Application Materials

You'll need to submit all of your application materials in one go, so be sure to prepare the following items in advance:

1) Statement of purpose (max. 300 words): One to three paragraphs explaining why you are interested in public engagement with science, and what you hope to get out of this experience.

Most scientists disseminate their findings only to peers. About half of them do not perform scientific outreach thinking that it is ineffective. The other half does minimal outreach mainly focusing on school children, and adopting the deficit model approach rather than a dialogue. Research shows that this method is most of the time fruitless. The deficit model is based on the notion that the public has a knowledge gap and all scientists need to do is fill it by educating them. Researchers in the field of science communication have repeatedly found this futile, holding the deficit model accountable in part for the "backfire effect," and useless on dealing with the "confirmation bias" phenomena. We have an urgent need on improving the way we communicate science to the public. Fail on this task will alienate even more the scientific world from the rest of society creating repercussions on decision making, public policy, and funding for research. As consequence, this could have a negative impact on finding the future answers to today's problems.

From there my urgency to explore new ways and tools to communicate science. I am interested in establishing transversal links to other types of knowledge, especially those based on the arts and the humanities. I am hoping to learn from the experience of others on areas like sci-art, audience interaction, and immersive experiences. At the end of the workshop, I would like to apply that new knowledge into the design of tools and educative programs that could promote science in society at large, creating equal access to creative scientific experiences that could bring science outside of the academic silos.

2) Collaboration essay (max. 300 words): One to three paragraphs describing your approach to interdisciplinary collaboration, and your thoughts on how the inclusion of diverse perspectives might improve public engagement with science.

Public engagement is necessary if we want to build support and growing interest for science. Public engagement requires an evolution from the deficit model to a two–way engagement model that gives the public a voice throughout the scientific process. This inclusiveness can foster interest and community engagement strengthening policy outcomes by pulling in more voices, encouraging science careers, improving science knowledge, and boosting the value of science to society.

As many authors state, I believe that appealing to the emotions can work better at the moment of discussing scientific facts compared with the direct clash used by the deficit model. Due to the strong connection to the emotions, the arts can be a solid partner allowing the public to situate and see themselves in the complexities of scientific inquiry. Art in popular culture has a durable influence in shaping most people's understanding of science and scientists. Films, novels, comics, design, and other media are usually more appealing, more eye-catching, and more memorable than formal lectures.

Personally, I have been using graphic design, storytelling, neuroscience, and psychology to invite scientists to share their knowledge. I have stablished collaborations as well with artists, designers, art educators, journalists, and science communicators to foster knowledge transfer between artists and scientists as equals partners. The result is a

class that will start its third iteration in September and has led to several public exhibitions of art inspired by neuroscience. We have also developed a public science symposium where science is discussed using storytelling, comics, dance, and visual arts. Using the arts, we have reached people otherwise unreachable by a formal conference or a class room, and made an impact communicating not just the science behind the pieces exhibited, but also the emotions they provoke. We are just starting to discover the possibilities.

3) Candidate biography (max. 150 words): A short paragraph describing your background, interests, and professional goals. Include a description of any previous experience you've had with science outreach or public engagement.

Born in Chile, Cristian obtained his Ph.D. at the Universidad Austral of Valdivia studying the structure and biophysics of ion channels. In 2009, he moved to Canada to work in neuroscience. His work and collaborations have been published in high impact journals including Cell Reports, PNAS, Science, and Nature. He is recipient of a CIHR Brain Star Award.
Parallel to his research, Cristian is also interested in SciComm and outreach. In 2016, he found the Convergence Initiative, a nonprofit that brings the complexity and beauty of the brain to the public through artwork inspired by cutting-edge neuroscience research. His work has brought together the BRaIN Program of the McGill University Health Centre, the Integrated Program in Neuroscience of McGill University, and Concordia University Faculty of Fine Arts, among others.
Cristian is also a Graphic Designer, practicing since 1995 in difference advertising companies in Chile and as an independent since 2001.

4) Your discipline (max. 50 words): Some of themes we will be exploring include Vacations on other planets, Bugs as foods of the future, Taste Illusions and the Senses. Please describe in very general basic terms how you can imagine connecting your expertise or practice to these events, e.g. scientific connection, artistic connection, audience-interaction, design contribution, educational connection.

I can imagine an advertising campaign where I design the graphics that promote the trips to Europa and Titan while we construct a space suit that will keep stable their physiologies. The suit could have controls that will be connected to information of what the user is adjusting and why.

5) Your Resume (max. 2 pages)

Attached in PDF.