Ontario

05/94-06/95 Research Fellow, ACE-MRL, University of Michigan, Ann Arbor, Michigan

(b) Administrative Positions Held (Dates: MM/YY)

09/19-Present Vice Dean, College of Engineering, University of Sharjah, UAE

09/17-03/18 Founding Director, Office of International Relations, U. of Sharjah, UAE

02/16-08/17 Acting Dean, College of Engineering, University of Sharjah, Sharjah, UAE

09/14-01/16 Chair, Dept. of Civil & Env. Eng., University of Sharjah, Sharjah, UAE

02/11-08/13 Vice Dean, College of Engineering, University of Sharjah, Sharjah, UAE

06/09-02/11 Acting Dean, College of Engineering, University of Sharjah, Sharjah, UAE

09/07-06/09 Vice Dean, College of Engineering, University of Sharjah, Sharjah, UAE

08/06-08/07 Chair, College of Engineering Research & Scholarship Committee, UoS

07/04-06/06 Program Manager, Master of Science in Civil Engineering (MSCE), NUS

Positions Highlights

- Developed Proposal for establishing the Office of International Relations (OIR) at the University of Sharjah, including the office organizational structure and office bylaws.
- Formed the University Committee for International Relations and Rankings (UCIRR) as part of organizational structure of the OIR.
- Led the UCIRR committee effort to prepare the institutional data for the QS Stars Audit exercise, which led to the outstanding results of the UoS in the Audit.
- Prepared the institutional data for submission to the QS and THE university ranking organizations.
- Represented the University of the Sharjah in collaboration/discussion meetings with current and potential international partners.
- Overseeing ABET & Local Accreditation efforts in the College
- Overseeing the development of three new programs, Sustainable and Renewable Energy Engineering (SREE), Mechanical Engineering (ME) and Nuclear Engineering (NE)
- Overseeing curriculum issues in the College as well as Development of new College Programs
- Supervising and following up on strategic planning activities in the College
- Overseeing & directing College Committees' activities
- Evaluating performance of faculty members in the College and making appropriate recommendations
- Planning and managing College Annual Budget in accordance College Priorities
- Promoting research activities in the College, including, creating more facilities and support for research, encouraging interdisciplinary research activities, building bridges with the industry and community, providing help to generate research opportunities for college faculty, improving the quality and enrolment in the college master programs, improving the impact & visibility of the college research activities, providing necessary support for local and international workshops and conferences.
- Leading strategic planning in the CEE Dept.
- Developing a new Dept. Organizational Structure leading to organizing and streamlining of Department work

- Overseeing curriculum issues in the Dept. in relation to National and International (ABET) accreditation requirements
- Developing the non-thesis option of the Master of Science in Civil Engineering (MSCE)
- Managing all aspects of the MSCE program, including curriculum, admission, monitoring student performance, etc...

3. Teaching

(a) Summary of Courses Taught

Code	Module Name
0401243	Dynamics
0401310	Structural Analysis
0401311	Structural Analysis I
0401311	Structural Analysis II
0404311	Fundamentals of Structural Analysis
0401405	Numerical Methods
0401506	Applied Engineering Statistics (Graduate)
0401509	Advanced Numerical Methods (Graduate)
0401512	Structural Dynamics & Earthquake Engineering (Graduate)
0401511	Advanced Structural Mechanics (Graduate)
0401532	Advanced Materials in Construction (Graduate)
EG1109	Statics and Mechanics of Materials
CIV261F	Engineering Mathematics I (University of Toronto)
CE2154	Structural Analysis
CE2403	Differential Equations and Computational Methods
CE2404	Engineering Mathematics I
CE2405	Engineering Mathematics II
CE2407	Engineering and Uncertainty Analysis
CE3153	Reinforced Concrete Design
CE3155	Structural Analysis II
CE4105	Design Project
CE5601	Cement and Concrete Composite Materials (Graduate)
CE5701	Engineering Fracture Mechanics (Graduate)
CE650	Fracture and Micromechanics of Fibrous Composites (Graduate)

(b) Training

Successfully completed a Professional Development Program (PDP) organized by the NUS Centre for Development of Teaching and Learning (CDTL). The program consisted of four core modules and two elective modules:

- Introduction to Pedagogy: Paradigms and theories that Shape Practice
- Large Group Teaching
- Small Group Teaching
- Teaching Practicum
- Use of IT in Teaching and Learning (elective)
- Assessment (elective)

(c) Research Students Supervised

1.	Mr S.F.U. Ahmed	PhD (1999-2004)	Principal Supervisor (NUS)
2.	Mr Santosh Sundararajan	PhD (2002-2004)	Principal Supervisor (NUS)
3.	Mr Md Rafiqul Islam	PhD (1999-2004)	Co-supervisor (NUS)
4.	Ms Lee Siew Chin	PhD (2002-2006)	Principal Supervisor (NUS)

