

Emeç Erçelik

Curriculum Vitae



Personal Data

Place and Date of Birth: Turkey | 07 July 1990
Address: Karlstr. 45, 80333, Munich, Germany
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Work Experience

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|-------------------|---|
| Oct 2016-... | Researcher at Neuroscientific System Theory Chair of Technical University of Munich, Munich, Germany |
| Dec 2013-Oct 2016 | Research and Teaching Assistant at Istanbul Technical University, Istanbul, Turkey |
| Jun 2015-Dec 2015 | Intern, Ecole Polytechnique Federale De Lausanne, Geneva, Switzerland
<i>Blue Brain Project</i>
Realization of mouse locomotion on a virtual mouse. |
| Oct 2012-Dec 2013 | Technical Editor at Industry Automation Journal, Istanbul, Turkey |
| Jun 2012-Jul 2012 | Summer Intern at Aselsan Defence System Technologies (SST), Ankara, Turkey
<i>Electronic Design Section</i>
Design of several communication protocols on Xilinx FPGA. |
| Aug 2011-Sep 2011 | Summer Intern at Arçelik, Istanbul, Turkey
<i>Audio Software Development Section</i>
Cabin Tool (television audio test interface) Design in C# |
| Jul 2011-Aug 2011 | Summer Intern at Er-Bakır Elektrolit, Denizli, Turkey
<i>Electric Maintenance</i> |

Education

- Oct 2017-... | PhD in Department of Electrical and Computer Engineering,
Technical University of Munich, Munich, Germany
Supervisor: Prof. Dr. Jörg Conradt
- Jul 2013-Jan 2016 | M.Sc. in Electronics Engineering Program,
Istanbul Technical University, Istanbul, Turkey
Thesis: "Implementation of Cognitive Tasks and Learning on Robots
with Using Spiking Neural Networks"
Advisor: Prof. Dr. Neslihan Serap Sengor
Gpa: 3.81/4.0
- 2008-Jun 2013 | B.Sc. in Eletronics Engineering
Istanbul Technical University, Istanbul, Turkey
Thesis: "Learning To Select an Appropriate Action: Implementation on
Bioloid Robot"
Advisor: Assoc. Prof. Dr. Neslihan Serap Sengor
Gpa: 3.71/4.0
- 2004-2008 | **Denizli Er-Bakır Science High School**, Denizli, Turkey
Gpa: 91/100

Engineering Skills

- Hardware Skills: Xilinx FPGA, Atmel MCUs, Microchip PIC, SpiNNaker
Software Skills: C, C++, Python, VHDL, Verilog, MATLAB
Simulation Envs: PyNN, NEST, Brian Simulator, OpenAI Gym, Webots
Robots: Darwin-OP, Robotis Bioloid
Operating Systems: Ubuntu, Windows, ROS

Academic Interests

Computational neuroscience, Temporal dynamics of spiking neural networks for robot control, Sensorimotor control, Temporal dynamics of reinforcement learning

Publications

International Conference

Z. Tayeb, **E. Erçelik**, J. Conradt, 2017, "Decoding of motor imagery movements from EEG signals using SpiNNaker neuromorphic hardware.", Neural Engineering (NER), 2017 8th International IEEE/EMBS Conference on. IEEE, 2017.

E. Erçelik, N. S. Sengör, 2015, "A Neurocomputational Model Implemented on Humanoid Robot for Learning Action Selection", The International Joint Conference on Neural Networks (IJCNN) 2015, Ireland.

National Conference

Ercelik, Emec, Rahmi Elibol, and Neslihan Serap Sengor. "A model on building and modifying the stimulus action association in the brain." Signal Processing and Communications Applications Conference (SIU), 2015 23th. IEEE, 2015.

