

A. HASSANI PhD, M.Sc., B.Sc.

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PERSONAL STATEMENT:

A vastly experienced civil engineer with strong academic and industrial and management credentials.

Proven track record in concrete materials engineering, pavement design and road projects quality control and assurance.

Seeking exceptional opportunities to participate in technical team design verification, pavement design, quality assurance and project implementation.

EXPERTISE:

Concrete mix design, sustainable concrete, waste materials, internationally recognized Standards such as Design Manual for Roads and Bridges: Volume 7 (DMRB), ASTM, AASHTO, etc.

EDUCATION:

PhD in Concrete: University of Westminster - London, England, 1992

Thesis; Laminated reinforced concrete pavement with thin layer of bitumen

MSc in Civil Engineering; University of Birmingham - Birmingham, England, 1986

Thesis: Correlation between rutting potential and quotient ratio

BSc in construction management: Safford University - England, 1981

WORK EXPERIENCE:

Academic: Full Professor since, 2010

Tarbiat Modares University (TMU) - Tehran, since 1992

Teaching

Senior lecturer on:

Concrete Pavement Design

Advanced Concrete Technology

Industrial projects

Esfahan – Shiraz Free-way concrete pavement, Project Technical Manager

Arak – Khorramabad Free-way: implementation of QA - Head of Quality Assurance Team

Qom – Tehran circular road: Roller Compacted Concrete – Technical project Manager

Consultant to civil engineering projects for Non Destructive Testing equipment

Business Developer for a Food Industry with 60 personnel.

RESEARCH ACTIVITIES:

Flexible Concrete Pavement

Rutting potential of Flexible Pavements

Fibrous Concrete

Semi Flexible Pavements

PROFESSIONAL MEMBERSHIP:

Member of International Society for Concrete Pavements (ISCP) - USA

Member of PIARC Committee for Concrete Pavements

Fellowship of Chartered Institution of Highways & Transportation - United Kingdom

Editor-in-Chief of International Journal of Transportation Engineering

COMMITTEE MEMBERSHIP:

1) **Member:** Committee on Durability of Concrete, AFN20 – **Transportation Research Board (TRB)** of the

National Academies - USA

2) **Member:** Committee on Durability of Concrete, AFN30 – **Transportation Research Board (TRB)** of the

National Academies – USA

PAPER PEER REVIEW:

Transportation Research Board (Concrete Material Journal) - USA

ACI Concrete and Materials Journal - USA

Construction and Building Journal - Elsevier

International Journal of Pavement Engineering – Taylor and Francis, United Kingdom

Road Materials and Pavement Design - Taylor and Francis, United Kingdom

AWARDS:

Distinguished Researcher, Tarbiat Modares University, Tehran – Iran, 2004, 2005, 2017 and 2019.

PhD AND MSc THESIS SUPERVISION

The study of mean time drying shrinkage behavior of steel fiber reinforced concrete pavements, summer 1997

Application of high strength concrete in pavements, March 1999

The durability of Railway concrete sleepers using steel fibers, spring 2000

Cracks due to sub-base materials in flexible pavements, spring 2001.

Effect of industrial chips on design criteria in high strength rigid pavements, Feb. 2002.

Application of FRP dowel bars in concrete pavements, 2003.

The study of permeability of RCC with pozzolanic material in concrete pavements May 2003.

Analysis of heavy axle loads effects on pavements, winter 2003.

Techno- economic analysis of suitable pavement in tunnels, winter 2005.

Laboratory investigation of road stone characteristics and road surface skid resistance, winter 2005.

Technical and economical comparison of concrete and ballasted infra-structures in railways, winter 2005.

An analytical study on overlay material to prevent reflective cracks in composite pavements, winter 2006.

Correlation between California Bearing Ratio (CBR) & Light Falling Weight Deflectometer (FWD) test results, winter 2005.

Back calculation of the FWD test results in flexible pavements using artificial Neural Networks, autumn 2006.

Performance Analysis of Surface Treatment Emulsion Asphalt Modified with Composite of Styrene Butadiene Rubber Polymer (SBR) and Nano Material, 2017.

Evaluation of Recycled Plastic (PET) Effect on Abrasion Resistance of Concrete Pavement, spring 2018.

Evaluating the effect of copper slag on load repetition fatigue cracks properties of pervious concrete pavements, spring 2018.

A functional model for Determining the Concrete Pavement Thickness Using Fiber Reinforced Concrete, spring 2018.

Development of Fatigue model in fiber reinforced roller compacted concrete pavement, spring 2018.

Evaluation of Thermo-Mechanical Properties of Alkali-Activated Slag-Red Mud Mortar and Concrete for Application in Pavement Engineering, summer 2018.

