



## *Curriculum Vitae*

*Associate Professor dr. Hala Tawfek Hasan*



### **1. Institution:**

*Higher Institute of Earthquake Studies and Research(HIESR) - University of Damascus– Syria*

*head of the Structural Earthquake Engineering Department.*

*Kafar Souseh next to Cham City Center- Damascus – Syria*

### **2. Home Postal Address:**

*Damascus - Syria*

*Cell Phone: 00963933723616*

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*[h.hasan@damasuniv.edu.sy](mailto:h.hasan@damasuniv.edu.sy)*

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*[info.hiesr@damasuniv.edu.sy](mailto:info.hiesr@damasuniv.edu.sy)*

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### **3. Personal Data:**

*Date of Birth: December 1\1\1961*

*Place of Birth: Latakia, Syria*

*Nationality: Syrian*

*Marital Status: Married*

*Number of Children: three*

#### **4. Education:**

*Ph.D. Structural Engineering, Damascus University, Syria, 30/12/2008, degree: excellent*

*M.Eng. Civil Engineering, Cairo University, 8/2/2001, degree: very good*

*Graduate Diploma, Techreen University, Syria, 1979-1984, degree: very good.*

*B.Sc. Civil Engineering, Techreen University, Syria, 1984-1985, degree: good.*

#### **5. Titles of Theses:**

*M.Eng. Thesis: "Effect of Added Viscoelastic Dampers on Seismic Response of Regular and Irregular Buildings".*

*Ph.D. Thesis: "The Interaction between Structural Damage and Added Dampers as Energy Dissipation Mechanism".*

#### **6. Teaching Experience:**

**At faculty of Civil engineering in Damascus University, Syria**

- Static
- Strength of Materials
- Structural Analysis I.
- Structural Analysis II (stiffness Matrix & Plastic analysis).
- Structural Analysis III (Fundamentals of Finite Element Analysis & shells & Theory of elasticity).

**At faculty of Architects engineering in Arab International University (AIU)**

- Structural analysis.
- Strength of material.
- static mechanics.

**At Higher Institute of Earthquake Studies & Research (HIESR)–Damascus University, Syria**

##### **A. Teacher in Master of Science**

- Building Design Concrete
- Dynamic structures
- Principles of Earthquake Engineering.
- Scientific research project

##### **B. Teacher in Master Professional Master in Disaster Risk Management Science**

**, since November 2013 –to date:**

- Cultural heritage and risk management
- Advanced programs for analysis and assessment potential losses from disasters
- Dynamic structures - first semester
- Response and Seismic Design of Buildings –second semester
- International strategy and humanitarian charter

## **7. Research Interests:**

*Design, performance, durability, and serviceability of reinforced and semi active control system for steel and concrete structures. Construction materials, cements, additives, high strength concrete, high performance concrete, fiber reinforced concrete, stone masonry building, dissipated energy, viscoelastic dampers, base isolation, blast load.*

## **8. Graduate Studies:**

### **a. Supervised Thesis In Earthquake Structural Engineering in (HIESR)–Damascus University**

1. ***“Improving the structural earthquake response by semi active control system”***, by Engineer **Yazan ALghussein, Achieved 2015** for the Thesis Master in Earthquake Structural Engineering department in (HIESR)–Damascus University.
2. ***“Analytical study of two energy dissipation systems Friction Base and Isolation Friction Viscous Elastic Damper for multistory building ”***, by **Alaa Barmo, Achieved 2013** for the Thesis Master in Earthquake Structural Engineering department in (HIESR)–Damascus University.
3. ***“Mitigate The Damage of R.C Walls under Blast Loading Using carbon fiber”***, by obay Shaaban Student candidate for the Thesis Master in Civil Engineering, Damascus University.
4. ***“Seismic Behavior of Low-Rise RC Existing Buildings Designed for Gravity Load only in Damascus city”***, by **Manar Zayoud Achieved 2018** for the Thesis Master in Earthquake Structural Engineering department in (HIESR)–Damascus University.
5. ***“Evaluation of criteria analytical local ductility of the existing buildings of reinforced concrete in accordance with European the criteria code 8”***, by **Michelle Hathout, Achieved 2014 -11-5** for the Thesis Master in. Civil Engineering, Damascus University.
6. ***‘The behavior of Steel Frame with and without Stiffened Steel Plate Infilled Wall under seismic loads’***, by **Mohammed Asad** Student candidate for the Thesis Master in Earthquake Structural Engineering department in (HIESR)–Damascus University.
7. ***“Seismic Performance of Steel Frames Equipped with Buckling Restrained Brace”***, by **Luay Al-Mnini Achieved 20-4-2015** for the Thesis Master in. In Earthquake Structural Engineering department in (HIESR)–Damascus University.

