



(a nonprofit
organization,
founded in 1978)
<http://stemd.org>

Foundation for Science and Disability Newsletter

<https://www.facebook.com/groups/360413492800/>

http://www.linkedin.com/groups?gid=4116054&trk=hb_side_g

Student Grant Awardees since 1990

1990	Wendy Pava, Birgit Wolz, Elaine Hall
1991	Kevin Wilkins, Shan Ming Lee
1992	Meghal Antani, Lynn Hanninen, Mara Frohlinger
1993	David Fass, William Hylton
1995	Chris Tromborg
1996	Anne-Michelle Singleton
1997	Leslie Harper
1998	Maura O'Modhrain
1999	Joseph Barbera, Byunggyoo Kim
2000	Jennifer Last
2001	Cassandra Quave
2002	My Lien Nguyen
2003	Mark Woods
2004	Jessica Mahood
2005	Cheryl Fogle
2007	Melodi King
2008	Ryan McKindles
2009	Emma Sacks
2010	Shaun Kane
2011	Lisa Dunning
2012	Kim Yeoman
2013	Naomi Delventhal
2014	Amy Nichols
2015	Rosemarie Figueroa
2016	Heather Page
2017	Rachel Wiley
2018	Cynthia Bennett
2019	Helen Rottier

Student Grant Awardees, contd.

2020	Lana Frankle
2021	Kyle Grosser
2022	Juan Alarcon

President's Corner

--Richard Mankin

This year, we're combining two newsletters into one due to pandemic-related time-delays.

First, we have some commentary about the year's events, followed by the Minutes of the 2022 annual meeting, including the treasurer report and the Grant Committee report.

We end with contact information for renewing memberships, etc., and in the side panel on this page we have information about the upcoming Annual Meeting of the Foundation at the AAAS annual meeting.

It should be a busy meeting, as we will have a new Graduate Student Grant to announce, a call for nominees for a new election, and new business.

I hope to see you there.

January 2023

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FSD is an
affiliate of the
American
Association for
Advancement of
Science (AAAS)

**The next FSD annual
meeting will be held
March 5 from 2:00-3:30
PM in the Washington
DC Convention Center
during the AAAS annual
meeting, March 2-5,
2023**

Commentary on 2022 Happenings Relevant to Entry into and Maintenance of Scientific Careers by Persons with Disabilities

Richard Mankin

Ryan McKindles, the Student Grant awardee in 2008, recently published a paper on “Utility of Inter-subject Transfer Learning for Wearable-Sensor-Based Joint Torque Prediction Models” in the 43rd Annual International Conference of the IEEE Engineering in Medicine and Biology Society , October 31-Nov 4, 2021. A copy of the paper is posted at <https://www.ars.usda.gov/southeast-area/gainesville-fl/center-for-medical-agricultural-and-veterinary-entomology/insect-behavior-and-biocontrol-research/people/richard-mankin/foundation-for-science-and-disability-reference/> . The study involves development of methods that help generalize training of machine learning models to operate wearable-sensor-controlled exoskeletons devices used by different individuals.

Indeed, machine learning and artificial intelligence (AI) did not exist when I received my Ph.D. but they have been of considerable interest to me for their potential to facilitate data analysis and accelerate the process of conducting science. So I took advantage of the opportunity offered recently to permit anyone to ask two questions to Chat GPT (website: <http://chat.openai.com/chat>). The first question was: Can robots replace persons with disabilities?

Here was its answer:

It is unlikely that robots will be able to fully replace individuals with disabilities in the near future. While robots and artificial intelligence have advanced significantly in recent years, they still lack the flexibility, empathy, and creativity of human beings. Additionally, many people with disabilities have unique needs and abilities that may not be easily replicated by technology. However, robots and other forms of assistive technology can be used to supplement and enhance the abilities of individuals with disabilities, allowing them to live more independently and perform tasks that may otherwise be difficult or impossible.

Well, I agreed with the last part, but the first part of the response seemed somewhat sketchy. Yes, robots lack the flexibility, empathy, and creativity of human beings. Chat GPT should have pondered further about the nonchalance of specifically replacing the livelihoods of persons who frequently suffer from discrimination. However, information linking disability and hiring discrimination is limited, and it may be worthwhile for FSD in the future to add to the scientific literature on such topic.

The second question was: what actions can persons with disability take to overcome unconscious bias?

Here was the answer:

Unconscious bias refers to the automatic, often negative, associations that people make about others based on stereotypes and prejudices. These biases can impact how people with disabilities are treated and can lead to discrimination.

There are several actions that people with disabilities can take to try to overcome unconscious bias:

1. Educate yourself: Becoming more aware of unconscious bias and how it can impact people with disabilities can help you to recognize and challenge your own biases.
2. Advocate for yourself: If you experience discrimination or unequal treatment because of unconscious bias, it is important to speak up and advocate for yourself. This can involve explaining your needs and asking for accommodations or seeking support from allies.

