



# Eoin Martino Grua

## Curriculum Vitae

### Personal Information

Date of birth **August 30th, 1993.**  
Place of birth **Cork, Co. Cork, Ireland.**  
Nationalities **Irish, Italian.**

### Languages

Italian Native Speaker  
English Native Speaker  
Spanish B1.1  
Dutch A1

### Research Interests

Machine Learning for e-Health  
Personalisation  
Clustering  
Reinforcement Learning  
Data-driven Software Engineering  
Software Self-adaptation

### Current Position

Jan 2017- **PhD Candidate**, *Vrije Universiteit Amsterdam, The Netherlands*, "Self-adapting  
Jan 2021 Intelligent e-Health Apps", Research areas: Machine Learning, Clustering, Reinforcement Learning, Software Engineering, Software Self-Adaptation, Mobile Apps, e-Health.  
Other roles: Cooperated with Sense-health (sense-health.com) on research for personalisation of e-Health apps.

---

## Education

- July 2017 **ICT4S**, attended the 2017 summer school on Information and Communications Technologies for Sustainability, Lorentz Center, Leiden (The Netherlands).
- June 2017 **iSAPS**, attended the 2017 International Software Architecture PhD School, Lorentz Center, Leiden (The Netherlands).
- 2015–2016 **Master Degree in Computer Science**, Swansea University, Swansea (Wales), Thesis: "Sampler of Ancient Egyptian Supernatural Beings".  
*Graduated with Distinction*
- 2012–2015 **Liberal Arts and Science honours degree in Science with a minor in Psychology**, Amsterdam University College, Amsterdam (The Netherlands), Thesis: "Analysis of computational cost and satisfiability of permutohedra derived by an instance of 3SAT".
- 2007–2012 **Maturità geometra (high school degree)**, Istituto Tecnico Geometra "IISP Vit-tone", Chieri (Italy), 89/100.

---

## Other work experience

- 2014–2015 Committee Affairs Officer in the Amsterdam University College Student Association (AUCSA). Main responsibilities: communication between the AUCSA and the member committees, organisation management, and budget management.
- 2014–2015 Internship at Amsterdam University College as a website developer (<http://am.auc-computing.nl/>). Main responsibilities: developing the back-end for an assignment manager website.
- 2014 Internship at the Computational Science section in the faculty of science of the Universiteit van Amsterdam (UvA). Main responsibilities: implemented an algorithm to create, modify, and graph a Barabasi Albert dynamic network.
- 2011 Internship at the Studio Geometra Conteri Orazio. Main responsibilities: drawing up floor plans in AutoCAD.

---

## Associations

- from 2019 **ACM**, Member of the Association for Computer Machinery.

---

## Publications

- [1] K. Chan Jong Chu, T. Islam, M. M. Exposito, S. Sheombar, C. Valladares, O. Philip-pot, E. M. Grua, and I. Malavolta. Investigating the correlation between performance scores and energy consumption of mobile web apps. (Preprint), 2020.
- [2] E. M. Grua, I. Malavolta, and P. Lago. Self-adaptation in mobile apps: A systematic literature study. In *2019 IEEE/ACM 14th International Symposium on Software Engineering for Adaptive and Self-Managing Systems (SEAMS)*, pages 51–62. IEEE, 2019.
- [3] E. M. Grua, M. Hoogendoorn, I. Malavolta, P. Lago, and A. Eiben. Clustream-GTk: Online clustering for personalization in the health domain. In *IEEE/WIC/ACM International Conference on Web Intelligence*, pages 270–275. ACM, 2019.

- [4] E. Barbaro, E. M. Grua, I. Malavolta, M. Stercevic, E. Weusthof, and J. van den Hoven. Modelling and predicting user engagement in mobile applications. *Data Science*, (Preprint):1–17, 2019.
- [5] A. F. Schneider, S. Matinfar, E. M. Grua, D. Casado-Mansilla, and L. Cordewener. Towards a sustainable business model for smartphones: Combining product-service systems with modularity. In B. Penzenstadler, S. Easterbrook, C. Venters, and S. I. Ahmed, editors, *ICT4S2018. 5th International Conference on Information and Communication Technology for Sustainability*, volume 52 of *EPiC Series in Computing*, pages 82–99, 2018.
- [6] E. M. Grua and M. Hoogendoorn. Exploring clustering techniques for effective reinforcement learning based personalization for health and wellbeing. In *2018 IEEE Symposium Series on Computational Intelligence (SSCI)*, pages 813–820. IEEE, 2018.