8. **'Improve The Behavior of R.C Columns Under Blast Loading by using Additions GFRC & SFRC'**, by **yara bdewi** Student candidate for the Thesis Master in Earthquake Structural Engineering department in (HIESR)–Damascus University.
9. **"Improving of Seismic Response of Structures Using of Active Control System"**, by **Bassam jadid**, Student candidate for the Thesis Master in. Civil Engineering, Damascus University.
10. **"Seismic behavior of buildings with precast wall system - Case studies in Damascus and its rural"**, by **msouty Achieved 2014-12-23** for the Thesis Master in Earthquake Structural Engineering department in (HIESR)–Damascus University.
11. **"Improving the Seismic Behavior of an Exterior Reinforced Concrete Frame Joint Using Fly Ash and Steel Fibers "**, by **Basel shouaeb Achieved 2016-7-24** for the Thesis Master in Earthquake Structural Engineering department in (HIESR)–Damascus University.
12. **" Improve The Behavior of R.C Columns Under Blast Loading by using Additions GFRC & SFRC"**, by **yara bdewi** Student candidate for the Thesis Master in Earthquake Structural Engineering department in (HIESR)–Damascus University.
13. **"flexural ductility assessment of rectangular sections reinforced concrete beams designed according to Syrian code using criterion Euro code 8"**, by **Malek Najeabeh Achieved 2018** for the Thesis Master in Earthquake Structural Engineering department in (HIESR)–Damascus University.
14. **"Effect of soil properties on seismic response of frame – shear wall systems"**, by **Halemeh Al Hariri**, Student Candidate for the Thesis Master in Earthquake Structural Engineering department in (HIESR)–Damascus University.
15. **" The effect of strengthened the Coupling Beams in shear walls with opening Using Smart Shape Alloy On the seismic behavior and failure modes "**, by **Raoad Nasr Aldin** Student Candidate for the Thesis Master in Earthquake Structural Engineering department in (HIESR)–Damascus University.
16. **"Wall with short connections in reinforced concrete tall multi-story building "**, **Nsrin Al-Horani** Student Candidate for the Thesis Master in Earthquake Structural Engineering department in (HIESR)–Damascus University.
17. **"Progressive Collapse Analysis of RC Dual System with Different Seismic Design Levels "**, by **Mohammed sharef Achieved 2018** for the Thesis Master in Earthquake Structural Engineering department in (HIESR) Damascus University.

18. "**Studying of Dynamic Behavior of Deep Tunnels Under the Effect of Far-Field Explosion Loads**", by Ali Khadra Student Candidate for the Thesis Master in Earthquake Structural Engineering department in (HIESR) Damascus University.
19. "**Assessment RC building behavior using a digital model of the iterative coefficient behavior R**", by sameh Mahmoud Student Candidate for the Thesis Master in Earthquake Structural Engineering department in (HIESR) Damascus University.
20. "**The assessment Behavior of composite columns subjected to blast load and its effects on the residual capacity**", by OBADA ALKHAMIS Student Candidate for the Thesis in Earthquake Structural Engineering department in (HIESR) Damascus University
21. "**The Effect of Soil-Structure interaction on Dynamic Behavior for ground Tanks**", by Abd Al-Moa'een Roukaya Student Candidate for the Thesis Master in Earthquake Structural Engineering department in (HIESR) Damascus University
22. "**Choosing the best solution in retrofitting and rehabilitating seismically of reinforced concrete frames by using different types of steel bracings**", by Dania Aneas, Achieved 2013 the Master.
23. "**Improve the dynamic response of the concrete columns confinement by CFRP Strips exposed to blast loads using numerical modeling**", by jubran hamdan, Student Candidate for the Thesis Master.
24. "**Study the seismic response of R.C. high buildings with Tubular system considering the effect of soil - structural Interaction (SSI)**", by Amer Naddaf, Student Candidate for the Thesis Master.
25. "**Study the dynamic behavior of the ground tanks base isolated exposed to seismic excitation**", by Ali Hasan, Student Candidate for the Thesis Master.
26. "**Study the failure modes of slender RC columns subjected to seismic loads considering (P-Δ) effect**", by Hiba Nassar, Student Candidate for the Thesis Master .

