Curriculum Vitae

Name: Nóra Horányi

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I. EDUCATION

2016- Jan 2018	M.Sc. in Info Bionics Engineering Studies Faculty of Science and Informatics University of Szeged GPA of three completed semesters: 4.7/5	Digital image processing, Image registration, Theory of the neural networks, Statistics, Mathematical analysis, Medical imaging
2012-2016	B.Sc. in Molecular Bionics Engineering Studies Faculty of Science and Informatics University of Szeged Final Grade: 3.97/5 Thesis: excellent with national awards	Calculus 1-2, Discrete Mathematics 1-2, Programming, Algorithms and databases, Signal processing, Robotics, Stochastics, Bioinformatics, Microscopy techniques, Cell biology, Spectroscopical methods
2008-2012	Specialized Mathematics class Ságvári Endre Grammar School Szeged, Hungary Final Grade: 4.8/5	

II. TRAININGS

21-26th August 2017	Vision and Sports Summer School Czech Technical University Prague, Czech Republic	Poster presentation: Multiview Absolute Pose Using 3D - 2D Perspective Line Correspondences and Vertical Direction.
7-16th June 2016	Summer School on Image Processing University of Szeged, Hungary	2nd prize in the project competition Project: OCT image analysis
20-22th March 2015	How to create a research plan Advanced Spring School for Students in Biology Eötvös Loránd University, Budapest, Hungary	
14-25th July 2014	Lasers in Medicine and Life Sciences Advanced Summer School for Students in Medicine and Physics University of Szeged, Hungary	

III. HONOURS AND AWARDS

12th April 2017	3rd prize in the National Scientific Students' Associations Conference organized by the Hungarian National Council of Student Research Societies Biology section - Animal physiology Presented topic: Changing the surface charge of brain endothelial cells by the digestion of glycocalyx with enzymes
24th November 2016	2nd prize in the local competition round of National Scientific Students' Associations Conference organized by the University of Szeged Presented topic: Changing the surface charge of brain endothelial cells by the digestion of glycocalyx with enzymes
16th June 2016	2nd prize in the project competition - Summer School on Image Processing Project: OCT image analysis

IV. SCHOLARSHIPS AND GRANTS

January 2013 - present	Monthly grant from the University of Szeged for excellent grades based on cumulative GPA credits
January 2017 - November 2017	"Visual computations" scientific scholarship for talented young researchers of the University of Szeged
February 2016 - January 2018	Hungarian Governmental Scholarship for my master studies in Info-bionics Engineering
September 2012 - January 2016	Hungarian Governmental Scholarship for my bachelor studies in Molecular Bionics Engineering

V. MEMBERSHIPS

2016 - 2017 John von Neumann Computer Society (NJSZT)
Computer Vision Foundation

VI. PROFESSIONAL EXPERIENCE

2016- present
Student researcher
Research Group on Visual Computation
University of Szeged, Hungary
Supervisor: Prof. Zoltan Kato

Master's thesis: Pose estimation of a stereo camera pair mounted on a moving platform
Skills: pose estimation, line extraction, camera calibration, analysis of 2D perspective and fish-eye images, 3D LiDAR pointcloud processing

April - May 2017
Student researcher – short research stay
Research Center for Automatic Control of Nancy
University of Lorraine, France
Supervisor: Constantin Morãrescu

Project: Developing drone control application based on sensor and visual information in the framework of the NETASSIST project
Skills: Kalman filter, Linear-Quadratic-Gaussian control, video sequence analysis, pose estimation, IMU sensor

2014- 2016
Student researcher
Biomolecular Electronics Research group
Biological Research Centre, HAS, Szeged, Hungary
Supervisors: Dr. Andras Der and Andras Kincses

Project: Integrated, microfluidical biochip development and testing according to measurements of Zeta potencial
Skills: construction of the biochips (gold evaporation, PDMS), cell culturing, manipulation of the cells and making measurements, quantification of the datas

2013- 2016
Student researcher
Molecular Neurobiology Laboratory, Institute of Biophysics
Biological Research Centre, HAS, Szeged, Hungary
Supervisors: Dr. Maria Deli and Dr. Fruzsina Walter

Bachelor's thesis: Changing the surface charge of brain endothelial cells by the digestion of glycocalyx with enzymes (rating: excellent)
Skills: cell culture (hCMEC/D3 cell line, primary endothelial cell line) and experiments with them, immunohistochemistry(WGA), flourescent microscopy(Leica) and intensity analysis of the pictures(Photoshop, ImageJ, Matlab) , Malvern Zetasizer Nano Z system, TEER registration

VII. SCIENTIFIC COMMUNICATIONS

2017 **Nora Horanyi**, and Zoltan Kato. Generalized Pose Estimation from Line Correspondences with Known Vertical Direction*. International Conference on 3D Vision* – accepted (conference paper)

Nora Horanyi, and Zoltan Kato. Multiview Absolute Pose Using 3D - 2D Perspective Line Correspondences and Vertical Direction. *Multiview Relationships in 3D Data 2017 (IEEE International Conference on Computer Vision Workshops)* - accepted

Ana Raquel Santa Maria, Fruzsina Walter, **Nora Horanyi**, András Kincses, Ilona Gróf, Sándor Valkai, András Dér, Mária A. Deli. The effect of surface charge on brain endothelial permeability. *Straub days* - Biological Research Centre, HAS (poster)

Logroño *et al*. Single chamber microbial fuel cell (SCMFC) with a cathodic microalgal biofilm: A preliminary assessment of the generation of bioelectricity and biodegradation of real dye textile wastewater. *Chemosphere, Volume 176, 2017, Pages 378-388, ISSN 0045-6535* – **collaborated** in the development of the image processing algorithm for quantitative analysis of SEM images of biofilms

VIII. COMPETENCES

Language	English: C1 level, complex, German: passive B2
Driving	B2 driving licence
Computational skills	European Computer Driving Licence Certificate
Programming skills and other softwares	MATLAB, C programming language Maple, R Statistical Software, Leica LAS AF, Malvern Zetasizer Software, ImageJ
Other	Team spirit, ability to cooperate, open-minded, creativity, logical thinking, hard-working, goal oriented

IX. OTHER ACTIVITIES

2013- present	Teaching Calculus and Mathematics for fellow graduate and grammar school students as my hobby
2016	Organization and presentation of the Girls in ICT event to motivate the secondary school girl students to start their studies in the field of informatics
2015 -2016	International Mentor of the Stipendium Hungaricum foreigner students of the University of Szeged
2013 -2016	Organization and laboratory presentation at the National Researcher's Night in Biological Research Centre of Szeged
2013 -2016	Organization of the annual Brain Awareness Week in Hungary, Szeged