CV of Prof. Dr. Ramazan DEMIRBOGA

Alfaisal University, Engineering Faculty,

Architectural Engineering Department,

Riyadh, 11533, Saudi Arabia

Tel: +966535220816 (Saudi Arabia)

+905058843015 (Turkey)

e-mail: rdemirboga@yahoo.com, rdemirboga@alfaisal.edu

Google scholar:

https://scholar.google.com/citations?user=uBSfY50AAAAJ&hl=en

EDUCATION

High School: Istanbul Kabatas Erkek Lisesi, 1987

B.S. Middle East Technical University (METU) Turkey, Civil Engineering 1992, TURKEY

M.S. Dumlupinar University, Structural Engineering, Construction Materials in Civil Engineering, August 1995, TURKEY

Ph.D. Ataturk University, Erzurum, Structural Engineering, Construction Materials in Civil Engineering, December 1999, TURKEY

APPOINTMENTS

18.09. 2016- Present, Alfaisal University, Riyadh, Saudi Arabia

8.2013-9. 2016, King Abdulaziz University, Saudi Arabia

10.2010-8.2013 University Putra Malaysia, Engineering Faculty Civil Engineering Department, Malaysia.

08.01.2010- Promoted to Professor Position, Ataturk University Eng. Fac., Civil Eng. Dep., Turkey.

2008 - 2010 Deputy Dean & head of Construction Materials, Ataturk University, TURKEY.

10.12.2004 -07.01.2010 Associate Professor, at Ataturk University

2003- 2004 Ohio State University, Columbus, USA (Visiting Scholar with Prof.Hojjat Adeli))

28.12.2001- 08.02.2005 Assistant Professor, Ataturk University

22.04.1993-27.12.2001 Research Assistant, Ataturk University, TURKEY

According to Stanford university professors' publication (in PLOS BIYOLOGY) related to ranking of professor; assessing scientists for career-long citation impact up until the end of 2020 and for citation impact during the single calendar year 2024, and listed the name of professor who are more influential in their area of interest (first 1%). I am among the limited faculties who are in that list from Alfaisal University.

CONSULTANCY and ENDUSTRIAL EXPERIENCE

- 1) Assessed Erzurum Airport concrete quality, assessment, and rehabilitation of the Erzurum Airport by epoxy injection.
- 2) Agri Ready-mixed concrete Company's concrete mix design.
- 3) Erzurum Ready-mixed concrete company's concrete mix design.
- 4) Assessment and rehabilitation of Agri Airport Tower.
- 5) Concrete quality controls of many public buildings such as schools, logjams, and hospitals in the eastern part of Turkey.

TEACHING

Teaching Experience (1993-Now):

Over 29 years of teaching experience (1993-2024) - taught graduate and undergraduate students, developed undergraduate/graduate programs.

Supervised under-graduate/graduate/PhD/Post-doctoral students, and examiner of Master's/PhD thesis.

External Examiner: University of Malaya, Malaysia.

Undergraduate Courses

- Materials of Construction
- Concrete Technology
- Mechanics of Materials, Solid Mechanics, Strength of Materials
- Reinforced Concrete Design
- Structural Analysis
- Structural Mechanics
- Introduction to Geotechnical Engineering
- Statics
- Materials Science
- Materials for Civil and Construction Engineers
- CE499 Senior Project

Postgraduate Courses

-Assessment and Rehabilitation of Concrete structures

- Advanced Concrete Technology
- -Durability of Construction Materials
- Admixtures for Concrete

ADMINISTRATIVE EXPERIENCE and PROFESSIONAL ACTIVITIES:

Vice- Dean of Engineering Faculty, Ataturk University, Erzurum, TURKEY, 2008-2010

Chairman or Member of the below Committees:

- MUDEK (Association for Assessment and Accreditation of Engineering Programs, ABET)

NCAAA Team member (National Commission for Academic Accreditation and Assessment), Review Panel for Civil Engineering Program, college of Engineering - (SU), Shaqra University, Shaqra, Saudi Arabia, from 18/02/2024 to 20/02/2024.

NCAAA Team member (National Commission for Academic Accreditation and Assessment), Review Panel for Civil Engineering Program, college of Engineering - (TU) Taif University, Taif, Saudi Arabia, from 14/01/2024 to 17/01/2024.

NCAAA Team member (National Commission for Academic Accreditation and Assessment), Review Panel for Civil Engineering Master Program, college of Engineering - (KKU), King Khalid University, Abha, Saudi Arabia, from 19/03/2023 to 21/03/2023.

NCAAA Team member (National Commission for Academic Accreditation and Assessment), Review Panel for Civil Engineering Program, college of Engineering - (NBU), <u>Northern Border</u> <u>University</u>, Arar, Saudi Arabia, from 12/02/2023 to 14/02/2023.

NCAAA Team member (National Commission for Academic Accreditation and Assessment), Review Panel for Civil Engineering Program, Engineering college of Unaizah - (QU) Qassim University, Qassim, Saudi Arabia, from 22/05/2022 to 24/05/2022.