Study the effect of mineral admixtures combination on abrasion resistance and durability of concrete pavements, summer 2018.

Evaluation of crumb rubber on abrasion resistance of concrete pavement, summer 2018.

Evaluating and presenting a model describing abrasion-related damages resulting from macro-texture of concrete pavement, spring 2019.

Investigating the effect of thermal stress and traffic loading on roller compacted concrete pavements using finite element method, spring 2019.

evaluation of the effect of self-healing agent on mechanical strength of bio concrete, Summer 2019.

PUBLICATIONS:

Heavy duty laminated reinforced concrete pavements, National Highway Traffic Safety Administration, 1992, DW Cox, A Hassani.

Study on salinity tolerance of barley varieties I lines in screening nursery, Seed and Plant Improvement Institute-SPII, 2004.

A Hassani, H Ganjidoust, AA Maghanaki, Use of plastic waste (Poly-ethylene terephthalate) in asphalt concrete mixture as aggregate replacement, Waste Management & research, 2005.

A Hassani, S Mohammad, Seepage analysis of interlocking concrete block pavement-3D finite element modeling approach, Road Materials and Pavement Design an International journal, 2008.

A Hassani, A Bahreininejad, M Moaveni, Kenlayer based pavement backcalculation moduli using artificial neural networks, International Journal of Pavement Research and Technology, 2008.

A Hassani, M Arjmandi, Enhancement of concrete properties for pavement slabs using waste metal drillings and silica fume, journal of Waste Management & research June 2009, Denmark.

H Ganjidoust, A Hassani, A Rajabpour Ashkiki, Cement Based Solidification / Stabilization of Heavy Metal Contaminated Soils with the Objective of Achieving High Compressive strength for the Final Matrix. International journal of science and Technology, 2009.

B Saghafi, A Hassani, R Noori, MG Bustos, Artificial Neural Networks and regression analysis for predicting faulting in jointed concrete pavements considering base condition. International Journal of Pavement Research and Technology, 2009.

A Hassani, M Arjmandi, Enhancement of concrete properties for pavement slabs using waste metal drillings and silica fume. Waste Management & Research, 2010.

A Hassani, S Mohammad, P Ghodousi, Runoff infiltration through permeable block pavements, Proceedings of the Institution of Civil Engineers-Transport, 2010.

Behrooz Shirgir, Abolfazl Hassani, Ahmad Khodadadi, Experimental study on permeability and mechanical Properties of Nano-Modified Porous Concrete. Journal of Concrete materials, 2011.

F Jafarkazemi, H Abdi, AA Zargar, A Hassani, Development of a solar collector/solar water heating system test center in Iran, Solar World Congress, Kassel, Germany, 2011.

B Fakhim, A Hassani, A Rashidi, P Ghodousi, Predicting the impact of multiwalled carbon nanotubes on the cement hydration products and durability of cementitious matrix using artificial neural network modeling technique, The Scientific World Journal, 2013.

AR Mamdoohi, M Fallah Zavareh, A Hassani, T Nordfjærn, A Monte Carlo Simulation of Chain Reaction Rear End Potential Collisions on Freeways, International Journal of Transportation Engineering, 2015.

B Fakhim, A Hassani, A Rashidi, P Ghodousi, Preparation and microstructural properties study on cement composites reinforced with multi-walled carbon nanotubes, Journal of Composite Materials, 2015.

A Kavussi, M Jalili Qazizadeh, A Hassani, Fatigue behavior analysis of asphalt mixes containing electric arc furnace (EAF) steel slag, Journal of Rehabilitation in Civil Engineering, 2015.

HT Ghashghaei, A Hassani, Predicting the permeability of pervious concrete pavement using artificial neural networks modeling, Scientific Research and Essays, 2015.

M Ahmadi, A Hassani, K Soleymani, Role of recycled steel fibers from tires on concrete containing recycled aggregate from building waste, JOURNAL OF CONCRETE RESEARCH, 2015.

M Abedini, A Hassani, MR Kaymanesh, AA Yousefi, The rheological properties of a bitumen emulsion modified with two types of SBR latex. Petroleum Science and Technology, 2016.

M Adresi, A Hassani, S Javadian, JM Tulliani, Determining the surfactant consistent with concrete in order to achieve the maximum possible dispersion of multi-walled carbon Nano tube in keeping the plain concrete properties. *Journal of Nano Technology*, 2016.

Effect of Durability of Concrete, Containing Nano carbon Cement Structures, on Weight Loss and Flexural Strength of Concrete Pavement, under Freeze-Thaw Cycle, *JOURNAL OF TRANSPORTATION INFRASTRUCTURE ENGINEERING (JTIE)*, 2016.

