# Andreea Radulescu

*19 Queen Square Apartments, Bell Avenue*
*BS1 4AP, Bristol, UK*
*+44 7955002070*
*andreearadulescu19@gmail.com*

## Education

2011–2016 **PhD Robotics**, *University of Edinburgh*, School of Informatics.
Institute of Perception, Action and Behaviour

2010–2011 **MSc Artificial Intelligence**, *University of Edinburgh*, School of Informatics,
MSc Thesis: *Exploiting Variable Physical Damping*.
Graduated with Distinction

2004–2009 **Bachelor of Engineering**, *"POLITEHNICA" University of Bucharest*, Faculty of Automatic Control and Computers, *Diploma grade: 9.75 (97.5%)*.
Main field of study: System and Computer Engineering
Specialisation: Automatic Control and Applied Informatics

## Experience

2019–present **Research, Design and Development**,
Dyson Technology Ltd.

- ***2021 - present***
  - Robotics Research Control Team Manager
    *Help define the minimum viable product and the project goals based on product design intent.*
    *Help define the technologies involved, resurces required, their allocation and a viable timeline.*
    *Leading a team of control engineers to deliver the technical solutions to achieve those goals.*
    *Ensure alignment with other parts of the research team (mechanical design, electronics, perception, high level planning, safety etc).*
    *Recruitment of new team members based on the project requirements.*
    *Help support the personal and profesional development of the team members.*
    *Help setting up collaborations with academic partners.*

- ***2020 - 2021***
  - Lead Robotics Research Engineer
    *Help the tech lead define the technical solutions to achieve the product design goals.*
    *Implement those technical solution in collaboration with other mememberes of the control team.*
    *Collaborate across research teams to help implement the technologiy solutions dictated by the product requirements.*

- ***2019 - 2020***
  - Senior Robotics Research Engineer

2016–2019 **Advanced Robotics Department - Dynamic Legged Systems Lab**, Istituto Italiano di Tecnologia.

- ***2018 - 2019***
  - Senior PostDoctoral Researcher
    *Help define the research plan of the lab.*
    *Co-wrote the project proposals for the VINUM programme and engaged in defining the research plan, required resources and the delivrables timeline. This project tackles the emerging challenge of the dramatic shortage in skilled labor and lower grape prices using robotic solutions.*
    *Continue the supervison of the PhD students and interns.*

- ***2016 - 2018***
  - PostDoctoral Researcher
    *Help develop planning and control strategies for quadruped robots.*
    *Help define the research plan for PhD student projects in the area of planning and control for quadruped robots.*
    *Recruit and supervise the PhD projects.*
    *Supervision of MSc and BSc student interns.*
    *Public outreach and demos of the research.*

2012–2016 **Teaching Experience**, University of Edinburgh.

- ***2012 - 2013***
  - Teaching Assistant - Data Mining and Exploration
  - Tutor - Informatics Research Proposal

- ***2013 - 2016***
  - Lab Demonstrator - Robotics: Science and Systems
  - Tutor - System Design Process

2009 **Intern (Process Engineering Department)**, Dacia, Group Renault.
During this internship I have completed my Bachelor Dissertation ("Modifications and backup management procedure for the OSCAR system").

### Miscellaneous

2013 - present **Meeting coordinator**, University of Edinburgh.
Organise regular research group meetings. Manage bookings and set up rota.

2013 - 2015 **EIE Conference Staff member**, iVentures.
Part of the support staff team.

2012 - present **Public engagement**, University of Edinburgh.
Science communication volunteer at various public outreach events. Open doors day volunteer.

### Invited Talks

25th May 2018 **Robust Locomotion Strategies on the HyQ Robot Series**, *Dynamic Legged Locomotion in Realistic Terrains Workshop*, The International Conference on Robotics and Automation (ICRA 2018), Brisbane, Australia.