NCAAA Team member (National Commission for Academic Accreditation and Assessment), Review Panel for <u>Construction Engineering</u> - (UQU) Ummul Qurra University, <u>College of</u> <u>Engineering at Al Qunfudhah branch campus</u>, Makkah, Saudi Arabia, from 30/10/2022 to 01/11/2022.

NCAAA Team member (National Commission for Academic Accreditation and Assessment), Review Panel for Architecture and Building Science Master Program - (KSU) King Saud University, Riyadh, Saudi Arabia, from 27/02/2022 to 01/03/2022. NCAAA Team member (National Commission for Academic Accreditation and Assessment), Review Panel for Interior Architecture Program- (IAU) Imam Abdulrahman bin Faisal University, Dammam, Saudi Arabia, from 14/03/2021 to 17/03/2021.

NCAAA Team member (National Commission for Academic Accreditation and Assessment), Review Panel for Architecture and Building Science Program- (KSU) King Saud University, Riyadh, Saudi Arabia, from 31/03/2019 to 03/04/2019.

NCAAA Team member (National Commission for Academic Accreditation and Assessment), Review Panel for Building Engineering Program- (IAU) Imam Abdulrahman bin Faisal University, Dammam, Saudi Arabia, from 19/10/2018 to 25/10/2018.

- Summer practice Affairs Committee
- Staff Affairs Committee
- Personnel Committee
- Manpower Planning Subcommittee
- -ABET Committee Member, King Abdulaziz University
- -ABET Committee Member, University Putra Malysia
- Course Coordinator (Statics and Mechanics of Materials)

Professional Affiliation:

- Member of Union of chamber of Turkish Engineering architects chamber of civil engineers
- Malaysian Society for Engineering & Technology
- ACI E- member

TECHNICAL ACTIVITIES:

Technical committee members and paper reviewer of many symposiums in Malaysia.

Advenced Concrete Technology Workshop, Keynote speaker, 16-17 April, 2013, Putrajaya, Malaysia.

RESEARCH ACTIVITIES

Development of blended cement, concrete, and other construction materials (high Performance / selfconsolidating concrete, lightweight concrete, controlled low strength materials, green concrete) for sustainable development with novel materials ranging from natural and industrial wastes (silica fume, fly ash, and slag), viscosity modifying agent, antifreeze admixtures, natural lime as well as volcanic materials (ash, pumice, and perlite). My studies include fresh and hardened concrete properties such as rheology, bond characteristics, durability (freeze-thaw resistance, porosity, diffusivity, drying shrinkage, autogenous shrinkage, and water/chloride permeability), marina performance (chloride and sulfate environments), pozzolanic and alkali-silica reaction, thermal conductivity, fire resistance, macro and microstructural properties (XRD, MIP, SEM, etc.), and their use in the development of structural elements. The application of nanomaterials (such as nano-silica, nano-titanium, and halloysite nano clay) to construction technology has been studied. Geopolymer cement from waste agro, blast furnace slag, pumice, and natural pozzolanic materials is investigated. Application of neural networks to the construction materials; non-destructive testing (NDT) methods are applied in many projects. Assessment and rehabilitation of structural elements exposed to elevated temperature have been studied. The strengthening methods such as a polymer injection, steel plate, and wrapping with different types of materials such as polymer, carbon fiber, aramid, and steel fibers, and their mats were used in some projects.

Area of Interest:

Analytical design of construction materials

Sustainability of construction materails; Waste materials, Reuse

Corrosion of Steel in Concrete

Durability of Concrete Materials

Materials Characterization at nano, micro and macro levels.

Structural Rehabilitation with Composite Systems and epoxies.

Green Concrete

Geoploymer concrete

Nano materials

Lightweight concrete

Cold weather concreting

Mineral and chemical admixtures for concrete

Referee of below international journals

- Cement concrete Research Journal
- -Cement Concrete Coposite
- Building and Environment Journal
- Journal of Hazardous Materials
- Building and Construction Materials
- Indian Journal of Engineering Materials
- Journal of Materials Processing Technology

PANELIST IN BELOW TERMS FOR RESAECH PROJECTS

- 2006 European Committee funded projects

- November 2006 term, Engineering Research Group, Civil Engineering Department projects, The Scientific and Technological Research Council of Turkey

- November 2007 term, Engineering Research Group, Civil Engineering Departments projects, The Scientific and Technological Research Council of Turkey

- Evaluation of the TEYDEB KOBI Grant Program Project 2006, The Scientific and Technological Research Council of Turkey.

- Projects of Turkish Ministry of Industry and Trade 2010

AWARDS

Faculty Awards for Research Excellence 2023 at the Alfaisal University level

Alfaisal University College of engineering research award (at the college level) 2022

Alfaisal University College of engineering research award (at the college level) 2021

Alfaisal University College of engineering research award (at the college level) 2019

Faculty Awards for Research Excellence 2019 at the Alfaisal University level.