5. Mr Wang Zengrong	PhD (2005-2006)	Principal Supervisor (NUS)
6. Mr Nguyen Minh Phuong	PhD (2005-2006)	Principal Supervisor (NUS)
7. Ms Patria Kusumaningrum	PhD (2005-2006)	Co-supervisor (NUS)
8. Ms Nadia Nassif	PhD (2022-Present)	Co-supervisor (UoS)
9. Humam M.H.D. Al Sebai	PhD (2022-Present)	Co-supervisor (UoS)
10. Hadif H.I.A. Alsuwaidi	PhD (2022-Present)	Principal Supervisor (UoS)
1. Mr Surachet Tanwongsva	MEng (1999-2001)	Principal Supervisor (NUS)
2. Ms Bian Yi	MEng (1999-2001)	Sole Supervisor (NUS)
3. Mr Koh Soo Jin, Adrian	MEng (2000-2002)	Principal Supervisor (NUS)
4. Mr Leong Kok Sang	MEng (2002-2004)	Sole Supervisor (NUS)
5. Ms Chia Yee CHHOA	MEng (2002-2004)	Principal Supervisor (NUS)
6. Ms Deena Puliya	MSc (2002-2003)	Sole Supervisor (NUS)
7. Mr. Salaheddine Qudah	MSc (2009-2011)	Sole Supervisor (UoS)
8. Mr. Hamid Ali Yahya	MSc (2010-2013)	Co-Supervisor (UoS)
9. Mr. Abdul Saboor Karzad	MSc (2014-2016)	Co-Supervisor (UoS)
10. Mr. Hazem Al Farra	MSc (2018-2019)	Principal Supervisor (UoS)
11. Ms. Nadia Nassif	MSc (2019-2020)	Co-Supervisor (UoS)
12. Ms. Nour M.K. Alrouh	MSc (2019-2022)	Principal Supervisor (UoS)
13. Mr. Mohamad I. Alhalabi	MSc (2021-2022)	Co-Supervisor (UoS)
14. Mr. Mohamad H. Tarabin	MSc (2022-2023)	Principal Supervisor (UoS)

(d) Participation in Thesis and Oral Examination Committees

Teoh Bak Koon	PhD	VC's Appointee (2003)
MD Kabir Hossain Patoary	PhD	VC's Appointee (2004)
Kong Kian Hau	PhD	VC's Appointee (2004)
Liu Ding	PhD	Internal Examiner (2005)
Thamaraikkannan Vinayagam	PhD	Internal Examiner (2005)
Seow Puay Eng-Constance	PhD	Internal Examiner (2005)
Vinod Kumar Jain	PhD	External Examiner (2005)
Iftekhhar Ahmad	MEng	University Examiner (1999)
Ramya A Hariraman	MEng	University Examiner (2000)
Lim Sun Nee	MEng	University Examiner (2000)
Siddhwartha Kumar Mandal	MEng	University Examiner (2001)
Liu Ning	MEng	University Examiner (2001)
Sun Zhihui	MEng	University Examiner (2001)
SUN YAN	MEng	University Examiner (2001)
ZHANG ZIYANG	MEng	University Examiner (2001)
WANG JIEWEI	MEng	Internal Examiner (2002)
G A VIJAYAKUMAR	MEng	Internal Examiner (2002)
HAN HAIPENG	MEng	Internal Examiner (2002)
Qian Xue Kun	MEng	Internal Examiner (2003)
Kong Ruiwen	MEng	Internal Examiner (2003)
Wong Nam Yuen	MEng	Internal Examiner (2003)
Li Lian	MEng	Internal Examiner (2003)
Ma Kaiying	MEng	Internal Examiner (2003)
Wu Li Peng	MEng	Internal Examiner (2004)
Duong Truong Son	MEng	Internal Examiner (2004)
Hussein Ousman	MSc	Internal Examiner (2009)
Deena Badran	MSc	Internal Examiner (2010)
Michel Obied	MSc	External Examiner (2013)
Ghanim Kashwani	MSc	External Examiner (2013)
Humam MHD Alsebai	MSc	Internal Examiner (2014)

Omar Maher Naseef	MSc	Internal Examiner (2014)
Ahmad Al Mansouri	MSc	Internal Examiner (2015)
Eman Al-Burai	MSc	Internal Examiner (2017)
Abdalla Reyad Sobhy Elbana	MSc	Internal Examiner (2018)
Anas Cherkaoui	MSc	Internal Examiner (2018)
Basil Kamel Ibrahim	MSc	Internal Examiner (2018)
Saif Uddin M. Al-Khaled	MSc	Internal Examiner (2019)
Fatima Yousef	MSc	Internal Examiner (2019)
Ibrahim Mahmoud Haj fattouh	MSc	Internal Examiner (2021)
Mohamad Ihsan Taklas	MSc	Internal Examiner (2021)
Firass Mohamad Ammar Al Marawi	MSc	Internal Examiner (2021)
Usama Al-Sabouni	MSc	Internal Examiner (2022)
Mohamed Essam Mohamed Elkafrawy	PhD	Diss. Adv. Committee (AUS, 2022)

(e) Singapore-MIT Internship Program

The NUS Centre for Construction Material and Technology (CCMT) hosted a Third year student from the Massachusetts Institute of Technology. The Student, Mr Michael Chen, was supported by the Singapore-MIT Alliance to complete a 3-month internship program. Mr Chen worked under my supervision from June to August 2002 on an intensive research program focusing on the study of interfacial stress concentration in RC beams strengthened in flexure with externally-bonded fiber-reinforced polymer (FRP).

