



Talking to the Future

Brian David Johnson, *Intel*

The Society for Science and the Public hosts an international science and engineering fair that encourages today's teenagers to create tomorrow's future.

Did you participate in your school science fair when you were a kid? Perhaps you've helped your own child put together a cardboard display that explains his or her hypothesis, research, and results. Most people have fond memories of the science fair. For many, it was their first step to becoming a scientist, engineer, or mathematician. One of my early science fair exhibits explored the effect of electricity on plants. I can't recall why I decided to run electrical currents through various plants and study the effects, but it was a winner.

INTEL INTERNATIONAL SCIENCE AND ENGINEERING FAIR

From this fondness for science fairs, I've had a deep commitment to the Intel International Science and Engineering Fair (Intel ISEF) that the Society for Science and the Public

puts on every year. Intel has been the event's lead sponsor for 18 years, but even if I didn't work for the company, I'd probably still be involved.

The Society for Science and the Public describes the event like so:

The Intel International Science and Engineering Fair, the world's largest international pre-college science competition, annually provides a forum for more than 1,700 high school students from over 70 countries, regions, and territories to showcase their independent research and compete for more than \$5 million in awards. Today, millions of students worldwide compete each year in local and school-sponsored science fairs; the winners of these events go on to participate in Intel ISEF-affiliated regional and state fairs from which the best win the opportunity to attend Intel ISEF. Intel ISEF unites these top young scientific minds, showcasing their talent on an international stage, enabling them to

submit their work to judging by doctoral level scientists. The Intel ISEF is the premier global science competition for students in grades 9–12.

For the past three years, I've been a part of the opening ceremony that kicks off the week-long procession of project judging, events, classes, advanced placement (AP) tests, excursions, and some pretty awesome geek-out moments. Standing backstage at Intel ISEF is like being transported to the command center of an immense and loud space station. Huge screens tower over you. The music thumps loudly in your ears (we're talking about teenagers here), and people race around in the darkness before the big show begins.

I waited at a small table and tweeted away. Then it was show time. I've spoken at Intel ISEF before, so I knew what to expect. The audience is a riot of nerdy enthusiasm led by the 1,700 finalists who have

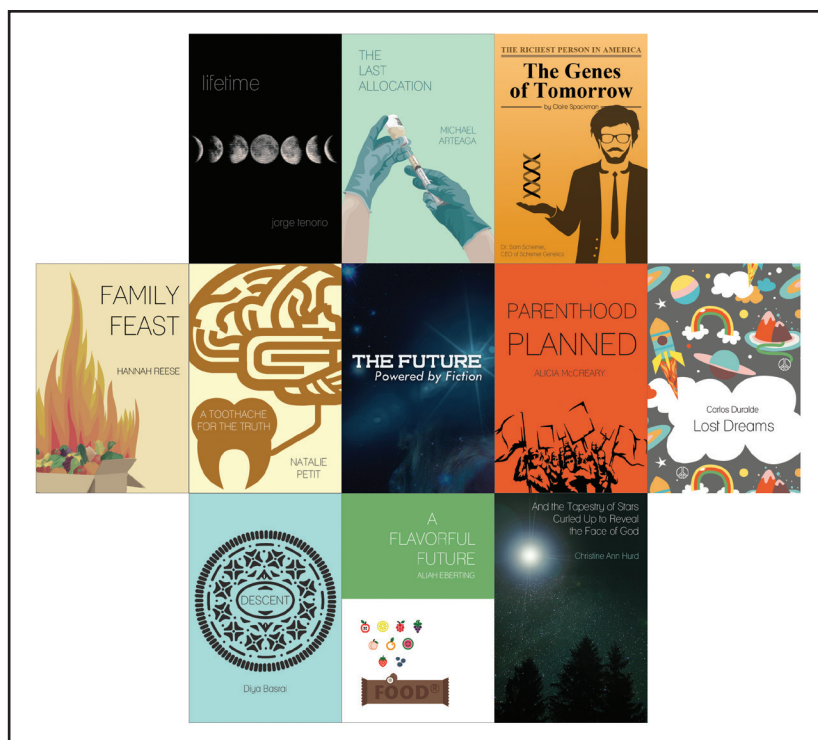


Figure 1. Cover illustrations of the 10 winners. Artwork by April Miller and Omedia.

come to show off their work. (The other 2,000 or so people in the auditorium are teachers, parents, and the army of supportive adults needed to make the event happen.) I had spent the previous hours walking the show floor, overwhelmed by the intelligence and creativity found in each and every science project.