Publication Incentive Award by Incentive Program for International Scientific Publications, 2023, the Scientific and Technological Research Council of Turkey

Publication Incentive Award by Incentive Program for International Scientific Publications, 2022, the Scientific and Technological Research Council of Turkey

Publication Incentive Award by Incentive Program for International Scientific Publications, 2021, the Scientific and Technological Research Council of Turkey

Publication Incentive Award by Incentive Program for International Scientific Publications, 2020, the Scientific and Technological Research Council of Turkey

Publication Incentive Award by Incentive Program for International Scientific Publications, 2019, the Scientific and Technological Research Council of Turkey

Publication Incentive Award by Incentive Program for International Scientific Publications, 2018, the Scientific and Technological Research Council of Turkey

Alfaisal University College of engineering research award 2017

Deanship of Scientific Research of King Abdulaziz University, Publication award 2015

Erzurum Ataturk University distinguished scientist recognition Award 2014.

Deanship of Scientific Research of King Abdulaziz University, Publication award, 2014

Ataturk University Engineering Faculty Award, Erzurum, 2014.

University Putra Malaysia, Production incentive award, 2012.

Publication Incentive Award by Incentive Program for International Scientific Publications, 2015, The Scientific and Technological Research Council of Turkey

Publication Incentive Award by Incentive Program for International Scientific Publications, 2014, The Scientific and Technological Research Council of Turkey

Publication Incentive Award by Incentive Program for International Scientific Publications, 2013, The Scientific and Technological Research Council of Turkey.

Publication Incentive Award by Incentive Program for International Scientific Publications, 2012, The Scientific and Technological Research Council of Turkey.

Publication Incentive Award by Incentive Program for International Scientific Publications, 2011, The Scientific and Technological Research Council of Turkey.

Publication Incentive Award by Incentive Program for International Scientific Publications, 2010, The Scientific and Technological Research Council of Turkey.

Publication Incentive Award by Incentive Program for International Scientific Publications, 2009, The Scientific and Technological Research Council of Turkey.

Publication Incentive Award by Incentive Program for International Scientific Publications, 2008, The Scientific and Technological Research Council of Turkey.

Publication Incentive Award by Incentive Program for International Scientific Publications, 2005, The Scientific and Technological Research Council of Turkey.

Publication Incentive Award by Incentive Program for International Scientific Publications, 2004, The Scientific and Technological Research Council of Turkey (4 times).

Publication Incentive Award by Incentive Program for International Scientific Publications, 2003, The Scientific and Technological Research Council of Turkey (3 times).

Publication Incentive Award by Incentive Program for International Scientific Publications, 2002, The Scientific and Technological Research Council of Turkey(1 time).

H-INDEXES:

H-Index: 44 according to the Google scholar.

Overall cited times: 6800 +

PUPLICATION LIST

BOOKS

- **BOOKS** : Demirboga R., Turkmen I., Sahin R., Construction Materials (In Turkish), Lecture notes.
- **EDITOR:** Editor of "Building and Construction" book (in Turkish), Ataturk Universitesi Acik Ogretim Fakultesi, 2013.
- Book Chapter: 7. Palm Oil Fuel Ash (ongoing) (Book Project: Sustainable Concrete Made with Ashes and Dust from Different Sources: Materials, Properties and Applications, Elsevier, 2022. Editors: Rafat Siddique, Rafik Belarbi.
 - Book Chapter: Mechanical performance of steel fiber-reinforced alkali-activated (ongoing) (Book Title: Advanced Fiber-Reinforced Alkali-Activated Composites: Design, Mechanical Properties, and Durability Authors: Khatib Zada Farhan, Ramazan Demirboga, Ayman Sabry Shihata

SCI-ISI- JOURNALS PAPERS

PUBLISHED PAPERS

In 2023

<u>KZ Farhan, AMJ Megat, R Demirboğa,</u> Performance of polypropylene fiber reinforced GGBFS-based alkali activated composites under sulfate and freeze–thaw conditions. <u>Materials and Structures 56 (2),</u> 44, 2023

<u>KZ Farhan, MAM Johari, R Demirboğa, AS Shihata,</u> Performance of Polypropylene Fiber Reinforced GGBFS-based Alkali Activated Composite under Elevated Temperatures. Journal of Advanced Concrete Technology 21 (7), 523-535, 2023

<u>KZ Farhan, AS Shihata, MI Anwar, R Demirboğa,</u> Temperature and humidity sensor technology for concrete health assessment: a review, <u>Innovative Infrastructure Solutions 8 (10), 276</u>

In 2022

- 1- <u>KZ Farhan, MAM Johari, R Demirboğa,</u> Evaluation of properties of steel fiber reinforced GGBFS-based geopolymer composites in aggressive environments, Construction and Building Materials 345, 128339. 2022
- 2- WH Khushefati, **Demirboğa**, **R.**, Farhan, K.Z., Assessment of factors impacting thermal conductivity of cementitious composites—A review, Cleaner Materials, 100127. 2022
- 3- MA Salih, N Farzadnia, **R Demirboga**, AAA Ali, Effect of elevated temperatures on mechanical and microstructural properties of alkali-activated mortar made up of POFA and GGBS, *Construction and Building Materials 328, 127041*

In 2021

- 4- Adnan Kocamaz, Yaşar Ayaz, İbrahim Türkmen, Ramazan Demirboğa, Mehmet Burhan Karakoç, Prediction of compressive strength and ultrasonic pulse velocity of admixture concrete using tree model M5P, Structural Concrete, 2021.
- 5- KZ Farhan, MAM Johari, R Demirboğa, Impact of fiber reinforcements on properties of geopolymer composites: A review, Journal of Building Engineering 44, 2021.