4. RESEARCH

(a) Research Interest

- High Performance Fiber Reinforced Cementitious Composites (HPFRCC)
- Impact/blast resistance of HPFRCC
- Micromechanics of fibrous composites
- Corrosion durability of reinforced concrete
- Structural repair and retrofitting
- Structural health monitoring

(b) Publications/Citations

Published more than 100 technical articles summarized as follows (see **Annex A** for full list):

65	Articles in International Refereed Journals
45	Conference/Workshop Articles
3	Books/Book Chapters
1	Patent

My papers have been well cited, with more than **5600** citations as per Google Scholar Data, [Google Scholar](#) h-index: **38**, [SCOPUS](#) h-index: **33**

(c) Research Grants

- University Research Grant, Co-Investigator
Development of locally produced 3D printed concrete in UAE: Rheology, Guidelines, and Performance (Competitive Research Project No. 220204001235, University Research Board, University of Sharjah (2012-2024); AED 119,000.

- University Research Grant, Co-Investigator
Integration of Ground Penetrating Radar and Remote Sensing Technologies to Detect Reinforced Concrete Deterioration: Laboratory Controlled Testing Setup (Targeted Research Project No. 19020401133), University Research Board, University of Sharjah (2019-2022); AED 78,000.
- University Research Grant, Co-Investigator
3D-Printed Polymer-Based Reinforcement for Structural Elements (Competitive Research Grant) University Research Board, University of Sharjah (2019-2021); AED 80,000.
- University Research Grant, Principal Investigator
Innovative Vibration Attenuation Devices for Equipment and Structures (Competitive Research Project No. 15020401009-P), University Research Board, University of Sharjah (2015-2017); AED 48,000.
- University Research Grant, Co-Investigator
Rapid Strengthening of Unreinforced Masonry Walls for Out-of-Plane Action (Competitive Research Project), University Research Board, University of Sharjah (2015-2017); AED 60,000.
- University Research Grant, Co-Investigator
Experimental Study on Shear strength of trapezoidal corrugated steel webs (Competitive Research Project), University Research Board, University of Sharjah (2015-2017); AED 65,000.
- University Research Grant, Principal Investigator
Engineered Cementitious Composite (ECC) for Hardening of Structures Against the Effects of Blast and Impact (Seed Project No. 060405), University Research Board, UoS College of Graduate Studies & Research (2007-2009); AED 20,000.
- University Research Grant, Principal Investigator
Engineered Composites and Functionally-Graded Concrete—A New Solution for the Durability of RC Structures (R-264-000-105-112); NUS Academic Research Fund (2000-2003); \$ 96,013.
- University Research Grant, Principal Investigator
Hybrid Optical Fibre Sensor System for Health Monitoring of Engineering Structures (R-264-000-172-112), NUS Academic Research Fund (2004-2007); \$ 150,145.
- Research Project Funded by Government Agencies or Industry, Principal Investigator
Engineered Cementitious Composites For Blast-Resistant Structures, Part of a DSTA-NUS Joint R&D Program on Development of Advanced Protective Materials and Systems Against Close-in Blast and Penetration (R-379-000-002-422); DSTA (2002-2006); \$ 1,513,000.

(d) Patents

An International Patent Application has been filed with the US Patent Office based on an invention involving a new design of plastic optical fiber sensor. Details of patent application: International Patent Application No. PCT/SG2005/000155 Filing Date: 20 November 2006, Title: Plastic Optical Fiber Sensor, INTRO Ref: KUANG KSC 01-PCT/US.

Plastic optical fiber sensor, US Patent No. 7,496,247 (February 2009). Inventors: Kuang; Sze-Chiang Kevin (Singapore, SG), Quek; Ser Tong (Singapore, SG), Maalej; Mohamed (Sharjah, AE).

5. SERVICE

(a) Membership of Institutional, National, or International Scientific Advisory Boards

- Fiber-Reinforced Polymer Society (Singapore), Honorary Secretary (2002-2005), Council Member (2005-2006)
- ACI Singapore Chapter, Director (2002-2004), Secretary (2004-2006)
- Professional Engineers Ontario, Member since 1998.

(b) Membership of Conference Committees

- Member, Local Organizing Committee, 7th International Symposium on Ferrocement and Thin Reinforced Cement Composites, 27-29 June 2001, Singapore.
- Member, Local Organizing Committee, 6th International Symposium on Fiber-Reinforced Polymer (FRP) Reinforcement for Concrete Structures, July 2003, Singapore.
- Session Chairman, 6th International Symposium on Fiber-Reinforced Polymer (FRP) Reinforcement for Concrete Structures, July 2003, Singapore.
- Secretary, Local Organizing Committee, 8th International Conference On Inspection, Appraisal, Repairs And Maintenance Of Structures, 18 – 20 December 2003, Singapore.
- Member, International Committee, 5th International Workshop on High Performance Fiber Reinforced Cement Composites (HPFRCC 5), July 10-13, 2007, Mainz, Germany.
- Member, Scientific Committee, Third Annual Scientific Research Forum, **University of Sharjah**, May 2-3, 2007.
- Member, Program Committee, 5th International Workshop on Signal Processing and its Applications (WoSPA 2008) 18-20 March 2008, University of Sharjah, Sharjah, United Arab Emirates.
- Member, International Advisory Committee of the International Conference on **Computational Design in Engineering--CODE2009**, November 3~6, 2009 Seoul, Korea.
- Member, Technical Committee of The First Australasia and South-East Asia Structural Engineering and Construction Conference (ASEA-SEC-1), Perth, Australia, Nov 28-Dec 2, 2012.
- Member, Technical Program Committee for the 2nd Global Conference on Materials Science and Engineering (CMSE 2013), Xianning, China, on Nov. 20-22, 2013.
- Chair of a session entitled "Educational Assessment," at the 5th Arab-International Conference on Quality Assurance in Higher Education, March 2015.
- Co-Chair, International Conference on Advances in Sustainable Construction Materials & Civil Engineering Systems (ASCMCES-17), University of Sharjah, Sharjah, United Arab Emirates, April 18th – 20th, 2017.
- Member, Scientific Committee for the 14th International Conference on Developments in eSystems Engineering (DeSE 2021), University of Sharjah, Sharjah, United Arab Emirates, 7th-10th December 2021.
- Session Co-Chair, 14th International Conference on Developments in eSystems Engineering (DeSE 2021), University of Sharjah, Sharjah, United Arab Emirates, 7th-10th December 2021.

