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Ph.D. Student Awarded 2017 Adobe Research Fellowship

University of California San Diego doctoral student C. Ailie Fraser has been awarded a 2017 Adobe Research Fellowship in only the second year of the company's fellowship program. The third-year Ph.D. student in Computer Science and Engineering (CSE) is a researcher in the Design Lab at UC San Diego, and simultaneously works tirelessly as president of the campus chapter of Graduate Women in Computing (GradWIC).

Adobe uses the fellowships to recognize outstanding graduate students anywhere in the world carrying out exceptional research in areas of computer science that are important to the software company.

Fraser's one-year award comes with a \$10,000 stipend and an internship this summer at Adobe. She also gets access to mentorship from an Adobe Research scientist for the year, as well as a free, year-long subscription and round-the-clock access to all of the software in Adobe's Creative Cloud (including Adobe's flagship products such as Photoshop and Acrobat Reader).

The student enrolled in the Ph.D. program at UC San Diego in 2014 after completing a B.S. degree (honors) in math and computer science from the University of Toronto in her native Canada. In San Diego, Fraser has focused on human-computer interaction under her advisor, CSE and Cognitive Science professor Scott Klemmer. Klemmer also co-directs the Design Lab, located in the Qualcomm Institute, and Fraser has been a Ph.D. researcher in the lab since Fall 2014. She also did an internship with Adobe's Creative Technologies Lab in the summer of 2015, developing and evaluating a suggestion tool to help users get started in complex software (on which she collaborated with CSE's Klemmer).



Adobe Research announces a 2017 fellowship for CSE Ph.D. student Ailie Fraser.

In addition to Fraser's own area of human-computer interaction (HCI), this year's Adobe fellowships are being awarded to students in seven other fields as well: computer graphics, computer vision, machine learning, visualization, audio, natural-language processing, and programming languages.

In a statement, the company noted that "Adobe Research is helping to grow the company's expertise in analytics, machine learning, data mining and other innovative technologies relevant to Adobe software products for consumers, creative professionals, developers and enterprises." At present, Adobe maintains collaborations with faculty and students at over 50 university partners, including UC San Diego, and the Adobe Research Fellowship program was launched in 2016 to extend those collaborations.

UC San Diego's Fraser and other recipients of the 2017 fellowships were selected based on their research (creative, impactful, important, and realistic in scope) and how their work would contribute to Adobe; their technical skills (ability to build complex computer programs); as well as personal skills (problem-solving ability, communication, leadership, organizational skills, ability to work in teams).

In her first year at UC San Diego, Fraser also worked as a researcher in the Graphics and Vision group of CSE professor Ravi Ramamoorthi, writing a program to render objects under environment lighting and to edit reflectance properties using interactive 'brushes'. She also worked with CSE research scientist Nadir Weibel on a Design Lab project in human-centered healthcare design to improve processes at the UC San Diego Medical Center involving treatments with radiation oncology.

Also in the Design Lab, she was first author on a paper presented at the 2016 Conference on Designing Interactive Systems (DIS 2016) with Scott Klemmer and three co-authors from Adobe. The paper presented DiscoverySpace, a novel interface (a prototype extension panel for Adobe Photoshop) to suggest task-level action 'macros' crowdsourced from Photoshop users online. Based on a photo's visual attributes, the interface suggests a set of one-click actions to help novice users of complex software programs create advanced effects that would otherwise require a steep learning curve

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