

BIOGRAPHY



Vahab Dehlaghi
Associated professor
Department of Biomedical Engineering

Education

Post-Doctoral research fellow, Biomechanics laboratory, Biomedical Engineering Department, Erasmus MC, Rotterdam, The Netherlands, April- October 2009.

Ph.D. in Biomedical Engineering (Biomechanics) (2007) Department of Biomechanics, Faculty of Biomedical Engineering, Amirkabir University of Technology (Tehran polytechnic), Tehran, Iran.

M.Sc. in Biomedical Engineering (Biomechanics) Department of Mechanical Engineering, Sharif University of Technology, Tehran, Iran.

B.Sc. in Mechanical Engineering Department of Mechanical Engineering, Iran University of Science and Technology, Tehran, Iran.

Areas of Interest:

Biomedicine and Biomechanics, focuses on cardiovascular fluid and solid mechanics

Medical ultrasound

Medical Equipment

Biomedical Image Processing

Professional Activities

Present: Associated Professor at the Department of Biomedical Engineering and Medical Physics, School of Medicine, Kermanshah University of Medical Sciences, Kermanshah, Iran.

2010- 2016: Hed of Department of Biomedical Engineering and Medical Physics, School of Medicine, Kermanshah University of Medical Sciences, Kermanshah, Iran.

2011- 2016: Manager of Medical Equipment Department, Kermanshah University of Medical Sciences, Kermanshah, Iran.

2001 - 2006: Research Associate at Amirkabir University of Technology, Tehran, Iran.

1998 - 2006: Lecturer, Department of Medical Sciences, Kermanshah University of Medical Sciences, Kermanshah, Iran.

1998- 2006: Manager of Medical Equipment Department, Kermanshah University of Medical Sciences, Kermanshah, Iran.

Address:

Home: No.11, 209 Alley, Simetry Aval Street, Shahid Beheshti BLVD, Kermanshah, IRAN.
(Postcode: 6714665583).

Work: Department of Biomedical Engineering, School of Medicine, Kermanshah University of Medical Sciences, Daneshgah Avenue, Kermanshah, Iran P.O. Box 1568.

Tel: (+98-831)-4274618.

Fax: (+98-831)-4276477

Email Address: v.dehlaghi@kums.ac.ir

<https://scholar.google.com/citations?user=VbmKYXEAAAAJ&hl=en>

www.kums.ac.ir

Publications

Journal Papers:

Somayeh Gharlioghi; Mehrdad Gholami; Abbas haghparast; **Vahab Dehlaghi**; “Numerical Study for Optimaization Parameters of High-Intensity Focused Ultrasound- Induced Thermal Field during Liver Tumor Ablation:HIFU Simulator”. *Iranian Journal of Medical Physics, IJMP*; Vol. 14, No. 1, March 2017, PP 15-22

Sahel Heydarheydari, **Vahab Dehlaghi**, Abbas Haghparast; “The Applications of Ultrasound Microbubbles in Molecular Diagnosis and Therapy”; *Acta Medica Iranica* 54 (5),2016, 343-344

Vahab Dehlaghi, Mostafa Taghipour, Abbas Haghparast, Gholam Hossein Roshani, Abbas Rezaei, Sajjad Pashootan Shayesteh, Ayoub Adineh-Vand, Gholam Reza Karimi, “Prediction of the thickness of the compensator filter in radiation therapy using computational intelligence” *Medical Dosimetry* 40 (1),2015, 53-57

Mostafa Ghelich Oghli, **Vahab Dehlaghi**; Ali Mohammad zadeh; Alireza Fallahi; and Mohammad Pooyan; “Right Ventricle Functional Parameters Estimation in Arrhythmogenic Right Ventricular

Dysplasia Using a Robust Shape Based Deformable Model”. [J Med Signals Sens](#). 2014 Jul-Sep; 4(3): 211–222

Behrouz Moradhasel, Mostafa Taghipour, Masumeh Seidi, **Vahab Dehlaghi**; “ Designing an Intelligent, Non-Contact System for Controlling Neonate’s Body Temperature in Incubators”. Journal of Fasa University of Medical Sciences, Summer 2014, Vol.4 , No.2, 185-193

Mostafa Ghelich Oghli; Alireza Fallahi; **Vahab Dehlaghi**; and Mohammad Pooyan; Left Ventricle Volume Measurement on Short Axis MRI Images Using a Combined Region Growing and Superellipse Fitting Method”. *ACEE Int. J. on Signal & Image Processing* , Vol 4, No 2, May 2013.