### **b. Associate Supervised PhD Thesis**

1. "**Improving the Performance of Reinforced Concrete Deep Beams Using the local Additives**", by Engineer Hussam Ballot, Student Achieved 2014 for the Ph.D. Thesis.
2. "**The study of CFRP Strengthened RC frames in joints with masonry hollow blocks Infilled using diagonal CFRP strips under cyclic loads**", by Engineer Alaa Salkini, Student candidate for the Ph.D. Thesis.

3. "Development of a Strategy for the Risks Management of Earthquake and Mitigate Its Impact Case Study Kafar souseh region Damascus ", **Engineer Kinda malki**, Student for the *PhD* at the University of Techreen – Latakia.
4. "Improve the behavior of ancient stone limestone walls using mortar with local additives under cyclic loads", and Case study (Module from Damascus Castel)", by **Engineer gada Esrawi** Student for the *Ph.D. Thesis*.
5. "Development of the friction isolator by SMAs to Improve the seismic response of structure", by **Engineer Alaa Barmo**, Student candidate for the *Ph.D. Thesis*.
6. "Seismic Risk Index and its effect on Damascus City", by **Ahmed Munir Mohamed**, Student candidate for the *Ph.D. Thesis*.
7. " Developing Methodology Design for Reinforced Concrete Buildings strengthened with Eccentrically Metal Braces/School Building/", by **Engineer Jihad Sobaih** Student for the *Ph.D. Thesis*.
8. " Behavior of steel connections in Seismic Resisting Frames Consisting of Cold-Formed Steel Sections", by **Engineer Abdel Massih Tawil** Student for the *Ph.D. Thesis*.
9. , "Development Model to predict the shear behavior in RC beams based on Fracture mechanics and using XFEM ", **by Engineer Rania AL sheikh** Student for the *Ph.D. Thesis*.
10. "Develop a Methodology to Determine Reliability Based Design Criteria of Pre stressed Concrete Beams in Syria", **by Ahmed Ala'a Zarzour**, Student candidate for the *Ph.D. Thesis*, In Earthquake Structural Engineering in (HIESR)–Damascus.

### **Supervised PhD Thesis**

1. " Contribution in Health Monitoring System of RC Buildings with Soil Structure Interaction Considered (Experimental and Analytical Study) ", **by basel shouaeb** Student candidate for the *Ph.D. Thesis*, In Earthquake Structural Engineering in (HIESR)–Damascus.
2. " Contributing in inserting the mechanical damage approaches in the behavior of existing damaged reinforced concrete elements", **by hayyan zaher aldeen** Student candidate for the *Ph.D. Thesis*, In Earthquake Structural Engineering in (HIESR)–Damascus.
3. Studying the Nonlinear Behavior of RC Dual Systems under Seismic Loads", **by suzan suliman** Student candidate for the *Ph.D. Thesis*, In Earthquake Structural Engineering in (HIESR)–Damascus.
4. " Developing Adaptive and non-Adaptive Pushover Procedure for High-Rise Buildings ", **by Mayssa Arab** Student candidate for the *Ph.D. Thesis*, In Earthquake Structural Engineering in (HIESR)–Damascus

c. Served as member of the jury projects out to the fifth-year students - Faculty of Civil Engineering - Damascus University

## **9. Memberships:**

- member of Syrian Engineers Association since 1985
- Consultant member of Syrian Engineers Association since 11/2/2017
- Member of Syrian Code Committee since October 2016

## **10. Professional and Academic Experience:**

1985-1988: Engineer Group Manager projects in the social institution the specialized military acts of a variety of engineering and service in Latakia –Syria

1979-1984: B.Sc. Civil Engineering, Techreen University, Syria.

