MARTIN ANDREEV ASENOV

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EDUCATION

The University of Edinburgh and Heriot-Watt University　　　　Sep 2017 - Jan 2022
Ph.D. in Robotics and Autonomous Systems

· "Architectures for Online Simulation-Based Inference Applied to Robot Motion Planning"
· Supervised by Prof. Subramanian Ramamoorthy and Dr. Kartic Subr

The University of Edinburgh　　　　Sep 2016 - Aug 2017
MRes in Robotics and Autonomous Systems

· "Active Sensing of Spatiotemporal Phenomena with a UAV"
· Supervised by Prof. Subramanian Ramamoorthy

The University of California, Irvine　　　　Sep 2014 - Jun 2015
International Exchange Student

· Favorite courses: Neural Networks and Deep Learning, Image Understanding, Computer Photography and Vision

The University of Edinburgh　　　　Sep 2012 - May 2016
BSc (Hons) Artificial Intelligence and Computer Science

· "Dynamic Model of Interactions Between Orientation Selective Neurons in Primary Visual Cortex"
· Supervised by Dr. Mark van Rossum

SELECTED PUBLICATIONS

FoldFormer: Sequence Folding and Seasonal Attention for Fine-grained Long-term FaaS Forecasting, LN. Darlow, A. Joosen, <u>M Asenov</u>, Q. Deng, J. Wang, A. Barker, **EuroMLSys '23: Proceedings of the 3rd Workshop on Machine Learning and Systems**, 2023

Learning to Score: Tuning Cluster Schedulers through Reinforcement Learning , <u>M. Asenov</u>, Q. Deng, G. Yeung, A. Barker, **11th IEEE International Conference on Cloud Engineering (IC2E)**, 2023

Vision-Based System Identification and 3D Keypoint Discovery using Dynamics Constraints, M. Jaques, <u>M. Asenov</u>, M. Burke, T. Hospedales, **NeurIPS Workshop on Physical Reasoning and Inductive Biases for the Real World**, 2021

Inversion of Ultrafast X-ray Scattering with Dynamics Constraints, <u>M. Asenov</u>, N. Zotev, S. Ramamoorthy, A. Kirrander, **NeurIPS Workshop on Machine Learning and the Physical Sciences**, 2020

Vid2Param: Modelling of Dynamics Parameters from Video, <u>M. Asenov</u>, M. Burke, D. Angelov, T. Davchev, K. Subr, S. Ramamoorthy, **IEEE Robotics and Automation Letters (RAL)**, Vol 5(2): 414-421. Presented at the IEEE International Conference on Robotics and Automation (ICRA), 2020

Active Localization of Gas Leaks using Fluid Simulation, <u>M. Asenov</u>, M. Rutkauskas, D.T. Reid, K. Subr, S. Ramamoorthy, **IEEE Robotics and Automation Letters (RAL)**, Vol 4(2): 1776-1783. Presented at the IEEE International Conference on Robotics and Automation (ICRA), 2019

Autonomous Multi-species Environmental Gas Sensing using Drone-based Fourier-transform Infrared Spectroscopy, M. Rutkauskas, <u>M. Asenov</u>, S. Ramamoorthy, D.T. Reid, **Optics Express**, 2019

WORK EXPERIENCE

Huawei Technologies Research & Development   Aug 2022 - Current
Senior Machine Learning Engineer   *Edinburgh, UK*

· Optimizing perfomance of cloud systems by tuning weights of scoring functions
· Time series prediction models for arrival patterns of function and resource requests

Hyperscience   Apr 2022 - July 2022
Machine Learning Engineer   *Edinburgh, UK*

· Improved rotation correction of documents with data augmentation

The University of Edinburgh   Apr 2021 - Mar 2022
Research Associate   *Edinburgh, UK*

· Breast cancer classification based on combined pCLE images and raman spectroscopy
· Adaptive scanning strategies for ultrasound examinations

The University of Edinburgh   Sep 2019 - Dec 2019
Teaching Assistant and Tutor   *Edinburgh, UK*

· Prepared materials for 8 tutorials for Computer Graphics
· Guest Lecture on 'Graphics simulators in robotics'

Amazon, PrimeAir   Oct 2018 - Dec 2018
Research Applied Scientist   *Graz, Austria*

· Worked on image segmentation from limited data using domain adaption

Defense Science and Technology Laboratory   Jan 2017 - Jun 2017; Nov 2017 - Sep 2018
Research Assistant   *Edinburgh, UK*

· Collaboration between Heriot-Watt University, BMT and REDALERT
· Data driven fluid simulation approach to characterize gas dynamics

The University of Edinburgh   Jan 2016 - May 2016
Tutor   *Edinburgh, UK*

· Prepared materials and conducted 9 tutorials for Object-Orientated Programming
· Tutored the Advanced tutorials for the course, answered and helped with additional questions

Thales Avionics   Jul 2015 - Aug 2015
Software Integration and Characterization Developer   *Irvine, California, USA*

· Extended the Google's Blockly visual programming editor to a test automation tool
· Assisted in training a support vector machine, able to estimate performance tests, without running them

Avid Academy for Gifted Youth   Dec 2014 - May 2015
Math Tutor and Web Developer   *Irvine, California, USA*

· Prepared students for the AIME and AMC math competitions
· Developed educational-focused web content management system using Django

POSITIONS OF RESPONSIBILITY & EXTRA CURRICULAR

Resident Assistant   Sep 2015 - Aug 2018

· Organized more than 17 events per year, helped students with any academic or personal matter

Representational Roles   Sep 2012 - Mar 2022
Student Ambassador, Cohort Student Representative, Informatics School Representative, etc.

· Collecting students' feedback, origanized Informatics Ceilidh for more than 200 students
· Toured potential informatics students

EdIntelligence Committee Member   Sep 2017 - Mar 2022

· Helped to organize events such as career fairs, lectures, movie screenings, etc.; maintaining the website

Bulgarian National Dances   Sep 2013 - Current

· Took part in numerous semi-professional events: International Evening, 6th Syn Festival Baharat-Spices of Eastern Music, 33th and 34th Annual University of Edinburgh Dance Performance, Concert 'Bulgarians from New Times', Concert for the Liberation Day of Bulgaria

Cycling   April 2019

· Cycled all around Scotland, took part in 256 miles bike ride with Mark Beaumont, raising 400£

TALKS

Robot Learning Using Physics-Informed Models   18th of October, 2019
Guest Lecture, Computer Graphics, The University of Edinburgh

Gaussian Processes. Theory and Applications   8th of March, 2017
Open Tech Meetup, Skyscanner, Edinburgh, UK

Gaussian Processes - When Neural Networks are not Enough   29th of July, 2017
SoftUni, Sofia, Bulgaria

AWARDS

Best Case Study, Edinburgh Robotics Annual Conference   8th October, 2019

Principal's Go Abroad Fund, attended Open Source Conference in Hong Kong   June, 2016

Gold Medal, Scottish Boat Race   28th May, 2016

Silver Medal, BUCS Regatta   1st May, 2016

Dean's Choice Award, UAV Forge: Innovation for Personal Autonomous Systems   March, 2015

Award for best UI, Smart Data Hack   Feb, 2013

SKILLS

Languages	Bulgarian (native), English (fluent)
Leadership	Team leader of more than 50 students for building an autonomous quadcopter
Cross-cultural	Lived in UK, USA, Austria and Bulgaria. Travelled to more than 20 countries