A Hassani, BS Mashhadi, The Effect of Moisture on the Strength of Concrete Samples in Middle Term and Long Term Using Ultrasonic Device, *International Journal of Computer Science and Information Security*, 2016.

HT Ghashghaei, A Hassani, Investigating the relationship between porosity and permeability coefficient for pervious concrete pavement by statistical modelling, *Materials Sciences and Applications*, 2016.

M Abedini, A Hassani, MR Kaymanesh, AA Yousefi, Low temperature adhesion performance of polymer modified bitumen emulsion in chip seal using different SBR latexes. *Petroleum Science and Technology*, January 2017.

A Foroutan Mirhosseini, A Kavussi, MH Jalal Kamali, MM Khabiri, Evaluation fatigue behavior of asphalt binders and mixes containing date seed ash. *Journal of civil engineering and management*, 2017.

M Adresi, A Hassani, Construction and Evaluation of Damage Detection Sensor Consistent with Concrete Pavement, *Modares Civil Engineering Journal*, 2017.

M Adresi, A Hassani, Determination of Proper Mix Design for Cement-Treated Base Containing High Volume of Reclaimed Asphalt Pavement, *JOURNAL OF TRANSPORTATION INFRASTRUCTURE ENGINEERING (JTIE)*, 2017.

A Hassani, BS Mashhadi, A Shafipour, M Bazrafkan, The Effect of Moisture on the Strength of Concrete Sample by using Ultrasonic Device, *AMBIENT SCIENCE*, 2017.

M Adresi, A Hassani, JM Tulliani, G Lacidogna, P Antonaci, A study of the main factors affecting the performance of self-sensing concrete, *Advances in Cement Research*, 2017.

H Rooholamini, A Hassani, M.R.M Aliha, Evaluating the effect of macro-synthetic fiber on the mechanical properties of roller compacted concrete pavement using response surface methodology. *Construction and Building Material Journal*, 2018.

F Balali, SV Ahmadi Tabatabaei, AH Hassani, Effect of Information and Communication Technology on Self-Efficacy and Academic Achievement of Students, *Health Education and Health Promotion*, 2018

J Safari, M Mirzaei, H Rooholamini, A Hassani, Effect of rice husk ash and macro-synthetic fibre on the properties of self-compacting concrete, *Construction and Building Materials*, 2018.

A Bayat, A Hassani, AA Yousefi, Effects of red mud on the properties of fresh and hardened alkali-activated slag paste and mortar, *Construction and Building Materials*, 2018.

H Rooholamini, A Hassani, MRM Aliha, Fracture properties of hybrid fibre-reinforced roller-compacted concrete in mode I with consideration of possible kinked crack, *Construction and Building Materials*, 2018.

Evaluation of Recycled Products from Worn Tires Effect on the Mechanical Properties of Concrete Pavement, *Modares Civil Engineering journal*, 2019, A Zarei, A Hassani

AR Lori, A Hassani, R Sedghi, Investigating the mechanical and hydraulic characteristics of pervious concrete containing copper slag as coarse aggregate. *Construction and Building Material Journal*, 2019.

A Kavussi, M Qorbaninik, A Hassani, The Influence of Moisture content and Compaction level on LWD Modulus of Unbound Granular Base Layers, *Transportation Geotechnics*, 2019.

F Kazemian, H Rooholamini, A Hassani, Mechanical and fracture properties of concrete containing treated and untreated recycled concrete aggregates, *Construction and Building Material Journal*, 2019.

M Daneshfar, AHassani, M Mohammadaliha, The effect of specimen size on Flexural Fatigue Life of macro-synthetic-fiber-reinforced concretes, *Modares Civil Engineering journal*, 2019.

A Kavussi, A Hassani, F Kazemian, M Taghipoor, Laboratory evaluation of treated recycled concrete aggregate in asphalt mixtures, *International Journal of Pavement Research and Technology*, 2019.

A Hassani, M Taghipoor, MM Karimi, A state of the art of semi-flexible pavements: Introduction, design, and performance, *Construction and Building Material Journal*, 2020.

MH Jalal Kamali, A Hassani, J Sodagari, Investigating the Relation among British Pendulum Number, Mean Texture Depth and Asphalt Content in Hot Mix Asphalt, *Journal of Rehabilitation in Civil Engineering*, 2020.

M Abedini, A Hassani, MR Kaymanesh, AA Yousefi, H Abedini, Multiple Stress Creep and Recovery Behavior of SBR-Modified Bitumen Emulsions, *Journal of Testing and Evaluation*, 2020.

A Bayat, A Hassani, O Azami, Thermo-mechanical properties of alkali-activated slag–Red mud concrete, *Road Materials and Pavement Design*, 2020.