International Meetings (Abstract)

- E. Erçelik**, N. S. Sengör, 2014, "Real Time Learning of Rearranging Associations on a Humanoid Robot", Bernstein Conference 2014, Göttingen, Germany
- E. Erçelik**, N. S. Sengör, 2014, "Implementation of Matching Stimulus-Movement Experiment on a Humanoid Robot", International Workshop on Autonomous Cognitive Robotics, Stirling, Scotland
- E. Erçelik**, B. Denizdurduran, N. S. Sengör, 2013, "Implementing the Learning of Appropriate Action Selection in Real Time", Bernstein Sparks Workshop 2013, Munich, Germany

National Meetings (Abstract)

- E. Erçelik**, N. S. Sengör, 2016, "A Computational Model on Pattern Representation in Brain with Spiking Neural Networks", 14th National Neuroscience Congress, Ankara, Turkey
- E. Erçelik**, N. S. Sengör, 2014, "Uyaran-Eylem İlişkilendirme Ödevinin İnsansı Robot Üzerinde Gerçeklenmesi", 12th National Neuroscience Congress, Istanbul, Turkey
- E. Erçelik**, N. S. Sengör, 2013, "A Bioid Robot Implementation of Computational Basal Ganglia Circuit", 11th National Neuroscience Congress Izmir, Turkey

Projects

Research Assistant in TUBITAK Project: "Decision Making, Goal Directed Behaviour and Reward Based Learning", Project Number: EEAG 111E264, Total Funds: 52000 €, The Scientific and Technological Research Council of Türkiye, (2012-2014).

Scholarships and Certificates

- Oct. 2013 TUBITAK Graduate Scholarship
- Nov. 2012 ALES(Academic Personnel and Postgraduate Education Entrance Exam): 97.62/100 , 62nd among 225.000 people
- June 2008 Achievement Grant of Istanbul Technical University for being 1st on entrance (in 0.02% percentile)

Teaching Assistance

Class Assistance

Technical University of Munich

- 2017-2018 WS: Advanced Seminar NeuroEngineering
- 2017-2018 WS: Project Laboratory Computational Neuro Engineering
- 2017-2018 WS: Makeup MSNE Electronics
- 2017-2018 WS: Mixed Signal Electronics
- 2017 SS: Neural Engineering
- 2017 SS: Scientific Seminar NeuroEngineering
- 2017 SS: Project Laboratory Computational Neuro Engineering
- 2017 SS: Large Scale Modeling and Large Scale Data Analysis
- 2016-2017 WS: Advanced Seminar NeuroEngineering

Istanbul Technical University

- 2015-2016 Spring: Electric and Circuit Basics Laboratory
- 2015-2016 Spring: Network Synthesis
- 2014-2015 Spring: Electric and Circuit Basics Laboratory
- 2014-2015 Spring: Digital System Laboratory
- 2014-2015 Fall: Artificial Neural Networks
- 2014-2015 Fall: Digital System Design and Applications
- 2014-2015 Fall: Digital Circuits
- 2013-2014 Spring: Network Synthesis
- 2013-2014 Spring: Circuit and System Analysis
- 2013-2014 Spring: Digital System Laboratory

Workshop Assistance

12th National Neuroscience Congress : Computational Models and Simulation Tools
in Neuroscience

Languages

Turkish: Mother tongue

English: Fluent

German: A1

Personal Interests

Turkish Folk Dances, Tango, Turkish Classical Music, Travelling

Attended Workshops and Scientific Meetings

6th EMO Academic Camp, 2017, Izmir, Turkey (as speaker)

Capo Caccia Neuromorphic Engineering Workshop 2017, Sardinia, Italy

14th National Neuroscience Congress 2016, Ankara, Turkey

Bernstein Conference 2014, Göttingen, Germany

12th National Neuroscience Congress 2014, Istanbul, Turkey

International Workshop on Autonomous Cognitive Robotics, Stirling, Scotland, 2014

2nd Bernstein Sparks Workshop "Neuroengineering the Brain", Munich, Germany, 2013

11th National Neuroscience Congress 2013, Izmir, Turkey

Isogeometric Simulation & Beyond - Athens Programme in Technische Universität München,
Germany, 2012

1st National Workshop on Complex Dynamical Systems and Their Applications, 2012, Ankara,
Turkey

Munich, 13.12.2017