- Organizer, First International Innovation X.0 Forum, University of Sharjah, Sharjah, United Arab Emirates, 5th May 2023.
- Moderator, First International Innovation X.0 Forum, University of Sharjah, Sharjah, United Arab Emirates, 5th May 2023.

(c) Service as Reviewer

Journals

- Journal of Materials in Civil Engineering (ASCE)
- Journal of Structural Engineering (ASCE)
- Journal of Composites for Construction (ASCE)
- ACI Structural Journal (ACI)
- Journal of Advanced Concrete Technology (JCI)
- Engineering Fracture Mechanics (Elsevier)
- Canadian Journal of Civil Engineering (CSCE)
- Composite Science and Technology (Elsevier)
- Structural Health Monitoring: An International Journal (SAGE)
- Structures and Buildings Journal (ICE)
- Construction and Building Materials (Elsevier)
- Engineering Structures (Elsevier)

Conferences

- 6th International Symposium on Fiber-Reinforced Polymer (FRP) Reinforcement for Concrete Structures, July 2003, Singapore.
- 8th International Conference on Inspection, Appraisal, Repairs And Maintenance of Structures, 18 – 20 December 2003, Singapore
- 3^{ed} International Conference on Construction Materials: Performance, Innovations and Structural Implications, 22-24 August 2005, Vancouver, Canada.
- 5th International Workshop on Signal Processing and its Applications (WoSPA 2008) 18-20 March 2008, University of Sharjah, Sharjah, United Arab Emirates.
- International Conference on COmputational Design in Engineering--CODE2009, November 3-6, 2009 Seoul, Korea.
- The First Australasia and South-East Asia Structural Engineering and Construction Conference (ASEA-SEC-1), Perth, Australia, Nov 28-Dec 2, 2012.
- International Conference on Advances in Sustainable Construction Materials & Civil Engineering Systems (ASCMCES-17), University of Sharjah, Sharjah, United Arab Emirates, April 18th – 20th, 2017.

(d) Membership of Journal Editorial Boards

- University of Sharjah Journal of Pure and Applied Sciences, ISSN No. 1811-1645 (2006-2007).

(e) Invited Presentations at Scientific Meetings/Workshops

- Delivered a lecture entitled "Design of Engineered Cementitious Composites" as part of a one day course on *Advances in Concrete Technology*, organized by the Singapore Concrete Institute and the Centre for Construction Materials and Technology, Singapore, 30 September 1999.
- Speaker at a One-Day Seminar on Structural Concrete organized by the Singapore Concrete Institute and the Centre for Construction Materials and Technology, Singapore, 23 May 2000.
- Delivered a lecture entitled "Fracture and Fatigue" as part of a two-day short course on *Structural Steelwork Design to BS5950: Part 1 (2000)*, Organized by the PSA Corporation Limited, Singapore, 3-4 June 2003.

- Invited to present a paper entitled "Structural Applications of Hybrid Fiber Engineered Cementitious Composites—A Review" at the 6th International Workshop on High Performance Fiber Reinforced Cement Composites (HPFRCC 6), June 19-22, 2011, Ann Arbor, Michigan, USA.
- Delivered a lecture entitled "Potential Applications of Hybrid Fiber Engineered Cementitious Composites," at the Workshop: Fiber Reinforced Concrete (FRC): Materials, Applications and Design Aspects, University of Sharjah, 23 April 2018.
- Presented a seminar entitled "How do we motivate our students to learn?" as part of the UoS New Faculty Orientation Program organized by the Institute of Leadership in Higher Education, University of Sharjah, 22-23 January 2019.
- Delivered a lecture entitled "Fiber Reinforced Cementitious Composites for Impact and Blast-Resistant Structures," at the Workshop on Building Design for Extreme Load: Blasts and Earthquakes organized by the Sustainable Construction Materials and Structural Systems Research Group, University of Sharjah, 17-18 February, 2019.

