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*Curriculum Vitae*

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| I. EDUCATION |

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| 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 |  |

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| II. TRAININGS |

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| 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 | |

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| III. HONOURS AND AWARDS |

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| 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 |

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| IV. SCHOLARSHIPS AND GRANTS |

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| 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 |

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| V. MEMBERSHIPS |

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

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| VI. PROFESSIONAL EXPERIENCE |

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| 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 |

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| VII. SCIENTIFIC COMMUNICATIONS |

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| 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 |

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| VIII. COMPETENCES |

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| 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 |

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| IX. OTHER ACTIVITIES |

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| 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 |