Dehlaghi, V.; Gijssen, F.; “Wall Shear Stress Distribution in Patient Specific Coronary Artery Bifurcation”. *Am. J. Appl. Sci.*, vol. 7(9), 2010: PP 1237-1242.

Dehlaghi, V.; Najarian, S.; Tafazzoli-Shadpour, M.; “Effect of Stent Geometry on Phase Shift between Pressure and Flow Waveforms in Stented Human Coronary Artery”. *Am. J. Appl. Sci.*, vol. 5(4), 2008: PP 340-346

Dehlaghi, V.; Tafazzoli-Shadpour, M.; Najarian, S.; “Analysis of Wall Shear Stress in Stented Coronary Artery Using 3D Computational Fluid Dynamics Modeling”. *J. Mater. Proc. Technology*, vol. (197), 2008: PP 174-181.

Dehlaghi, V.; Tafazzoli-Shadpour, M.; Najarian, S.; “Analysis of 3D and Steady Blood Flow in Stented Human Coronary Artery”. *Journal of Amirkabir*, vol. 67, 2007, PP 45-56.

Dehlaghi, V.; Tafazzoli-Shadpour, M.; Najarian, S.; “Numerical Analysis of Pulsatile Blood Flow in a Stented Human Coronary Artery with a Flow Divider”. *Am. J. Appl. Sci.*, vol. 4(6), 2007: PP 397-404.

Dehlaghi, V.; Najarian, S.; Tafazzoli-Shadpour, M.; “Effect of The Flow Divider on Restenosis in Stented Human Coronary Artery”. *Journal of Qazvin University of Medical Sciences* , vol. 12, No.2, Summer 2008, PP 7-12.

Dehlaghi, V.; Farhanieh, B.; Kazemzadeh, S.; “Temperature Distribution and Freezing Penetration Depth in Biological Tissues in Cryosurgery, *Journal of Qazvin University of Medical Sciences*, vol. 9, 1999: PP 47-53.

Conference Papers:

Sepedeh bakhtiari, Sahel haidari, **Vahab dehlaghi**,”Ultrasound Microbubbles for Molecular Diagnosis and Therapy” 31Th Iranian Congress of Radiology, 5-8 May, 2015, Tehran, Iran.

Mostafa Taghipour, Behrouz Moradhasel, Saeed Mohammadi, **Vahab Dehlaghi** , “Evaluation and analysis of warning system for ionizing air in the radiotherapy and radiology departments” Medical physics and biomedical engineering, 26-31 May, 2012, Beijing, China

Behrouz Moradhasel, Sajjad Pashootan Shayesteh, Mostafa Taghipour, **Vahab Dehlaghi**, “New design and construction of the temperature control system for prevent of infection transmission with skin sensors” Medical physics and biomedical engineering, 26-31 May, 2012, Beijing, China

Sajjad Pashootan Shayesteh, Mostafa Taghipour, Behrouz Moradhasel, Abbas Haghparast, **Vahab Dehlaghi**, "The quality assurance of Targeted image Guided Radiation Therapy software in post mastectomy radiotherapy techniques" Medical physics and biomedical engineering, 26-31 May, 2012, Beijing, China

Eshagh Shiri, Mostafa Taghipour, **Vahab Dehlaghi**; "Continuous monitoring and control of ionizing air system in nuclear medicine (radiotherapy and radiology departments)" Medical physics and biomedical engineering, 26-31 May, 2012, Beijing, China

Dehlaghi Vahab, "Examining the status of a standard hospital air conditioner in Iran and comparing it with other countries". Specialized Conference on Medical Equipment Standards and Infection Control Area, 8-9 January 2012, Tehran, Iran.