In 2020

6- Khatib Zada Farhan, Megat Azmi Megat Johari, **Ramazan Demirboga**, Assessment of important parameters involved in synthesis of geopolymer composites: a review, *Construction & Building Materials*, 2020, volume 264.

5- Adnan Kocamaz, Yaşar Ayaz, İbrahim Türkmen, Ramazan Demirboğa, Mehmet Burhan Karakoç,

In 2019

6- Rıza Polata, **Ramazan Demirboğa**, F Karagöl Mechanical and physical behavior of cement paste and mortar incorporating nano-CaO, *Structural Concrete*, 2019, 20 (1), 361-370.

In 2018

- 7- Rıza Polata, Ramazan Demirboğa, Fatma Karagöl, The Influence of Expanded Perlite Aggregate on Compressive Strength, Linear Autogenous Shrinkage, Restrained Shrinkage, Heat of Hydration of Cement-Based Materials. Structural Concrete, 2018, 19(6), pp.1771-1781.
- 8- Fatma Karagöl, Yavuz Yegin, Rıza Polata, Ahmet Benli, **Ramazan Demirboğa**, The Influence of Lightweight Aggregate, Freezing-Thawing Procedure and Air Entraining Agent on Freezing-Thawing Damage, *Structural Concrete*, 2018, 19(5), pp. 1328-1340.

In 2017

- **9-** R Polat, **R Demirboğa**, F Karagöl, The effect of nano-MgO on the setting time, autogenous shrinkage, microstructure and mechanical properties of high performance cement paste and mortar. Construction and Building Materials, 2017, 156, 208-218
- **10-** MM Yadollahi, A Benli, **R Demirboga**, Application of adaptive neuro-fuzzy technique and regression models to predict the compressive strength of geopolymer composites, Neural Computing and Applications 28 (6), 1453-1461(2017)
- 11- M. H. Rafiei, Waleed H. Khushefati, **Demirboga R.**, Hojjat Adeli, Novel Approach For Concrete Mix Design Using Neural Dynamics Model And The Virtual Lab Concept, *ACI Materials Journal* 114 (1) (2017).
- 12- M. H. Rafiei, Waleed H. Khushefati, **Demirboga R.**, Hojjat Adeli, Supervised Deep Restricted Boltzmann Machine For Estimation of Concrete Strength, *ACI Materials Journal* 114 (1), 2017.
- 13- İ Türkmen, AF Bingöl, A Tortum, R Demirboğa, R Gül, Properties of pumice aggregate concretes at elevated temperatures and comparison with ANN models, Fire and Materials, 41 (2), 142-153 (2017)

In 2016

14- M. H. Rafiei, Waleed H. Khushefati, Demirboga R, Hojjat Adeli, Neural Network, Machine Learning, and Evolutionary Approaches For Concrete Material Characterization, ACI Materials Journal. Volume: 113, Issue: 6, 2016

- 15- TM Al-zharani, **Demirboga R**, WH Khushefati, O Taylan, Measurement and prediction of correction factors for very high core compressive strength by using the adaptive neuro-fuzzy techniques. Construction and Building Materials 122, 320-331. 2016.
- 16-TM Al-zharani, **R Demirboga**, WH Khushafati Relationship Between Core Compressive Strength and UPV Values for Different Core Slenderness of High Strength Concrete Beam, 3 rd International Balkans Conference on Challenges of Civil Engineering, 3-BCCCE, 19-21 May 2016, Epoka University, Tirana, Albania.
- 17-Karakoc M. B., Türkmen İ., F. Kantarci, Demirboga R., M. M.Maraş Fire Resistance of Geopolymer Concrete Produced from Elazığ Ferrochrome Slag, Journal Fire Mater. 2016; 40:836–847.
- 18- Ahmet Benli, Yadollahi, M.M., Demirboğa R, Application of adaptive neuro-fuzzy technique and regression models to predict the compressive strength of geopolymer Composites", Neural Computing and Applications, January 2016, Pages 1-9. (DOI: 10.1007/s00521-015-2159-6).
- 19-Karakoc M. B., Türkmen İ., F. Kantarci, **Demirboga R.,** M. M.Maraş Sulfate Resistance of Ferrochrome Slag Based Geopolymer Concrete, *International Ceramics*, 42 (1), 1254-1260, 2016.
- 20-Mohammad Panjehpour, Nima Farzadnia, Ramazan Demirboga, Abang Abdullah Abang Ali, Behavior of high-strength concrete cylinders repaired with CFRP sheets', Journal of Civil Engineering and Management 22 (1), 56-64 2016.