3. Be an ally: Supporting others who may be marginalized because of their disability can help to break down barriers and promote inclusion.
4. Promote diversity and inclusion: Encourage your community or workplace to implement policies and practices that promote diversity and inclusion, including for people with disabilities.
5. Seek support: If you are experiencing discrimination or feel overwhelmed by unconscious bias, it can be helpful to seek support from friends, family, or mental health professionals.

I think ChatAI did its homework on this question and provided a good answer. Would anyone like to have a go at producing a better answer?

Here are the minutes of the FSD 2022 Virtual Annual meeting:

FOUNDATION FOR SCIENCE AND DISABILITY

Annual Meeting

7:00 -9:00 PM, Friday, February 18, 2022

Zoom meeting, Washington, DC

AGENDA

- Call to Order/Introduction
Yoshiko Miwa, Laureen Summers, Suzanne Thurston, Stephanie Bailey, Kumar David, and Richard Mankin each introduced themselves. Suzanne, Stephanie, and Kumar were welcomed as new attendees.
- Minutes - February 10, 2021 (Washington, DC)
The minutes had been posted previously at the foundation website (<http://stemd.org>), and in the 2021 Annual Newsletter (<https://www.ars.usda.gov/ARUserFiles/3559/FSDNewsletterAug2021.pdf>). No changes were requested.
- Treasurer's Report for 2021- Richard Mankin for Angela Foreman, Treasurer

Balance on January 1, 2021 12,721.07

Kyle Grosser: 2021 FSD Graduate Student Grant Award Winner	\$-1,000.00		\$11,721.07
Deposits: Membership dues and Donations		\$800.00	\$12,521.07
Balance on December 31, 2021			\$12,521.07

- Science Student Grant Committee Report – Angela Foreman and Richard Mankin, Chair
Juan Alarcon, a student in the Department of Chemistry, Florida International University, Miami, FL. was selected for the 2022 FSD Graduate Student Grant Award. Juan's dissertation research is titled "Molecular mechanisms of rocket fuel combustion," and combines empirical data from ultrafast laser spectroscopy of charge transfer processes in molecular dyes with theoretical understanding and predictions of combustion processes.
- New Business

Several potential areas of further exploration by FSD were discussed by attendees. Stephanie was interested in advocating policies that make it easier for persons with disabilities to enter and remain in the scientific workforce. Several members have conducted advocacy in previous years and there was interest expressed in developing new activities relevant to the post-pandemic workforce. Stephanie is hoping to interact with other FSD members in ramping up a project that will be developed over the next year.

In addition, as the current pandemic ends, FSD may wish to consider ways to assist those in the community who have suffered from long Covid. There is evidence from the 1918 pandemic (see article in Nature: <https://doi.org/10.1038/d41586-022-00414-x>) that persons who survived bouts with 1918 influenza often developed a Parkinson's-like disease that caused disability later in life. Similar problems happened with polio survivors. Many persons in the scientific workforce who are not currently disabled remain at risk of developing disabilities in the future. Awareness of such risks may lead to advocacy for enhancement of previous legislation such as the Rehabilitation act of 1973 and the Americans with Disabilities Act of 1990.

Finally, we keep in mind a continuing goal that led to the formation of FSD in the 1970s. Due to implicit biases in all humans, persons with disabilities who wish to enter and persevere in scientific careers must: 1) demonstrate consistently high levels of achievement themselves, and 2) provide effective mentorship and encouragement to others who follow them. Given the unchanged, relatively low percentage of persons with disabilities in the scientific workforce over the last 30 years, FSD and similar organizations should ramp up such activities to meet such goals effectively. Some, such as HIARO (<http://deafearsScientists.org/>), have made excellent progress in recent years, and FSD also has opportunity to do so.

- Adjournment

The meeting adjourned at 8 PM.

Respectfully submitted by Richard Mankin, February 19, 2022.

**Foundation for Science
and Disability**

<http://stemd.org>

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The Foundation for Science and Disability (<http://stemd.org>) was founded in 1978 to promote the integration of persons with disabilities into the mainstream of the scientific community. A major focus of FSD has been the removal of barriers that restrict opportunities to develop careers and conduct scientific research. The Foundation also provides grants to students with disabilities who are conducting research in the fields of Science, Technology, Engineering, or Mathematics.

President: Richard Mankin (rmankin1@ufl.edu)

Treasurer: Angela Lee Foreman (angelaleeforeman@yahoo.com)

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**Foundation for Science and Disability 2023 Dues Notice
Membership Application / Renewal Form**

Dues Schedule:

Student \$5.00

Regular \$25.00

Contribution _____

Total _____

Please make checks out to:

Foundation for Science and Disability

and mail to:

Angela Lee Foreman

Foundation for Science and Disability

P. O. Box 3384

San Leandro, CA 94578

Please send a change of address, if any, and / or list any comments to the President or Treasurer. Also, please forward us your email address if you would like to receive pdfs of future Newsletters.
