Carlo Alberto Amadei

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EDUCATION

Harvard University Cambridge (US), Exp. 2019
Ph.D. Environmental Engineering (3.9/4.0)

Autonomous University of Barcelona, Barcelona (SP), 2014
M.Sc. Materials Science and Nanotechnology (9.0/10.0)

University of Modena & Reggio Emilia, Modena (IT), 2012
M.Eng. Environmental Engineering (110/110 cum laude)

University of Modena & Reggio Emilia, Modena (IT), 2009
B.Eng. Environmental Engineering (110/110 cum laude)

WORK and RESEARCH EXPERIENCE

Harvard University, Graduate Researcher Cambridge (US), 2014 - Present

- Managed research projects to fabricate novel membranes to increase efficiency (by 50%) in water separation processes; the projects involved a team composed of four undergraduates and one master's student
- Established collaborations with governmental agencies (Bureau of Reclamation, Department of Interior)
- Developed and implemented 2 high-throughput standardization methods for characterizing nanomaterials

Novartis, Environemntal Defense Fund Fellow Cambridge (US), Summer 2018

- Modeled carbon dioxide emissions in the supply chain to drive sustainable business (15%/year reduction in total emissions)

Harvard University, Teaching Fellow Cambridge (US), 2015 - 2017

- Assisted in teaching three undergraduate classes in environmental engineering (water engineering)

Masdar Institute of Science and Technology, Research Assistant Abu Dhabi (UAE), 2012 - 2014

- Developed, tested, and analyzed nanomaterials for sustainable energy applications
- Managed research projects in joint partnerships with American (MIT) and European (Spain) research groups

LEADERSHIP EXPERIENCE

Aqua Novus, Co-Founder Cambridge (US), spring-summer 2017

- Start-up for sensing contaminants using engineered bacteria. This innovation fills the technology gap in the detection of heavy metals by offering cost-effective (100x cheaper) engineering solutions
- Developed market opportunity, competitive analysis, and business plan, and pitched in front of investors
- Finalist MIT Water Prize, semi-finalist MIT 100k, Harvard Incubation Program, 2nd round MassChallenge

Harvard Italian Student Society, Co-Founder & Co-President Cambridge (US), 2016 - 2018

- Established the university-wide society across all Harvard schools (now counting >100 members)
- Organized panels, networking, and social events (dozen events in the first year, >50 attendees/event)

Harvard Graduate Dormitory Council, President Cambridge (US), 2015 - 2016

- Managed $20,000 annual budget for the council representing >400 students living in the residence halls
- Ran monthly meeting and coordinated a team of ten people organizing activities for for the residence halls

FELLOWSHIPS and AWARDS

American Membrane Technology Association, Fellowship (awarded to 3 students nationwide) 2017
Pierce Fellow (additional scholarship at Harvard University) 2014 - 2017
Premio Mussini for academic excellence (University of Modena, awarded to 5 graduate students) 2012
First Place in Engineering Program for International Students (Beijing University of Technology) 2011
Premio di Studio for academic excellence during undergraduate degree (University of Modena) 2009

SKILLS and INTERESTS

Computer: Python, Matlab, Adobe Illustrator Image J, LaTeX, SAM (System Advisor Model for Solar Tech)
Languages: Italian (mother tongue), English (fluent)
Technical: Engineering of water filtration systems; experience in bottom-up and top-down fabrication; expert user of materials characterization tools
Interests: Triathlon (Ironman finisher), travel (45 countries), mountaineering, sustainable business (worked in collaboration with Harvard Business School researchers on sustainable use of resources)

PUBLICATIONS and CONFERENCE PRESENTATIONS

Publications: 14 peer-reviewed articles (10 first authors, impact factor range 4-8)
Conferences: 8 presentations in international conferences (5 oral and 3 poster presentations)