(f) University Service

University, College and Dept. Committee Involvements (2014-present)

Served as Acting Dean, Vice-Dean, Chair of the CEE Dept. as well as in numerous committees at the University of Sharjah, including the University Faculty Recruitment & Contract Renewal Committee (Member), College Strategic Planning Committee (Member), Engineering Management PhD Program Committee, Ad-hoc Internal Advisory Committee for UoS Research Institute of Sciences and Engineering etc... to name few.

University, College and Dept. Committee Involvements (2013-2014)

Served in numerous committees at the University of Sharjah, including the University Faculty Recruitment & Contract Renewal Committee (Member), University Strategic Research Domain Committee—Sustainable Infrastructure (Chair), College Strategic Planning Committee (Member), College Faculty Recruitment Committee (Member), CEE Dept. Strategic Planning Committee (Chair), CEE Dept. Faculty Recruitment Committee (Chair), CEE Dept. Graduate Studies Committee (Member) to name few.

University of Sharjah Administrative & Committee Involvements (2011-2013)

Served as Vice Dean of the College of Engineering as well as in numerous committees, including, College Council (Member), College Advisory Committee (member), College Faculty Promotion Committee (Member), University Faculty Recruitment & Contract Renewal Committee (member).

University of Sharjah Administrative & Committee Involvements (2009-2011)

Served as Acting Dean of the College of Engineering as well as in numerous committees, including, College Council (Chair), College Advisory Council (Chair), College Faculty Promotion Committee (Chair), and CE Dept. Research & Graduate Studies Committee (Member).

University of Sharjah Administrative & Committee Involvements (2007-2009)

Served as Vice-Dean of the College of Engineering as well as in numerous committees, including, College Council (Member), College Advisory Committee (Member), College Faculty Promotion Committee (Vice-Chair), and CE Dept. Research & Graduate Studies Committee (Member).

University of Sharjah Committees (2006-2007)

Served in numerous committees at the University of Sharjah, including the University Research Board (Member), College Council (Member), College of Engineering Research & Scholarship Committee (Chairman), College of

Engineering Faculty Promotion Committee (Member), CE Dept. Research & Graduate Studies Committee (Chairman), CE Dept Accreditation Committee (member), CE Dept Senior Design Coordinator.

Committee for the Outstanding Faculty Performance Award and Sharjah Islamic Bank Award (May 2007)

Member of this Committee who's task is to examine the files of candidates nominated for the awards as per standard procedures, ensure that they fully meet all requirements, and nominate the winners.

CE Research and Graduate Studies Committee (2001-2006)

Duties include: reviewing half-yearly RS progress reports; review of exam results for MEng and PhD students; identification and monitoring of MEng and PhD problem cases, representing CE Department in BOE meeting for MEng/PhD program.

MSc Program Manager (2004-2006)

Duties include: evaluation of applications for admission in the MSc program (CE); review of examination results; identification and monitoring of problem cases; represent CE Department in BOE meeting for MSc program.

CE Research and Graduate Studies Committee (1999-2004)

Responsible for conducting a number of benchmarking exercises aimed at evaluating the research output of NUS Academic Staff in the Department of Civil Engineering. One of the criteria used to gauge staff research output was to look at the number of citations and refereed journal publication as well as the impact factors of the journals where the articles were published.

FOE Benchmarking Committee (2001-2003)

I had been nominated to represent the Civil Engineering Department in a faculty Task Force on Benchmarking of Graduate Programs. The objective in this benchmarking exercise is to "compare and contrast" the graduate programs in the NUS faculty of engineering against "selected programs" elsewhere. The primary focus of this exercise is on the research programs (MEng & PhD).

Peer Reviewer (2003-2004)

As a continuing effort to improve the teaching of MA1505 & MA1506 Mathematics I & II for engineering students, the Department of Mathematics conducted peer reviews on the lecturers of these modules. These were special peer reviews with the aim of improving quality of teaching but not for assessment of faculty members. The Department of Civil Engineering nominated me to represent the Department in this exercise.

FOE Task Force on Graduate Studies: Recruitment Strategies (2004-2005)

The Task Force was formed to look into strategies to improve and increase the recruitment of graduate students. The task aimed to (a) ascertain the possible reasons for the drop in the number of graduate students' applications, (b) make recommendations on strategies to reverse the trend, (c) recommend strategies to attract more Singaporean Ph.D.s, and (d) recommend strategies to recruit graduate students beyond our traditional sources.

(g) Service to Profession/Industry

Fiber-Reinforced Polymer Society (Singapore)

Honorary Secretary (2002-2005), Council Member (2005-2006).

ACI Singapore Chapter

Director (2002-2004), Secretary (2004-2006).

Housing and Development Board

Provided the Singapore Housing and Development Board (HDB) with feedback on a term contract for composite wrapping to structural members in various HDB estates (22 October 1999).

Provided HDB with ideas on how fiber optic sensing can be used to monitor the structural health of building estates in Singapore. HDB has subsequently adopted the proposed idea and installed a number of fiber optic sensors in a high-rise building for the purpose of monitoring its structural health during and after construction (September 2000).

Service to Industry (10 June–10 August 2005)

Provide consultancy services to CISCO in relation to their security study of Key Installations (KINs). The scope of the work consisted of assessing hardening needs and developing hardening options and solutions for KINs.