In 2015

21- Ibrahim Türkmen, A. Ferhat Bingöl and **Ramazan Demirbog**, Properties of Perlite aggregate Concretes After Elevated Temperatures, *Academic Journal of Science*, 149–156 (2015)

22- Ahmet Benli, Yadollahi, M.M., Demirboğa R, The Effects of Silica Modulus and Aging on Compressive Strength of Pumice-Based Geopolymer Composites, Construction & Building Materials, 2015. 94: p. 767–774. (doi:10.1016/j.conbuildmat.2015.07.052)

24- Demirboga R., F. Karagol, W. H. Khushafeti, Behavior of Fresh and Hardened Concretes with Antifreeze Admixtures in Deep-Freeze Low Temperatures and Exterior Winter Conditions, **Construction & Building Materials** 76 (2015) 388–395.

25- Polat R., Demirboga R., W. H. Khushafeti, Effects of nano and micro size of CaO and MgO, nano-clay and expanded perlite aggregate on the autogenous shrinkage of mortar Construction & Building Materials 81 (2015) 268–275.

26- Omer sharmark, Demirboga R., W. H. Khushafeti, Relationship between Compressive Strength and UPV of GGBFS Based Geopolymer Mortars Exposed to Elevated Temperatures. Construction and Building Materials, *Volume 94, 30 September 2015, Pages 189-195.*

27- Omer sharmark, Demirboga R., W. H. Khushafeti, GGBFS Based Geopolymer Mortars Immersed in Sodium and Magnesium Sulfate Solutions and Sea Water, International Journal of Engineering Research & Technology (IJERT), Vol. 4 Issue 02, February-2015.

26- Moslih Amer Salih, Abang Abdullah Abang Ali, Nima Farzadnia, Ramazan Demirboga Development of high strength alkali activated binder using palm oil fuel ash and GGBS at ambient temperature. **Construction and Building Materials** 93 (2015) 289–300.

27- Moslih Amer Salih, Abang Abdullah Abang Ali, Nima Farzadnia, Ramazan Demirboga, Effect of different curing temperatures on alkali activated palm oil fuel ash paste, *Volume 94, 30 September 2015, Pages 116-125.*

28- Ahmet Benli, Yadollahi, M.M., Demirboğa R., Effects of elevated temperature on pumice based geopolymer composites. *Plastics, Rubber and Composites* (prcprcme3378.3d 10/6/2015), DOI: 10.1179/1743289815Y.000000020 Journal Impact Factor: 0.675

29- Yadollahi, M.M., Ahmet Benli, Demirboğa R., Prediction of Compressive Strength of Geopolymer Composites Using Artificial Neural Network, *Materials Research Innovations* DOI: 10.1179/1433075X15Y.000000020 Journal Impact Factor: 0.473

In 2014

30- Karakoc M. B., Türkmen İ., F. Kantarci, Demirboga R., M. M.Maraş, Mechanical Properties and Setting Time of Ferrochrome Slag Based Geopolymer Paste and Mortar, Construction & Building Materials 72 (2014) 283–292.

31- Demirboga R., F. Karagol, Polat R. and Kaygusuz M.A. The effects of Urea on cold weather strength gaining of fresh concrete. Construction & Building Materials, 64 (2014) 114–120.

32- Yadollahi, M.M., Demirboğa R., Polat R., Effect of heat treatment temperature on ground pumice activation in geopolymer composites Sci Eng Compos Mater 2014; 21(3): 377–382.

In 2013

33- Demirboğa R. and Kan A. Design of specific gravity factor of artificial lightweight aggregate. Indian Journal of Engineering and Materials Sciences. Vol. 20, April 2013, pp. 139-144.

34- Moslih Amer Salih, Abang Abdullah Abang Ali, Ramazan Demirboga, Mustafa Al Bakri. Properties of Fresh Palm Oil Fuel Ash Based Geopolymer Material. Advances in Environmental Biology, 7(12) October Special Issue 2013, Pages: 3572-3579.

35- Hassan Noorvand, Abang Abdullah Abang Ali, Ramazan Demirboga, Nima Farzadnia, Hossein Noorvand. Incorporation of nano TiO2 in black rice husk ash mortars. **Construction and Building Materials**, 47 (2013) 1350–1361.

36- Nima Farzadnia, Abang Abdullah Abang Ali, Ramazan Demirboga, Mohammed Parvez Anwar. Characterization of high strength mortars with nano Titania at elevated temperatures. **Construction and Building Materials** 43 (2013) 469–479.

37- Hossein Noorvand, Abang Abdullah Abang Ali, Ramazan Demirboga, Hassan Noorvand, Nima Farzadnia. Physical and chemical characteristics of unground palm oil fuel ash cement mortars with nanosilica. **Construction and Building Materials** 48 (2013) 1104–1113.

38- Nima Farzadnia, Abang Abdullah Abang Ali, Ramazan Demirboga, Mohammed Parvez Anwar. Effect of halloysite nanoclay on mechanical properties, thermal behavior and microstructure of cement mortars. **Cement and Concrete Research 48** (2013) 97–104.