Dehlaghi Vahab, Sabzi Faridoon, "Influence of Graft Geometry on Hemodynamic in a Proximal Aorta-Coronary By-Pass Graft". 9TH INTERNATIONAL CONGRESS ON CORONARY ARTERY DISEASE. 23-26 October 2011, Venezia, Italy

Dehlaghi Vahab, Roshani Amin, Yosufi Tooraj, Sabzi Faridoon, "Influence of Graft Geometry on Hemodynamic in Distal End-to Side Anastomoses of By-Pass Graft". **World Congress of Cardiology 2010**. 16–19 June 2010, Beijing, China, *Circulation*, Vol 122, No 2 July 13, 2010.

Dehlaghi Vahab, Roshani Amin, Yosufi Tooraj, Sabzi Faridoon, " Numerical Analysis of 3D and Pulsatile Blood Flow in a Human Coronary Artery with By-Pass Graft". **The 4th International Symposium on Biomechanics in Vascular Biology and Cardiovascular Disease**, April, 16-17, 2009, Rotterdam, The Netherlands.

Dehlaghi Vahab, Roshani Amin, Yosufi Tooraj, Sabzi Faridoon, " INVESTIGATION OF BLOOD FLOW PATTERN IN CORONARY ARTERY WITH BY-PASS GRAFT". 16th Congress of Iranian Heart Association In Collaboration with American College of Cardiology, November 18-21, 2008, Tehran, IRAN

Rai Alireza, Sadeghi Ezat, Khalgh doost Susan, **Dehlaghi Vahab**, " IN HOSPITAL FOLLOW-UP OF PERIPHERAL ANGIOPLASTY AND STENTING". 16th Congress of Iranian Heart Association In Collaboration with American College of Cardiology, November 18-21, 2008, Tehran, IRAN

Rai Alireza, Sadeghi ezat, Khalgh doost. Susan, **Dehlaghi Vahab**, Ronasi Niloofar; "PREVALENCE OF CORONARY ARTERY DISEASE IN PATIENTS WITH PERIPHERAL VASCULAR DISEASE BY ANGIOGRAPHY". 16th Congress of Iranian Heart Association In Collaboration with American College of Cardiology, November 18-21, 2008, Tehran, IRAN

Dehlaghi, V.; Najarian, S; Rai, A.; "Investigation of Wall Shear Stress Distribution in Stented Coronary Artery Bifurcation" **14th WORLD CONGRESS ON HEART DISEASE, THE INTERNATIONAL ACADEMY OF CARDIOLOGY ANNUAL SCIENTIFIC SESSIONS 2008** TORONTO, ON, CANADA, JULY 26-29, 2008

Dehlaghi, V.; Najarian, S.; Tafazzoli-Shadpour, M.; Rai, A.; “Effect of the Stent Design Properties on Restenosis in Stented Human Coronary Artery Bifurcation”. **2008 World Congress of Cardiology Abstracts**, *Circulation*, Vol 117, No 19 May 13, 2008.

Kazerani, H.; Rai, A.; **Dehlaghi, V.;** “Correlation between serum high sensitivity CRP level and inhospital”. **2008 World Congress of Cardiology Abstracts**, *Circulation*, Vol 117, No 19 May 13, 2008.

Dehlaghi, V.; Najarian, S.; Tafazzoli-Shadpour, M.; “Effect of the Length, Curvature, and Stent Geometry on Restenosis in Stented Human Coronary Artery”. **the 27th annual scientific meeting of the BSC**, Brussels, Belgium on the 31st January, 1st February & 2nd February 2008.

Dehlaghi, V.; Najarian, S.; Tafazzoli-Shadpour, M.; “Effect of the Stent Design Properties on Restenosis in Stented Human Coronary Artery”. **4th Asian Pacific Congress of Heart Failure**, 31 January-3 February, Melbourne, Australia, *Heart, Lung and Circulation*, vol. 17S:S4–S12 2008. **doi:10.1016/j.hlc.2007.11.031**

Dehlaghi, V.; Tafazzoli-Shadpour, M.; “Analysis of Pulsatile Blood Flow in Stented Human Coronary Arteries”. **Proce. of the 5th World Cong. of biomec.**, Munich, Germany, 2006.

