Service statement

Emanuele Viola

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Computer science is at the center of radical transformations that are going on in all of science. Indeed, certain issues are especially prominent in our community, such as (i) the debate on the role of conferences vs. journals, (ii) the tension between brick-and-mortar instruction and various types of E-learning, and (iii) the competition between public and private access to research. Moreover, computer science is uniquely positioned to develop *solutions.* For example, various tools for E-learning, rapid review and dissemination of research, and question-and-answer fora belong to the domain of computer science.

At the same time, Northeastern University is undergoing exceptional growth which provides both challenges and unique opportunities, especially within the context of the above issues. For example, the university is launching new online programs, while at the same time expanding its campuses in the United States and elsewhere.

I view service as the means by which we can steer both computer science and Northeastern through these transformations, and towards the most successful route.

Service to the Profession

I am associate editor of *SIAM Journal on Computing,* and of the *ACM Transactions on Computation Theory.* I served on eight NSF panels, in years 2008, 2009, 2011, 2014, 2015, 2016, 2019, and 2020. One of these was for CAREER proposals. I served on the the FOCS program committee in 2017, and a number of other conferences earlier.

I was also a local co-organizer for the IEEE Conference on Computational Complexity (CCC) in 2010. In 2019 I placed a bid to host this conference at Northeastern. The bid was not successful, but after discussions with the conference administration I plan to place another bid.

I have been on the Scientific Board of the public archive *Electronic Colloquium on Computational Complexity* (ECCC) since 2009. The Board screens each submission and decides whether to accept it. Over the years, this has made ECCC a useful, trustworthy repository for the rapid dissemination of research.

I also promote theoretical computer science to a wider audience. Some of my technical blog posts [Vio14] and videos [Viob] have received thousand of views. I contribute to the "cs-theory" question-and-answer site `http://cstheory.stackexchange.com`, and in 2012 I was a top user. I also contributed to a popular-science book on finance [LH10], by writing

a section on randomness from a computational point of view. Through my *Wordpress* blog [Vioa] I became involved in several discussions on the points mentioned at the beginning of this document, such as the "conferences vs. journals" and the "public vs. private access to research" debates [Vioc]. I have also raised awareness [Vioc] of the environmental cost of the *modus operandi* of the community, and proposed ways to mitigate it.

Service to the Institution

Since joining Northeastern University in 2008 I have worked to increase the visibility of the College by attracting outstanding researchers. For example recently I hosted Elena Grigorescu for a semester-long visit, and Omri Weinstein, Shubhangi Saraf, and Swastik Kopparty for shorter visits. They all gave talks and met our faculty and students. Earlier I hosted Yevgeniy Dodis for a semester-long visit, during which he taught an advanced class in cryptography, and I organized the theory seminar [Nor] in 2008-20015. I also worked to recruit new top faculty members, resulting in several offers.

During my time at Northeastern I served on many internal committees. During the last few years I served on the Ph.D. admission committee, in which capacity I also drafted a new guideline for the use of Ph.D. fellowships, which has received support from the committee. Recently I also served on the MS Curriculum committee. We updated the curriculum for the MS in Computer Science, and reworked its requirements. These changes come at an important juncture as Northeastern is about to launch an online MS program in Computer Science, and is also multiplying its offerings across several campuses.

Earlier I served twice on the hiring committee. The first time (2009-2010) was for a joint position with the department of Mathematics. I advertised this position widely, and I helped recruit four outstanding candidates and hosted one of them. The second time (2010-2011) was for a joint position with the College of Arts, Media, and Design (CAMD). The search resulted in the hire of Magy Seif El-Nasr. In 2012-2013 I served on the merit committee, in which capacity I also worked with the rest of the committee towards making the process more efficient.

References

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