39- Fatma Karagöl, Ramazan Demirboğa, Mehmet Akif Kaygusuz, Mehrzad Mohabbi Yadollahi, Rıza Polat. The influence of calcium nitrate as antifreeze admixture on the compressive strength of concrete exposed to low temperatures. **Cold Regions Science and Technology** 89 (2013) 30–35.

40- Mehrzad Mohabbi Yadollahi, Fatma Karagol, Mehmet Akif Kaygusuz, Rıza Polat and Ramazan Demirboga. Safety factor determining for space trusses by non-linear analysis and artificial neural network method. DOI 10.1515/secm-2012-0114 Sci Eng Compos Mater 2013; 20(3): 277–284.

41- Ramazan Demirboğa, Mehmet Akif Kaygusuz and Rıza Polat. Effect of glass fiber-reinforced polymer and epoxy injection on compressive strength of elevated temperature damaged concrete. Fire and Materials, 2013; 37:100–113.

42- Nima Farzadnia, Abang Abdullah Abang Ali, Ramazan Demirboga. Characterization of high strength mortars with nano alumina at elevated temperatures. **Cement and Concrete Research 54** (2013) 43–54.

43- Mehrzad Mohabbi Yadollahi, Ramazan Demirboga, Rıza Polat, Majid Atashafrazeh. Behavior Investigation of NaOH activated Pumice-Based Geopolymer Composites Exposed to Elevated Temperature. Int. J. Struct. & Civil Engg. Res. Vol. 2, No. 2, May 2013.

In 2012

44- Moslih Amer Salih, M.M.A. Abdllah, Demirboga R., and Abang Abdullah Abang Ali Effect of Na2SiO3/NaOH Ratio and Binder/Activator Ratio on Compressive Strength of POFA Blended with GGBS to produce Geopolymer Cement, Archive des Sciences, Volume. 65, Issue. 8, 2012.

45- Demirboga, R., and Kan A., Thermal Conductivity and Shrinkage Properties of Modified Waste Polystyrene Aggregate Concretes, **Building and Construction Materials**, 35 (2012) 730–734.

46- Karakoc M. B., Demirboga R., Türkmen İ. and Can İ, Effect of Expanded Perlite Aggregate on cyclic thermal loading of HSC and Artificial Neural Network Modeling, International Journal of science and technology Scientia Iranica, Transactions A: Civil Engineering 19 (2012) 41–45.

47- Nima Farzadnia, Abang Abdullah Abang Ali and Demirboga R., Development of Nanotechnology in High Performance Concrete, Advanced Materials Research Volume 364,2012, pp.115-118.

48- Mohabbi Yadollahi, M., Kaygusuz, M.A., Polat, R., Demirboga ,R., Gül,R., Majid Atashafrazeh, M., Goharkhaneh Asli, F., 2012. Steel Fibers Effect in Strength Enhancement of Geopolymer Composite. J. Basic. Appl. Sci. Res., 2(8) 8416-8420.

49- Moslih Amer Salih, M.M.A. Abdllah, Demirboga R., and Abang Abdullah Abang Ali, Utilization Palm Oil Fuel Ash with Slag in Geopolymer Technology: A Review, International Review of Civil Engineering (I.RE.C.E.), May 2012 (Vol. 3 N. 3).

50- Yadollahi, M, Demirboga R., Polat R. and Kaygusuz M.A. Estimating of FRP-confined compressive strength of elevated temperature damaged concrete using ANN, Archive Des Sciences, Volume. 65, Issue. 8, 2012.

In 2011

51- Mohammad Panjehpour , Abang Abdullah Abang Ali and Demirboga R ., A Review for Characterization of Silica Fume and Its Effects on Concrete Properties, International Journal of Sustainable Construction Engineering & Technology (ISSN: 2180-3242) Vol 2, Issue 2, December 2011

52- Demirboga R., Transparent concrete and security of houses, Housing news, Vol.10 January-June 2011, page 7.

53- Nima Farzadnia, Abang Abdullah Abang Ali and Demirboga R., Incorporation of Mineral Admixtures in Sustainable High Performance Concrete, International Journal of Sustainable Construction Engineering& Technology, vol. 2, Issue 1, 2011, 44-49.

55- Karakoc M. B., Demirboga R., Türkmen İ. and Can İ., Modeling with ANN and effect of pumice aggregate and air entrainment on the freeze-thaw durability of HSC, **Building and Construction Materials**, volume 25(11) (2011), 4241-4249.

In 2010

56- Karakoç M.B. Demirboga R., HSC with expanded perlite aggregate at wet and dry curing conditions, ASCE Journal of Materials in Civil Engineering, Volume 22, Issue 12, pp. 1252-1259 (2010).

56- Polat R., Demirboga R., Karakoc M. B. and Türkmen İ., The influence of lightweight aggregate on the physico-mechanical properties of concrete exposed to freeze-thaw cycles, **Cold Regions Science and Technology**, 60 (2010) 51–56.

In 2009

58- Kan A., Demirboga R., A new technique of processing for waste-expanded polystyrene foams as aggregates. Journal of Materials Processing Technology, 209 (2009) 2994–3000.