Tafazzoli-Shadpour, M.; **Dehlaghi, V.;** Avolio, A.; “Analysis of Blood Flow in Stented Human Coronary Artery with Applications of Computational Fluid Dynamics”. **The 12th Ent. Conference on Biomed. Eng.**, Singapore, 2005.

Dehlaghi, V.; Tafazzoli-Shadpour, M.; “Hemodynamics and Stent Design”. **The 14th Congress of Iranian Heart Association in Collaboration with British Cardiac Society**, Tehran, Iran, 2004.

Dehlaghi, V.; Farhanieh, B.; Kazemzadeh, S.; “Heat Transfer Modeling in Biological Tissues in Cryosurgery”. **Eighth Mechanical Engineering Conference**, Sharif University of Technology, May 16-19, 2000.

Dehlaghi, V.; Farhanieh, B.; Kazemzadeh, S.; “Investigation of the Depth of the Freezing Penetration and Cells Destruction in Biological Tissues in Cryosurgical Treatments”. **14th Iranian Congress of Physiology and Pharmacology**, Tehran University of Medical Sciences, May 16-20, 1999.

M. Sc. Thesis supervisor:

MRI Images Segmentation for MS Disease Automatic Diagnosis Using Wavelet and Neural Network. Mohammad Ramezani, February 2018.

Evaluation of Methods of Co-segmentation in PET/CT Images of Lung Tumor using GATE Simulation. Elham Kashian. , February 2018.

Automatic Segmentation, Detection, and diagnosis of Abdominal Aortic Aneurysm (AAA) using CT and CTA images by Convolutional Neural Networks. Saba Mohammadi, February 2018.

Automatic processing and image analysis of endothelial cells angiogenesis using image processing in in-vitro model. Yones Hosainii, August 2017.

Design and Implement of an Appropriate Algorithm to Reduce the Metal Artifacte in PET/CT Image. Ali Khaksar, Aug 2015

Study of the effect of right ventricular aithemogenic dysplasia on the right ventricular function of the heart (ARVD). Mostafa Ghelich Oghli, January 2015

Construction of X-ray Tube Using Nano fluids. Reza Noroozi, September 2014.

Optimization of Hyperthermia treatment in Liver with High Intensity Focused Ultrasound. Somaye Gharloghi, June 2014.

Evaluation of Registration between CT and Ultrasound Images of Liver Vascular Tree for Displacement Measurement. Nastaran Amini, June 2014

Optimization of Clarkson,s Method for calculating Absorbed Dose Under Compensator Filter Used in Intensity Modulated Radiation Therapy. Maryam Pourkaveh, June 2014

Analysis of the Reasons of Fracturing of Orthopedic Plates made by Iranian Company. Tahere Moshfeghi, September 2014.

Detection of Lung Tumors Using Image Processing Techniques. Uones Mohebi, September 2014

Investigation of Machine Intelligence Abilities in modeling and prediction of Toxicological Tests. Mostafa Taghipour, August 2013.

Optimization of Endoscopy and Laparoscopy Devices Field of View by Omnidirectional Vision. Fatemeh Rahimi sepehr, February 2013.

Heat Transfer Modelling of Prostate Tissue in Cancer Treatment by Laser. Parvin Larkinezhad, September 2012.

Experimental Modeling of Heat Transfer in X-Ray Tube with Nano fluid. Behrouz Moradhasel, September 2012.

Research projects

Investigation of remaining radioactive after injection in syringes used in the nuclear medicine department. Ehsan Bayat, Under Construction

Toothbrush cover design is equipped with a dryer system. 2013

Designing and manufacturing of sterile gas impregnated with povidone has a double-wall hygienic coating. 2013

Design and manufacture of road accidents and information systems to reduce mortality. 2012

Evaluation of compliance with standards in diagnostic radiology departments of Kermanshah University of Medical Sciences in 2010

Three-dimensional simulation of blood flow in the coronary artery bypass grafting. 2008.

Optimization of Cryo Surgery Prop with Temperature Controller. 2001

Books:

Ultrasound, Physics and Technology