(h) Public Service

Member, Judging Committee for 2017 Abdul Hameed Shoman Arab Researchers Award (Amman, Jordan, July 2018)

Judge, Singapore Science and Engineering Fair (Singapore, March 2001)

ANNEX A: LIST OF PUBLICATIONS

International Refereed Journals

1. **Maalej, M.** and Li, V.C. (1994) "Flexural Strength of Fiber Cementitious Composites", ASCE Journal of Materials in Civil Engineering, Vol. 6, No. 3, pp. 390-406.
2. **Maalej, M.** and Li, V.C. (1994) "Flexural/Tensile Strength Ratio in Engineered Cementitious Composites", ASCE Journal of Materials in Civil Engineering, Vol. 6, No. 4, pp. 513-528.
3. Li, V.C., **Maalej, M.** and Hashida, T. (1994) "Experimental Determination of Stress-Crack Opening Relation in Fiber Cementitious Composites with Crack Tip Singularity", Journal of Materials Science, Vol. 29, No. 10, pp. 2719-2724.
4. **Maalej, M.** and Li, V.C. (1995) "Introduction of Strain Hardening Engineered Cementitious Composites in Design of Reinforced Concrete Flexural Members for Improved Durability", ACI Structural Journal, Vol. 92, No. 2, pp. 167-176.
5. **Maalej, M.**, Li, V.C. and Hashida, T. (1995) "Effect of Fiber Rupture on Tensile Properties of Short Fiber Composites", ASCE Journal of Engineering Mechanics, Vol. 121, No. 8, pp. 903-913.
6. **Maalej, M.**, Hashida, T. and Li, V.C. (1995) "Effect of Fiber Volume Fraction on the Off-Crack-Plane Fracture Energy in Strain Hardening Engineered Cementitious Composites", J. Am. Ceram. Soc., Vol. 78, No. 12, pp. 3369-3375.
7. Li, V.C., Wu, H.C., **Maalej, M.**, Mishra, D.K. and Hashida, T. (1996) "Tensile Behavior of Engineered Cementitious Composites with Discontinuous Random Steel Fibers", J. Am. Ceram. Soc., Vol. 79, No. 1, pp. 74-78.
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9. Li, V.C. and **Maalej, M.** (1996) "Toughening in Cement Based Composites. Part II: Fiber Reinforced Cementitious Composites", J. of Cement and Concrete Composites, Vol. 18, No. 4, pp. 239-249.
10. **Maalej, M.**, Karasaridis, A., Hatzinakos, D. and Pantazopoulou, S.J. (1999) "Spectral Analysis of Sensor Data in Civil Engineering Structures", Computers and Structures, Vol. 70, No. 6, pp. 675-689.
11. Bonacci, J.F., **Maalej, M.** (2000) "Externally-Bonded FRP for Service-Life Extension of RC Infrastructure", ASCE Journal of Infrastructure Systems, Vol. 6, No. 1, pp. 41-51.
12. Lee, C., Bonacci, J.F., Thomas, M.D.A., **Maalej, M.**, Khajehpour, S., Hearn, N., Pantazopoulou, S. and Sheikh, S. (2000), "Accelerated Corrosion and Repair of Reinforced Concrete Columns Using CFRP Sheets," Canadian Journal of Civil Engineering, Vol. 27, No. 5, pp. 941-948.
13. Bonacci, J.F. and **Maalej, M.** (2000) "Externally-Bonded FRP for Rehabilitation of Corrosion Damaged Concrete Beams," ACI Structural Journal, Vol. 97, No. 5, pp. 703-711.

14. Ramanalinagm, N., Paramasivam, P., Mansur, M.A. and **Maalej, M.** (2001) "Flexural behavior of hybrid fiber reinforced cement composites containing high volume fly ash," ACI SP-199, pp. 147-161.
15. Tanwongsval, S., **Maalej, M.** and Paramasivam, P. (2001) "Strengthening of RC Wall-Like Columns," ACI SP-200, pp. 663-676.
16. Bonacci, J.F. and **Maalej, M.** (2001) "Behavioral Trends of RC Beams Strengthened With Externally Bonded FRP", Journal of Composites for Construction (ASCE), Vol. 5, No. 2, pp. 102-113.
17. **Maalej, M.** (2001) "Tensile Properties of Short Fiber Composites with Fiber Strength Distribution," Journal of Materials Science, Vol. 36, No. 9, pp. 2203-2212.
18. **Maalej, M.** Goh W.H. and Paramasivam, P. (2001) "Analysis and Design of FRP Externally-Reinforced Concrete Beams against Debonding-Type Failures," Materials and Structures (RILEM), Vol. 34, No. 241, pp. 418-425.
19. **Maalej, M.** and Bian, Y. (2001) "Interfacial Shear Stress Concentration in FRP-Strengthened Beams," Composite Structures, Vol. 54, No. 4, pp. 417-426.
20. **Maalej, M.**, Karasaridis, A., Pantazopoulou, S., Hatzinakos, D. (2002) "Structural Health Monitoring of Smart Structures," Smart Materials and Structures, Vol. 11, No. 4, pp. 581-589.
21. **Maalej, M.**, Tanwongsval, S. and Paramasivam P. (2003) "Modelling of Rectangular RC Columns Strengthened with FRP," Cement and Concrete Composites, Vol. 25, No. 2, pp. 263-276.
22. Tanwongsval, S., **Maalej, M.** and Paramasivam P. (2003) "Strengthening of RC Wall-Like Columns with FRP under Sustained Loading," Materials and Structures (RILEM), Vol. 36, No. 259, pp. 282-290.
23. **Maalej, M.**, Ahmed, S.F.U. and Paramasivam, P. (2003) "Corrosion Durability and Structural Response of Functionally-Graded Concrete Beams," Journal of Advanced Concrete Technology, Vol. 1, No. 3, pp. 307-316.
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25. **Maalej, M.**, Ahmed, S.F.U., Kuang, K.S.C. and Paramasivam, P. (2004) "Fiber Optic Sensing for Monitoring Corrosion-Induced Damage," Structural Health Monitoring, Vol. 3, No. 2, pp. 165-176.
26. Koh, S.J.A., **Maalej, M.**, and Quek, S.T. (2004) "Damage Quantification of Flexurally-Loaded RC Slab Using Frequency Response Data," Structural Health Monitoring, Vol. 3, No. 4, pp. 293-311.
27. Kuang, K.S.C, Quek, S.T. and **M. Maalej** (2004) "Assessment of an Extrinsic Polymer-Based Optical Fibre Sensor for Structural Health Monitoring," Measurement Science and Technology, Vol. 5, No. 10, pp. 2133-2141.
28. Islam, M.R., Mansur, M.A. and **Maalej, M.** (2005), "Shear strengthening of RC deep beams using externally bonded FRP systems," Cement and Concrete Composites, Vol. 27, No. 3, pp. 413-420.

