

# Yousef Amar

## Curriculum Vitae

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### Profile

As an MEng graduate in Computer Systems Engineering with Business Management, my skills are multi-faceted. With strengths in hardware design, low to high-level programming, and every layer of web development, but also project management and business administration, I am a jack of all trades.

I am currently a visiting PhD student at Imperial College London with a focus on Systems, Privacy, Networks, Security, and Personal Data under Dr Hamed Haddadi at the Department of Electronic Engineering and Computer Science.

For more information and to see past projects and work in more detail, please visit [my website](#) or [my LinkedIn profile](#).

### Publications

- 2018 Building accountability into the Internet of Things: the IoT Databox model *Journal of Reliable Intelligent Environments* (pp. 1-17) Springer
- 2017 Balanced Message Distribution in Distributed Message Handling Systems *US Patent (serial number: 15/794440)*
- 2017 Route-based authorization and discovery for personal data *In the 11th EuroSys Doctoral Workshop*
- 2016 Personal Data Management with the Databox: What's Inside the Box? *In Proceedings of the 2016 ACM Workshop on Cloud-Assisted Networking* (pp. 49-54) ACM
- 2016 Privacy-aware infrastructure for managing personal data *In Proceedings of the 2016 ACM SIGCOMM Conference* (pp. 571-572) ACM
- 2015 Incremental dense multi-modal 3d scene reconstruction. *In Intelligent Robots and Systems (IROS), 2015 IEEE/RSJ International Conference on* (pp. 908-915) IEEE

### Education

2016–present **PhD in Electronic Engineering and Computer Science, QMUL**, London, U.K.

- ◇ Visiting Student at Imperial College London
- ◇ Visiting Student at University of Genoa

**Conference and Workshop Attendance:**

- ◇ EuroSys 2018 Shadow PC
- ◇ EuroSys 2017 EuroDW Presenter
- ◇ SIGCOMM 2016 Presenter
- ◇ Cosners 2016 Presenter
- ◇ UK-HDAN Workshop Participant

**Societies:**

- ◇ Artificial Intelligence and Robotics Society
- ◇ Engineers Without Borders
- ◇ Design Society
- ◇ Trading and Investment Society

- 2010–2014 **Master of Engineering**, *The University of Birmingham*, Birmingham, U.K.  
 First Class Honours  
**Project Work:**  
*4<sup>th</sup> Year MEng Final Year Project*  
 Design and implementation of a low-cost UAV sensor system for constructing object and topographical 3D models in real-time.  
*3<sup>rd</sup> Year MEng Group Project*  
 Building a quadcopter that can autonomously transport a payload from the roof of the EECE building to an arbitrary target.  
**Societies:**  
 ◇ Electronic, Electrical & Computer Engineering Society  
 ◇ Birmingham Enterprise and Entrepreneur's Society (BEES)  
 ◇ Games Development Society  
 ◇ Investment Society  
**Other relevant modules:**  
 ◇ Data Mining  
 ◇ Computer Vision  
 ◇ Computer Networking  
 ◇ Computer Hardware and Digital Design  
 ◇ Digital Systems and Embedded Computing  
 ◇ Digital Logic and Microprocessor Systems  
 ◇ Object Oriented Software Design  
 ◇ Computer Systems, Algorithms and Data Structures  
 ◇ C Programming and Algorithmic Problem Solving  
 ◇ Project Management and Professional Practice
- 2010 **European Baccalaureate**, *European School Frankfurt*, Frankfurt, Germany

## Experience

### Research

- May 2017 – **Research Intern**, *Nokia Bell Labs Stuttgart*, Stuttgart, Germany  
 Aug 2017 Research in distributed function scheduling and dynamic load balancing for minimising latency in the context of serverless computing
- Oct 2014 – **Research Intern**, *The University of Oxford*, Oxford, U.K.  
 Jan 2016 Research in multi-camera rig calibration, multimodal scene reconstruction, machine learning, and HRI, while attending doctoral training program lectures

### Vocational

- Jan 2016 – **Teaching Assistant**, *Queen Mary University of London*, London, U.K.  
 present Teaching, supervision, and examination of undergraduates and postgraduates.  
 ◇ Digital Systems Design (hardware design and VHDL)  
 ◇ Software and Network Services Design / IT Programming (Java)  
 ◇ 2x Digital Media and Social Networks (graphs, network analysis, web APIs)
- Sept 2010 – **Programming Tutor**, *Self-employed*, Birmingham, U.K.  
 June 2014 Personal tutor to 16 students
- Nov 2011 **Teaching Assistant**, *The University of Birmingham*, Birmingham, U.K.  
 Teaching and supervision of sixth form students
- May – Sept 2008 **Shop Floor Worker**, *Aquila Aviation AG*, Berlin, Germany  
 Construction and assembly of fibre composite plane parts