1987-1988: Graduate Diploma, Techreen University, Syria

1988-2003: Teacher at the Technical Institute geometric mean of Damascus University

1999-2001: M.Eng. Civil Engineering, Cairo University

2003-2008: Ph.D. Damascus University

2003-1/5/2011: Teacher at the Faculty of Civil Engineering - University of Damascus

1/5/2011-to date: Teacher in structural Engineering Department in (HIESR)

2009-to 2012: Dr. Teacher in the Arab International University - Faculty of Architecture

20/10/2012-to date: Vice Dean of the (HIESR) - University of Damascus

20/10/2016-to date: head of the Earthquake Structural Engineering Department- University of Damascus

## **11. LIST OF PUBLICATIONS:**

### **1. refereed international journals**

1. Hasan, H., Almnini, L., and Al Helwani, A. ,2014, “Seismic Performance of Steel Frames Equipped with Buckling Restrained Brace”, published in the International Journal of Engineering Research and Science & Technology (IJERST) Vol. 4, No. 1, February 2015.
2. Barmo, A., Hasan, H., 2014, , "The Behavior Of Multi-Story Buildings Seismically Isolated System Hybrid Isolation (Friction, Rubber And With The Addition Of Rotational Friction Dampers) , Open Journal of Earthquake Research, 2015, 4, 1-13,

3. Mooty, M. N. A., And Hasan, H. T., "Effect of Added Viscoelastic Dampers on Seismic Response of Regular and Irregular Buildings", Thesis for the degree of Master of Science in Civil Engineering, Cairo University, Egypt, October 2000.
4. Abdel-Mooty, M.N., and Hassan, H.T. "Effect of Added Viscoelastic Dampers on Seismic Response of Regular and Irregular Buildings", Engineering Research Journal, Helwan University, Cairo, Vol. 92, April, pp. c108-c127,2004.

## **2. local journals**

1. Ballout. H., Ghareeb, M., Hasan, H., "Studying the effect of steel fibers on the behavior and strength of concrete" Aleppo Univ. Engineering Science Series No. 5 2013.
2. Ballout. H., Ghareeb, M., Hasan, H., "The effect of additives on the behavior of reinforcement concrete beams", Aleppo Univ. Engineering Science Series No. 2013.
3. Ballout. H., Ghareeb, M., Hasan, H., "The Effect of Steel Fibers on the Behavior of Reinforcement Concrete Deep Beams", Aleppo Univ. Engineering Science Series No. 2013.
4. Ballout. H., Ghareeb, M., Hasan, H., "Comparative practical study to the effect of the industrial additives on the concrete strength ", Damascus Univ. Engineering Science Series No. 2013.
5. Sobaih, J., Hasan, H., "Analytical Study to Thickness and Quality of Shear Panel influence in Energy Dissipation", Aleppo Univ. Engineering Science Series No. 12, 2015.
6. Alghasin, Y., Tabak, T., Hasan, H., "Effect of Semi Active Control on Seismic Response of High Rise Buildings with Magneto Rheological Dampers and Linear Control ", Aleppo Univ. Engineering Science Series No. 13, 2015.
7. Al-kousa, M., Hasan, H., Abdul-wahed, M., Alarab, M., Najjar, D., "Structural Dynamic Characteristics Assessment of the Eighth Tower in Damascus Citadel ", Aleppo Univ. Engineering Science Series No. 13 2015.
8. Al-kousa, M., Hasan, H., Abdul-wahed, M., "Effects Evaluation of the Seismic Damage of the Eighteenth Tower in Damascus Citadel ", Aleppo Univ. Engineering Science Series No. 13 2015.
9. Al-kousa, M., Hasan, H., Abdul-wahed, M., Idmon, A., "Structural Dynamic Characteristics Assessment of the Eighth Tower in Damascus Citadel ", Damascus Univ. Engineering Science Series 2015.
10. Hasan, H., "Improving the behavior of high-rise buildings by hybrid basement insulation system with the addition of rotational friction dampers on the entire height ", Damascus Univ. Engineering Science Series 2015.
11. Hasan, H., Al-kousa, M., Tawil, A., "Upgrade Performance the slender and long RC Columns on the Buckling Using CFRB ", al Baath university Engineering Science Series 2015.
12. Hasan, H., Al-kousa, M., "Analytical Study on Improvement of Long Slender RC Columns Behavior on Buckling Using CFRP ", Aleppo Univ. Engineering Science Series No.13, 2015.
13. Hasan, H., Subh, M., Tawil, A., "Behavior of Slipped Bolted Steel Frames Consisting of Cold-Formed Steel Sections under Cyclic Loading", al Baath university, Engineering Science Series 30-8-2015.