29. **Maalej, M.**, Quek, S.T., and Zhang J. (2005). "Behavior of Hybrid-Fiber Engineered Cementitious Composites Subjected to Dynamic Tensile Loading and Projectile Impact," *Journal of Materials in Civil Engineering (ASCE)*, Vol. 17 No. 2, pp. 143-152.
30. **Maalej, M.** and Leong K.S. (2005) "Effect of Beam Size and FRP Thickness on Interfacial Shear Stress Concentration and Failure Mode of FRP-Strengthened Beams," *Composites Science and Technology*, Vol. 65, No. 7-8, pp. 1148-1158.
31. **Maalej, M.** and Leong K.S. (2005) "Engineered Cementitious Composites (ECC) for Effective FRP-Strengthening of RC Beams," *Composites Science and Technology*, Vol. 65, No. 7-8, pp. 1120-1128.
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43. Ahmed, S.F.U., **Maalej, M.** (2009) "Tensile strain hardening behaviour of hybrid steel-polyethylene fibre reinforced cementitious composites", *Journal of Construction and Building Materials* (Elsevier, UK), Vol. 23 No. 1, pp. 96-106.
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45. **Maalej, M.**, Chhoa, C.Y. and Quek, S.T. (2010) "Effect of Cracking, Corrosion and Repair on the Frequency Response of RC Beams," *Construction & Building Materials* (Elsevier), Vol. 24, No. 5, pp.719-731.
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47. Lin, V. W. J., Quek S.T., **Maalej, M.**, Lee, S.C. (2010) "Finite Element Model of Functionally-Graded Cementitious Panel under Small Projectile Impact," *International Journal of Protective Structures*, Vol. 1, No. 2, pp. 271-297 (DOI: 10.1260/2041-4196.1.2.271).
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50. **Maalej, M.**, Quek, S.T., Ahmed, S.F.U., Zhang, J., Lin, V.W.J., Leong, K.S. (2012) "Review of potential structural applications of hybrid fiber Engineered Cementitious Composites," *Construction & Building Materials* (Elsevier), Vol. 36, No. 11, pp.216-227.
51. Qudah, S. and **Maalej, M.** (2014) "Application of Engineered Cementitious Composites (ECC) in interior beam-column connections for enhanced seismic resistance," *Engineering Structures* (Elsevier, UK), Vol. 69, No. 1, pp. 235-245. (DOI: 10.1016/j.engstruct.2014.03.026).
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53. Leblouba, M., Junaid, M.T., Barakat, S., Altoubat, S., **Maalej, M.** (2017) "Shear buckling and stress distribution in trapezoidal web corrugated steel." *Thin-Walled Structures* (Elsevier, UK), Vol. 113, pp. 13-26 (DOI: 10.1016/j.tws.2017.01.002).
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56. Alrefaei, Y., Rahal, K., **Maalej, M.** (2018) "Shear Strength of Beams Made Using Hybrid Fiber Engineered Cementitious Composites," *ASCE Journal of Structural Engineering*, Vol. 144, NO. 1 (DOI: 10.1061/(ASCE)ST.1943-541X.0001924).
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60. Alrouh, N., **Maalej, M.** Barakat, S. (2021) "Modeling the Shear Strength of FRP-Strengthened RC Beams Using Artificial Neural Networks," *Materials Science Forum* (Trans Tech Publications Ltd, Switzerland), Vol. 1047, pp 207-213.
61. Leblouba, M., Altoubat, S., Karzad, A.S., **Maalej, M.**, Barakat, S., Metawa, A. (2022) "Impact response and endurance of unreinforced masonry walls strengthened with cement-based composites," *Structures* (Elsevier, UK), 36, pp. 262-279.
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63. Leblouba, M., Barakat, S., Altoubat, S., **Maalej, M.**, Awad R. (2022) "Resistance factors for reliability based-design of fiber reinforced concrete suspended slabs in flexure," *Journal of Building Engineering* (Elsevier, UK), Vol. 57, 104911.
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65. Altoubat, S., **Maalej, M.**, Nassif, N., Barakat (2023) "Punching shear behavior of RC slabs incorporating macro-synthetic fibers," *Journal of Building Engineering* (Elsevier, UK), Vol. 67, 105983.