My first line to the crowd was that the person introducing me neglected to describe me as a nerd, in addition to being an author and a futurist. This got a massive round of applause and shouts, and it's why I love this event so much—it's one of the few places where you can profess your love of science and science fiction and get a roaring response.

VISIONS OF THE FUTURE

At the previous year's opening ceremony, I had announced a youth writing competition and asked the audience for their visions for the future. I wanted to know what kind of future they wanted to live in and which ones they'd avoid. These

are the people who will build our future—I've seen what they can do on the floor of the science fair, and the future is in good hands. But they needed to dream bigger, and they needed to share those dreams.

The Future Powered by Fiction was a collaboration with the Society for Science and the Public and Arizona State University's Center for Science and the Imagination (<http://csi.asu.edu>). The 10 winners would be selected by an independent editorial board, and each one would receive \$1,000 and have their story published by the Tomorrow Project, an international project that uses science fiction based on science fact to spark conversations about the future. The project professes the belief that everyone should be an active participant in the future and that science fiction prototypes can give us a language with which we talk about it.

The call for entries closed on 13 December 2013, and the response was humbling. Our total submissions reached 274, with visions

coming from 15 countries and 36 US states. Incredibly—and happily—49 percent of the entries came from young women. For a long time now, it's been our goal to get more young women involved in STEM topics. We were impressed that the stories came from a wide range of ages as well: 26 percent from 13- to 15-year-olds, 45 percent from 16- to 18-year-olds, and 29 percent from 19- to 25-year-olds.


Another fact that surprised the editorial board was the quality of the submissions. The board was able to pick the 10 winners but felt that a large number of other stories should also be published by the Tomorrow Project and shared with the world. Bryan Walsh, a senior editor at *Time* magazine and a member of the editorial board, said, "The stories I was fortunate enough to judge showed a wonderful imaginative sense, an ability to use fiction to explore the shape of our future."

Because of the overwhelming response, we decided to publish 33 additional stories along with the 10 winners. This meant we faced a really good problem to have—too many great stories for a single volume—so we opted to publish them in quarterly anthologies. In summer 2014, we'll release *The Future Powered by Fiction*, which will contain the 10 winners and a few extras. We'll follow that in fall 2014 with *Dark Futures*, an exploration of the possible dangers of technology and the futures we want to avoid. In winter 2014, we'll share *Living Tomorrow*, which will focus on the future of humans and the environment. Finally, spring 2015 will feature *Journeys through Time and Space*. All of the anthologies will be published free online and in limited paperback form.

The 10 \$1,000 prize winners and their outstanding stories were (in no particular order) Natalie Petit ("A Toothache for the Truth"), Claire Spackman ("The Genes of Tomorrow"), Aliah Eberting ("A Flavorful

Future”), Diya Basrai (“Descent”), Christine Ann Hurd (“And the Tapestry of Stars Curled Up to Reveal the Face of God”), Hannah Reese (“Family Feast”), Jorge Tenorio (“LifeTime”), Carlos Duralde (“Lost Dreams”), Michael Arteaga (“The Last Allocation”), and Alycia McCreary (“Parenthood Planned”). Figure 1 shows the list. Visit <http://isef.tomorrow-projects.com> to watch the award ceremony.

Coming back from Intel ISEF, I reflected on what science fiction prototypes could do—how they could inspire young minds and get people excited about science and engineering. I’m so committed to this event because these kids are some of the brightest minds we have in our world, and their enthusiasm is infectious. With so many students and parents seeking me out explicitly to tell me the positive effects the Tomorrow Project and science fiction prototypes have had on them as well as their communities, it was particularly affirming.

It’s all too easy to get so deeply involved in our work that we forget why we do it. We really can build a bright future, and these young minds are the ones who will help us do it. But don’t take my word for it—test it out yourself. Find a young person and ask her what her vision for the future is. You might be surprised at the answer. Then encourage her to go build it! 

Brian David Johnson, Science Fiction Prototyping column editor, is Intel’s first futurist. He is the author of Humanity in the Machine: What Comes After Greed? (York House, 2013) and Vintage Tomorrows: A Historian and a Futurist Journey through Steampunk and into the Future of Technology (Make, 2013). Contact him at brian.david.johnson@intel.com or follow him on Twitter @IntelFuturist.

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revised 23 May 2014