14. Alghasin, Y., Tabak, T., Hasan, H. "Improving Seismic Response of Low-Rise Buildings with Magneto Rheological Damper with ( $H_{\infty}$ ) controller", Damascus university Engineering Science Series 2015.
15. Al Hasan, A., Mooty, M. N. A., and Hasan, H. T., "Testing of Model of Exterior R.C Beam-Column Connection under Cyclic Loads", Damascus university Engineering Science Series 2008.
16. Hasan, H., Subh, M., Tawil, A., "Using High End Finite Element Method in Modeling Complicated Problems for Cold-Formed Sections ", al Baath university, Engineering Science Series, 2015.
17. Hasan, H., Jabbour, W., shouaeb, B., "Improving the Seismic Behavior of an Exterior Reinforced Concrete Frame Joint Using Fly Ash ", al Baath university, Engineering Science Series, 2015.
18. Hasan, H., Alsheikh, R., "Analytical study of the behavior of R.C beam-column joint under cyclic load using ANSYS program ", al Baath university, Engineering Science Series, June, 2015.
19. Hasan, H., Subh, M., Tawil, A., "Emulation of Bolted connections to plastic hinges in Seismic Resisting Steel Frames Consisting of Cold-Formed Steel Sections", Damascus Univ. Engineering Science Series No., 2015.
20. Mayada Al-kousa I, Tawfiq Hasan, H., Abdul-wahed M., Alarab , M., Al-egy, I., "Experimental and analytical evaluation of the consolidation of tower 8 in the Damascus citadel", Arabian Journal of Geosciences, ISSN 1866-7511, Volume 10, Number 2, Arab J Geosci (2017) 10:1-13, DOI 10.1007/s12517-016-2788-9

21. احمد الحسن، محمد نعيم عبد المعطي، هاله حسن، "اختبار نموذج وصلة خارجية من الخرسانة المسلحة لجانز مع عمود تحت تأثير أحمال دورية"، مجلة جامعة دمشق للعلوم الهندسية، جامعة دمشق، 2008.

### **3. International conference**

Al Hasan, A., Mooty, M. N. A., and Hasan, H. T., "Seismic Energy Dissipation in R.c Buildings through Both Structural Damage and Added Dampers", 5th World Conference on Structural Control and Monitoring 5WCSCM-10389, TOKYO, JULY, 2010

### **4. Books.**

1. Hala Hassan "the safety engineering", edited book collectors, Institute of Engineering, the Ministry of Higher Education, and Syria 1996.
2. Translation book, by Al-kousa, M., Hasan, H., Saleh, H., "Disaster Management: International Lessons in Risk Reduction, Response and Recovery", Editors Alejandro López-Carresi, Maureen Fordham, Ben Wisner, Ilan Kelman, JC Gaillard Publisher: Routledge, 2013

### **ورشات عمل**

1. ورشة عمل الهيئة العليا للبحث العلمي في مشروع رسم السياسة الوطنية للعلوم والابتكار في سوريا والخاصة بمناقشة تقرير قطاع السكان في 2014/2/12
2. ورشة عمل الهيئة العليا للبحث العلمي في مشروع رسم السياسة الوطنية للعلوم والابتكار في سوريا والخاصة بمناقشة تقرير قطاع البناء والتشييد 2014/2/19.

3. حضور فعالية قام بها المكتب الوطني لبرنامج "إيراسموس بلس" في سورية بعنوان: اليوم الوطني التعريفي الثالث لبرنامج "إيراسموس بلس" في سورية ، وذلك 10 و 11 آب 2016 في نادي الشرق - ساحة النجمة - دمشق
5. المشاركة بالإشراف في ورشة عمل بعنوان: "محاضرات اسبوع الهندسة الزلزالية" في فرع نقابة المهندسين السوريين في محافظة دمشق ، في الفترة 12-12-2016 ولغاية 15-12-2016 ، بالمحاضرات التالية :
- تصميم المباني لمقاومة الانهيار
  - تصميم الجوائز العميقة واستخدام نموذج الجائز الشبكي
  - التصميم المبني على الاداء

5. *I attended the first TAM "TECHNICAL ASSISTANCE MISSION" event "Higher Education Quality Standards from a European Perspective (Bologna Process) to Syrian HE Institutions" to be held in Lebanon, Zahleh, at the Holy Spirit University of Kaslik USEK, Zahleh on 10 March 2017 from 10:00 AM to 4:30 PM.*