58- Kan A., Demirboga R., A novel material for lightweight concrete production, Cement & Concrete Composites, 31 (2009) 489–495.

In 2008

59- İ. Turkmen, Y.Özdemir, M Kurudirek, F. Demir, Ö.Şimşek, Demirboga R., Calculation of radiation attenuation coefficients in Portland cements mixed with silica fume, blast furnace slag and zeolite, **Annals of Nuclear Energy** Volume: 35 (10)(2008) 1937-1943.

In 2007

60- H.Canakci, Demirboga R., M. B. Karakoc and O. Sirin, Thermal conductivity of limestone from Gaziantep (Turkey). **Building and Environment,** vol.42 (4)(2007) 1777 – 1782.

61- Kan A., Demirboga R., Effect of cement and EPS beads ratios on compressive strength and density of lightweight concrete, Indian Journal of Engineering & Materials Sciences Vol. 14, April 2007, pp. 158-162.

62- Demirboga R., Türkmen İ., and Karakoç M.B., Thermo-mechanical Properties of Concrete Containing High Volume Mineral Admixtures. **Building and Environment**, vol.42(1)(2007) 349 – 354.

63- Demirboga R., Thermal Conductivity and Compressive Strength of Concrete Incorporation with Mineral Admixtures. **Building and Environment**, vol.42 (7)(2007) 2467 – 2471.

In 2006

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83- M. Burhan KARAKOÇ, İbrahim TÜRKMEN, M. Murat MARAŞ, Fatih KANTARCI, **Ramazan Demirboğa**, Investigation of Ferrochrome Slag Based Geopolymer Concrete under the Sulfate Attack, International Journal of Arts & Sciences (IJAS) Conference, 19-22 Oct, 2015, Roma, Italy

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C- RESEARCH PROJECTS

In Saudi Arabia

- Basic Science Grant (BSG), Research Development and Innovation Authority (RDIA) Durability Of Geopolymer Cement From Activation of Pozzolana and Modelling By Soft Computing Techniques. KSA, 2023.
- 2) Impact of fibre addition on properties of Blast furnace slag based Geopolymer Binder. DSR, KAU, 2019.
- 3) The Effect of Lime addition on properties of Blast furnace slag Based Geopolymer Binder, 2019, ongoing.
- 4) Durability of geopolymer cement from activation of Pozzolana and modelling by soft computing Techniques, Grant Programs for Universities and Research Centres, KACST, 2020, under review.
- 5) Effect of nano-MgO on mechanical properties and microstructure of high-performance cement pastes and mortars, 2016, completed.
- 6) Predicting concrete properties using advanced neural network models (accepted), Highly cited Research Project (with Prof. Hojjat Adeli, Ohio State University), 2015, completed.
- 7) Effect of core sizes and casting direction on high strength concrete, 2014, completed.

In Malaysia

7- Effects of different saturation levels on concrete strength, RUG,(RM 25,900), Project no:05.02.12-2303 RU. Principal Investigator.

8- Industrialized Building Systems Naim Holdings Berhad, 2012-2013. Co-investigator (RM 1,000,000), completed.

9- Investigation of geopolymer cement from ground POFA by alkali activation method, MOSTI, Malaysia, Co-investigator, 2011-2013 (RM 246,320).

10- Sustainable Housing Design and Construction" under KESDEC (Vote: 63696), Malaysia, 2010-2012. Co-investigator. (RM 122,394), Completed.

11- Lightweight concrete with pelletized POFA aggregates, submitted to the FRGS/ERGS, Malaysia, (submitted). Principal Investigator.

In Turkey

12- The effect of nano materials on the autogenic shrinkage of high strength concrete, 2012-2014, Erzurum Ataturk University, TURKEY. Principal Investigator.

13- Investigation of geopolymer cement from Elazig Ferro- chrome Slag by Alkali-activation method, MAG-111M147, 2011-2014, completed, Funded by The Scientific and Technological Research Council of Turkey, Supervisor.

14- Strengthening and repairing damaged reinforced beams exposed to the elevated temperatures by FRP, BAP, 2010-2012, Erzurum Ataturk University, TURKEY Co- investigator, completed.