---

## Program committees and reviewing activities

- 2020 *External reviewer* of MobileSoft 2020, 7th IEEE/ACM International Conference on Mobile Software Engineering and Systems, Yongsan-gu, Seoul, South Korea.  
*Program committee member* of MMHS20, 4th International Workshop on (Meta)Modelling for Healthcare Systems, Bergen, Norway.
- 2019 *External reviewer* of ESEM 2019 (Emerging Results and Vision Papers), 13th ACM/IEEE International Symposium on Empirical Software Engineering and Measurement, Porto de Galinhas, Brazil.  
*External reviewer* of SEH 2019, the 1st International Workshop on Software Engineering for Healthcare, co-located with ICSE 2019, Montreal, Canada.
- 2018 *External reviewer* of MobileSoft 2018, the 5th IEEE/ACM International Conference on Mobile Software Engineering and Systems, Gothenburg, Sweden.

---

## Given seminars and presentations

- October 2019 **CluStream-GT: Online Clustering for Personalization in the Health Domain**, at *Web Intelligence 2019*, Thessaloniki (Greece).
- May 2019 **Self-Adaptation in Mobile Apps: a Systematic Literature Study**, at *SEAMS 2019*, Montreal (Canada).
- November 2018 **Exploring Clustering Techniques for Effective Reinforcement Learning based Personalization for Health and Wellbeing**, at *SSCI-IEEE 2018*, Bengaluru (India).
- March 2018 **Self Adapting e-Health Apps**, at *ICT.OPEN 2018*, Amersfoort (The Netherlands).

---

## Teaching

### Courses

- Jan 2020 **Learning Machines**, *Vrije Universiteit Amsterdam*, 45 students, MSc level.  
25h
- Sept-Oct 2019 **Green Lab (empirical software engineering for energy efficiency)**, *Vrije Universiteit Amsterdam*, 30 students, MSc level.  
15h
- Sept-Oct 2018 **Green Lab (empirical software engineering for energy efficiency)**, *Vrije Universiteit Amsterdam*, 20 students, MSc level.  
12h
- Sept-Oct 2017 **Green Lab (empirical software engineering for energy efficiency)**, *Vrije Universiteit Amsterdam*, 20 students, MSc level.  
4h
- Feb-May 2015 **Programming Your World**, *Amsterdam University College*, 25 students, BSc level.  
16h
- Sept-Dec 2014 **Programming Your World**, *Amsterdam University College*, 25 students, BSc level.  
16h

### Master thesis supervision

- 2019 Randy de Vries, *Redesigning an Android experimentation framework for extensibility and testability*. Role: Second reviewer.
- 2019 Anouk Neerincx, *Tailoring Online Cognitive Behavioral Therapy via Communication Analysis and Reinforcement Learning*. Role: Daily Supervisor.
- 2017 Amaka Atoyebi, *Exploring how location-awareness is realized in Android mobile apps*. Role: Daily Supervisor.

#### Bachelor thesis supervision

- 2019 Maria Sanchez Pineiro, *App Reviews Analysis with Machine Learning*. Role: Second reviewer.
- 2019 Jakob Kiselica, *Graphical User Interface for User Review Analysis using Machine Learning*. Role: Second reviewer.
- 2019 Ted Asiamah, *End users' perception of Android run-time permissions in React Native apps*. Role: Second reviewer.
- 2018 Adhivira Putra Theodorus, *Development of synthetic Android applications for Energy efficiency benchmarking*. Role: Second reviewer.
- 2018 Marit Leijnse, *Exploring how location-awareness is realized in Android mobile apps*. Role: Daily Supervisor.

## Technical knowledge

- + Programming languages: Python, C, Racket, Java, PHP, Javascript, SQL, Bash, R,  $\text{\LaTeX}$
- + Website development using HTML5, CSS3, and PHP
- + Website development using Django for Python
- + Excellent knowledge of Android.
- + Excellent knowledge of AutoCAD.
- + Good knowledge of MPI for C.
- + Good knowledge of EMACS.
- + Good knowledge of Arduino.