Books/Book Chapters

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2. Ong, G.K.C., **Maalej, M.** and Zhang, M.H. eds (2003) *Inspection Appraisal Repairs & Maintenance of Structures*, CI-Premier Pte Ltd, Singapore, December, 2003. 366 pp. ISBN: 981-04-8559-X.
3. Shanableh, A., **Maalej, M.**, Barakat, S., Omar, M., Al-Toubat, S., Al-Ruzouq, R., and Hamad K. eds (2017) *International Conference on Advances in Sustainable Construction Materials & Civil Engineering Systems (ASCMCES-17)*, Sharjah, United Arab Emirates, April 18-20, 2017, MATEC Web of Conferences, Volume 120 (2017), *EDP Sciences*, France, eISSN: 2261-236X. (DOI: [10.1051/mateconf/201712000001](https://doi.org/10.1051/mateconf/201712000001)).

Patents filed

1. Kuang, S.C.K., Quek, S.T. & **Maalej, M.** "Plastic optical fiber sensor," US Patent No. 7,496,247 (February 2009).

Conference Articles/Presentations

1. Li, V.C., **Maalej, M.** and Hashida, T. (1992) "Optimization of Discontinuous Fiber Composites", *Proceedings of the ASCE Ninth Engineering Mechanics Conference*, College Station, Texas, May 25-27, 1992, L. D. Lutes and J. M. Niedzwecki, eds., ASCE, New York, pp. 1000-1003.
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3. **Maalej, M.** and Li, V.C. (1994) "Crack Width Control With Engineered Cementitious Composites in R/C Structures", *Proceedings of the ASCE 1994 Materials Engineering Conference Infrastructure: New Materials and Methods of Repair*, San Diego, California, November 13-16, 1994, K. D. Basham, ed., ASCE, New York, pp. 359-366.
4. Li, V.C., **Maalej, M.** and Lim, Y.M. (1995) "Fracture and Flexible Behavior in Strain Hardening Cementitious Composites," *Proceedings of the IUTAM Symposium on Fracture of Brittle Disordered Materials: Concrete, Rock and Ceramics*, The University of Queensland, Brisbane, Australia, September 20-24, 1993, G. Baker and B. L. Karihaloo, eds., E & FN Spon, London, pp. 101-115.
5. Karasaridis, A., **Maalej, M.**, Pantazopoulou, S. and Hatzinakos, D. (1997) "Time-Frequency Analysis of Sensor Data for Detection of Structural Damage in Instrumented Structures," *1997 13th International Conference on Digital Signal Processing Proceedings*, Volume II, July 2-4, 1997, Santorini-Hellas (Greece), Zeus European Economic Interest Group, Patras, pp. 817-820.
6. **Maalej, M.** and Bonacci, J.F. (1998) "Repair and Strengthening of RC Beams Using FRP Reinforcement," *Proceedings of the CSCE 1998 Annual Conference: 2nd Structural Specialty Conference*, Halifax, Nova Scotia June 10-13, 1998, J. P. Newhook and L. G. Jaeger, eds., CSCE, Montreal, pp. 643-652.
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9. **Maalej, M.** Goh W.H. and Paramasivam, P. (2000) "Analysis and Design of FRP-Plated Beams Against Debonding-Type Failures," *ICSF2000-6th International Conference on Structural Failure, Durability and Retrofitting*, 14-15 September 2000, Singapore, K.C.G. Ong, J.M. Lau, P. Paramasivam, N.Y. Ho, eds., Singapore Concrete Institute, Singapore, pp. 237-246.
10. **Maalej, M.** and Rizkalla, S.H. (2000) "Fiber Optic Sensing and Intelligent Processing of Sensor Data for Structural Health Monitoring," *ofs2000-14th International Conference on Optical Fiber Sensors*, 11-13 October 2000, Venice, Italy, A.G. Mignani, H.C. Lefèvre, eds., Proceedings of SPIE Vol. 4185, pp. 238-241.
11. Ahmed S.F.U., **Maalej, M.** and Paramasivam P. (2001) "Strain-Hardening Behavior of Hybrid Fiber Reinforced Cement Composites," *Ferro-7--Proceeding of the Seventh International Symposium On Ferrocement and Thin Reinforced Cement Composites*, June 27 – 29, 2001, Singapore, M.A. Mansur and K.C.G. Ong, eds., National University of Singapore, Singapore, pp. 215-226.
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20. Lee, S.C., Quek, S.T., and **Maalej, M.** (2004) "FE Modeling of Penetration and Cratering of Hybrid-Fibre ECC Panels under Projectile Impact," Proceedings of the Seventeenth KKCNN Symposium on Civil Engineering, 13-15 December 2004, Krungsri River Hotel, Authaya, Thailand, Chulalongkorn University, Bangkok, pp. 193-198.
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