- 21-Investigation of geopolymer cements paste and mortar's properties from ground pumice, number: 2011/152, 2011-2012. Funded by Atatürk University, Turkey. Principle Investigator. Completed on November 2012,
- 22-Investigation shrinkage of HSC and modelling by neural network, 2010-2012, completed on November 20012, Turkey,
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- 24-The Effect of the LWA and Air Entraining Agent on the Freeze- thaw resistance of the HSC and it's Modelling by Artificial Neural Network. 106M014 TÜBİTAK-MAG, The Scientific and technological Research Council of Turkey, 2009. Principle Investigator. Funded by The Scientific and Technological Research Council of Turkey.
- 25- The Effect of the LWA, Fiber and Air Entraining Agent on the Fire resistance of the HSC and its Modelling by Artificial Neural Network, 106M230, TÜBİTAK-MAG Project, 2009. Funded by The Scientific and Technological Research Council of Turkey, Co-researcher.
- 26-Investigation physico-mechanical properties of self-compacting LWA concrete, 2005-2008, Completed in 2008, Co- investigator, Turkey.
- 27-Investigation the usability of the Modified Expanded polystyrene as a concrete aggregate. Funded by Atatürk University, project, No: 109, 2004-2006, completed 2006, principle investigator, Turkey.
- 28-The effect of the expanded perlite on the fire and freeze-thaw resistances of high strength concrete. Funded by Atatürk University, project, No: 03/39. Principle Investigator, Turkey.
- 29-Several physico-Mechanical Properties of lightweight and semi-lightweight concretes under different curing conditions. Funded by Atatürk University, project, No: 03/56, 2004-2006, completed in 2006, principal investigator, Turkey.
- 30-Investigation properties of concrete blocks made up of expanded perlite and pumice aggregates. Funded by Atatürk University, project, No: 98/26, 1998-2000. Principle Investigator, Turkey.
- 31-Investigation properties of concrete blocks made up of expanded perlite and pumice aggregates. Funded by Atatürk University, project, No: 98/26, 1998-2000. Principle Investigator, Turkey.

SUPERVISED THESIS

PhD: 9 (1 in progress & 8 completed), Masters: 8

Completed Master's thesis in Turkey

- Mehmet Burhan Karakoç, 2004 Genleştirilmiş perlit agregasının yüksek dayanımlı betonların fiziksel vemekanik özelliklerine etkileri/*Effects of expanded perlite aggregate on physical and mechanicsproperties of high strength concrete*
- **Rıza Polat,** 2007 Genleştirlimiş perlit ve pomza ile hava sürükleyici katkının betondakılcal geçirimlilik ve don hasarına etkisi/*The influence of expanded perlit aggregate and pomza aggregate withair entraining agent on the capillary absorbtion and freezing damageof concrete*
- **Mehmet Akifkaygusuz** , 2008 Yangın hasarına uğramış betonun GFRP ve epoksi enjeksiyonu ile onarım ve güçlendirilmesi/*Repair and strengthening of fire damaged concrete with gfrp and epoxy injection*
- **Yavuz Yegin,** 2009 Donma-çözülme hasarına hafif agreganın, hava sürükleyici katkının vedonma-çözülme yönteminin etkisi/*The influence of light weight agregate, freezing-thawing procedure and air entraining agent at freezing-thawing damage.*

Completed PhD thesis in Turkey

- Mehmet Akifkaygusuz, 2018 Yüksek sıcaklık hasarına uğramış betonarme kirişlerin FRP ile onarım ve güçlendirilmesi / *Repair and strengthening of elevated temperature damaged RC beams with FRP*.
- **Fatma Karagöl,** 2013 Antifriz katkıların soğuk havada dökülen beton özelliklerine etkileri /*The effects of antifreeze admixtures on the properties of cold weather concreting*
- **Riza Polat,** 2013 Genleştirilmiş perlit agregası, nano ve mikro boyutta CaO, MgO ve kil'in yüksek mukavemetli betonların otojen rötreleri üzerindeki etkisi / *The effect of expanded perlite aggregate, nano and micro size CaO and MgO and clay on the autogenous shrinkage of high strength concrete*
- Mehrzad Mohabbi Yadollahı 2013 Hasankale pomzasından alkali aktivasyon yöntemiyle geopolimer çimentosunun üretilebilirliğinin araştırılması / *The investigation of Hasankale pumice based geopolymer cement production by alkali aktivation method*

- Mehmet Burhan Karakoç, 2010 Hafif agreganın ve hava sürükleyici katkı maddesinin yüksek dayanımlı betonun donma-çözülme dayanıklılığına etkisinin incelenmesi ve modellenmesi / Investigation and modelling of the effect of light-weight aggregate and air entrained admixture on freezing-thawing durability of high strength concrete
- Abdulkadir Kan, 2007 Isıl işlem yöntemiyle modifiye edilmiş atık EPS köpüklerin beton agregası olarak kullanılabilirliğinin araştırılması/*The investigation of the usability of waste EPS foams modified by thermal treatment method as a concrete aggregate*

Completed or Ongoing Master's & PhD thesis in Saudi Arabia

- **Traad Mohammed Ahmed**, M.S., 2016, Effect of core sizes and casting direction on high strength concrete, King Abdulaziz University.
- Sharmarke Abdi Omer, 2015, M.S., Durability Of Geopolymer Cement Using GGBFS With Chemical Activators, King Abdulaziz University.
- Khatib Farhan (PhD) (ongoing) (Co-Supervisor)

Completed Master's & PhD thesis in Malaysia

- Hassan Noorwand (M.S) (Co-Supervisor)
- Hussain Noorwand, (M.S) Physical and chemical properties of unground palm oil fuel ash mortars incorporating nano-SiO2, 2013 (Co-Supervisor).
- Nima Farzidna (PhD), (Co-Supervisor)
- Moslih Amer Salih (PhD), 2015, High strength alkali activated binder with palm oil fuel ash and ground granulated blast furnace slag,.(Co-Supervisor)