## Miscellaneous

- ◇ Student Representative of the Department of Electronic, Electrical and Computer Engineering for 2 consecutive years. Student Rep Chair for 1 year.
- ◇ Peer Assisted Study Sessions (PASS) Leader; tutoring first year students.
- ◇ Ambassador for the University of Birmingham on a cultural exchange program in China for future direct-entry students.
- ◇ EECE Green Impact project assistant for 2 years and sole student delegate.
- ◇ Certification of completion of Birmingham Start-Up Masterclasses 2013

## Skills

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                       |                      |                      |                 |                           |          |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|----------------------|----------------------|-----------------|---------------------------|----------|
| Programming/<br>Scripting | Java<br>PHP+SQL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Python<br>VHDL                                        | C/C++<br>GLSL        | C#<br>MatLab         | R<br>Bash       | HTML5+CSS3+JS<br>CUPL     | Assembly |
| Software and<br>APIs      | OpenGL<br>L <sup>A</sup> T <sub>E</sub> X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | OpenCV<br>Doxygen                                     | OpenCL<br>Node.js    | OpenMP<br>LiveScript | CUDA<br>MongoDB | SSE Programming<br>Docker |          |
|                           | Cordova<br>GIMP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | WebGL<br>IBM z/OS mainframe (CICS, WebSphere MQ, JCL) | WebSocket<br>Unity3D |                      | Blender         | Git, Hg, SVN              |          |
| Spoken<br>Language        | English (fluent)<br>Italian (4yrs)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | German (fluent)<br>Mandarin (1yr)                     | Arabic (fluent)      |                      |                 |                           |          |
| Other                     | <ul style="list-style-type: none"><li>◇ Extensive experience in teamwork with people from any background face-to-face or online and achieved the PSA Advanced award through volunteering work and attending regular lectures, workshops, and networking events for soft skills and insights on the industrial environment.</li><li>◇ Ability to perform extended research and write up detailed scientific reports as well as literary essays, due to the nature of my degree and regular publication and reviewing of journal papers, conference papers, and patents.</li><li>◇ Confidence in public speaking and dealing with large numbers of people through conference talks, school outreach work, public speaking events, actively campaigning for a position as school council president, and protagonists roles in 3 Shakespearean plays.</li><li>◇ Ability to work efficiently under heavy time pressure amassing a large fanbase writing video game mods and extensions who expect immediate release updates, in conjunction with winning several programming contests (e.g. IBM, SMAC, LD) with tight deadlines.</li></ul> |                                                       |                      |                      |                 |                           |          |

## Awards

- 2018 EuroSys Shadow PC Travel Grant
- 2017 EuroSys 2017 Travel Grant
- 2017 IEEE Circuit Building Competition Winner
- 2016 SIGCOMM 2016 Travel Grant
- 2014 AP Jarvis Prize
- 2014 Personal Skills Award (Advanced)
- 2014 Peer Assisted Study Sessions scheme PASS Leader of the Year award
- 2014 University of Birmingham Student Mobile App Competition (SMAC) winner
- 2013 IBM Mainframe Challenge 2012 winner
- 2009-2013 University of Birmingham First Class Excellence Scholarship
- 2008 2x European School Science Symposium medalist

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## Referees

### **Dr Hamed Haddadi**

*Senior Lecturer*

*Deputy Director of Research*

*Academic Fellow of the Data Science Institute*

Dyson School of Design Engineering,

Imperial College London, South Kensington Campus, SW7 2AZ London, U.K.

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### **Professor Philip H. S. Torr**

*Fellow St Catherine's College*

*Royal Society Wolfson Merit Award Holder*

Department of Engineering Science,

University of Oxford, Parks Road, OX1 3PJ Oxford, U.K.

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### **Professor Robert J. Stone**

*Chair in Interactive Multimedia Systems*

*Director, Human Interface Technologies Team*

School of Electronic, Electrical & Computer Engineering,

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### **Dr Costas Constantinou**

*Reader in Communications Engineering, Director of Research*

School of Electronic, Electrical & Computer Engineering,

University of Birmingham, Edgbaston, B15 2TT Birmingham, U.K.

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### **Dr Michael Spann**

*Senior Lecturer, Senior First Tutor*

School of Electronic, Electrical & Computer Engineering,

University of Birmingham, Edgbaston, B15 2TT Birmingham, U.K.

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Further available upon request.