## Publications

2020 **Soft Terrain Adaptation and Compliance Estimation (STANCE): Locomotion Adaptation Over Soft Terrain**, IEEE Transactions on Robotics (T-RO).
Authors: Shamel Fahmi, Michele Focchi, Andreea Radulescu, Geoff Fink, Victor Barasuol, Claudio Semini

2018 **Simultaneous Contact, Gait, and Motion Planning for Robust Multilegged Locomotion via Mixed-Integer Convex Optimization**, The International Conference on Robotics and Automation (ICRA 2018).
Authors: Bernardo Aceituno-Cabezas, Carlos Mastalli, Hongkai Dai, Michele Focchi, Andreea Radulescu, Darwing G. Caldwell, José Cappelletto, Juan C. Grieco, Gerardo Fernández-López, Claudio Semini

2017 **Learning Optimal Gait Parameters and Impedance Profiles for Legged Locomotion**, Humanoid Robots (Humanoids 2017).
Authors: Elco Heijmink, Andreea Radulescu, Brahayam Ponton, Victor Barasuol, Darwing G. Caldwell, Claudio Semini

2017 **Whole-body Trajectory Optimization for Non-periodic Dynamic Motions on Quadrupedal Systems**, The International Conference on Robotics and Automation (ICRA 2017).
Authors: Andreea Radulescu, Ioannis Havoutis, Darwing G. Caldwell, Claudio Semini

2017 **Trajectory and Foothold Optimization Using Low-Dimensional Models for Rough Terrain Locomotion**, The International Conference on Robotics and Automation (ICRA 2017).
Authors: Carlos Mastalli, Michele Focchi, Ioannis Havoutis, Andreea Radulescu, Sylvain Calinon, Jonas Buchli, Darwing G. Caldwell, Claudio Semini

2017 **Probabilistic Contact Estimation and Impact Detection for State Estimation of Quadruped Robots**, The International Conference on Robotics and Automation (ICRA 2017).
Authors: Marco Camurri, Maurice Fallon, Stephane Bazeille, Andreea Radulescu, Victor Barasuol, Darwing G. Caldwell, Claudio Semini

2017 **Optimal Control of Variable Stiffness Policies: Dealing with Switching Dynamics and Model Mismatch**, *Springer Tracts in Advanced Robotics*, Geometric and Numerical Foundations of Movements.
Authors: Andreea Radulescu, Jun Nakanishi, David J. Braun, Sethu Vijayakumar

2016 **Optimization for non-periodic dynamic motions of legged systems**, The 9th International Workshop on Human-Friendly Robotics (HFR 2016).
Authors: Andreea Radulescu, Ioannis Havoutis, Darwing G. Caldwell, Claudio Semini

2015 **Optimal Control of Multi-Phase Movements with Learned Dynamics**, IEEE International Conference on Man-Machine Interactions (ICMMI).
Authors: Andreea Radulescu, Jun Nakanishi, Sethu Vijayakumar

2014 **Spatio-Temporal Stiffness Optimisation in Movements with Switching Dynamics**, IEEE Transactions on Robotics (T-RO) Journal *(currently under review)*.
Authors: Jun Nakanishi, Andreea Radulescu, David Braun, Sethu Vijayakumar

2013 **Spatio-temporal Optimisation for Multi-phase Movements: Dealing with Contacts and Switching Dynamics**, IEEE/RSJ International Conference of Intelligent Robots and Systems, Tokyo, Japan.
Authors: Jun Nakanishi, Andreea Radulescu, Sethu Vijayakumar

2012 **Exploiting Variable Physical Damping in Rapid Movement Tasks**, IEEE/ASME International Conference on Advanced Intelligent Mechatronics, Kaohsiung, Taiwan **[AIM 2012 Best Student Paper Award Finalist]**.
Authors: Andreea Radulescu, Matthew Howard, David Braun, Sethu Vijayakumar

## Awards

2011 Informatics UK/EU Master's Scholarship 2010-2011

## Computer skills

Basic HTML, UML, SQL Server, Assembler, Verilog, LabView, Microsoft Robotics Studio, Corel Paintshop Pro, Autodesk 3ds Max

Intermediate C++, java, OpenOffice, Linux, Microsoft Windows, Microsoft Office Tools

Advanced Matlab, Octave, LaTeX

## Certificates and activities

2008 CISCO - CCNA1 (Cisco Certified Network Associate)

2008 CISCO - Fundamentals of Java Programming

2008 Student Scientific Conference - POLITEHNICA University of Bucharest
*Automated methods of detection for the QRS complex in the ECG*

2007 Summer Course BEST - Vrije Universiteit Brussel
*Introduction into aero-spatial engineering*

2006 Summer Course BEST - Budapest University of Technology and Economics
*Introduction to networking*

2006 Student Scientific Conference CERC - Technical Military Academy, Bucharest
*The use of fractals in image compression*

## Languages

| | | |
|---|---|---|
| English | Fluent | *Cambridge Advanced English Certificate* |
| Romanian | Native speaker | |
| German | Intermediate | |
| Italian | Intermediate | |