

Meeting of the VASE General Membership

Spring 2023

March 1, 2023 (via Zoom), 4:30pm – 6:00pm

In attendance: Board Directors -John Cohn (Outreach Coordinator), Sylvie Doubleie, Jeff Finkelstein (former Board president), Stephen Knowlton (Treasurer), Michael Metz, and Grace Spatafora (President) Members – Allen Betts, David Bradbury, Gary Carver, Daniel Schartstein, Christopher Francklyn, Noah Graham, Howard Kalter, Beth Kirkpatrick, Rick Page, Linda Schadler, Edith Hendley, Regina Toolin, Leslie Parise.

A warm Welcome was extended by Board president, Grace Spatafora, who cited the three-part mission of VASE to:

- honor outstanding achievement and contributions in the broadly defined areas of science and engineering,
- promote the interests of Science, Technology, Engineering, and Mathematics (STEM) throughout the state of Vermont
- educate Vermonters about the importance of the STEM fields
- help state government resolve scientific and engineering problems

The Board president then introduced VASE's new administrative assistant, Mary Braun, who looks forward to meeting members and encourages them to contact her when information is needed or collaboration sought; her email is VTscieng@gmail.com

The six VASE Board Directors were also introduced: John Cohn (Outreach Coordinator), Sylvie Doubleie, Jeff Finkelstein (former Board president), Stephen Knowlton (Treasurer), and Michael Metz.

Since valuable recommendations contributed at last year's spring members' meeting, multiple actions have ensued:

At the Fall 2022 annual meeting, Kyle Clark, founder of BETA Technologies gave the keynote presentation. During that meeting, the Teacher of the Year, Greg Wolf was introduced along with an example of his dynamic social media posts. Since 2021, 9 new inductees were added to VASE's membership: Randall Holcombe- Director, UVM Cancer Center; Regina Toolin- UVM College of Education; Linda Schadler- Dean, UVM College of Engineering & Math; Beth Kirkpatrick- Chair, UVM Dept. Micro. & Mol. Gen.; Giuseppe Petrucci- UVM Dept. of Chemistry; Mark Levine- VT Dept. of Health; Leslie Parise- Dean, UVM College of Ag. And Life Sciences; Mary Cushman- UVM Professor of Medicine & Pathology; and Christopher Francklyn- UVM Dept. of Biochemistry.

The VASE Board expresses its gratitude to the Vermont Technology Council for their financial commitment to provide \$30,000 per year for the next 3 years.

John Cohn described VASE's grants program, which is designed to stimulate STEM education. The Fall of 2022 grants cycle, resulted in 6 Small Equipment Grants (SEG) amounting to \$8400 in awards, and 13 Hands-on Science and Technology Grants (HOST) amounting to \$12,800. Altogether the average grant size was \$1,500 for a total of \$21,200 in grants awarded. John noted the particular success realized in VASE's partnership with FIRST Robotics (the largest STEAM program in the world.) Since 2017, 43 of the 60 HOST grants awarded went to FIRST teams. VASE support has helped grow FIRST at all levels and has helped fuel the creation of independent FIRST in Vermont. More recently, the Argosy Foundation has committed \$375,000 to FIRST in VT over three years.

John noted the need to communicate these SEG and HOST grant opportunities more broadly and invited members to help spread news of the grants. *Members are also encouraged to serve on the grants review sub-committee, which is automating its grant application and review process. A call for spring grant applications opens April 1.*

Multiple VASE members shared recommendations for increasing VASE's communications, including:

- VT Principals' Association (VPA)
- VT Science Teachers' Association (VSTA)
- VT Computer Science Teacher Association (CSTA)
- VT Extensions Office
- VT Agency of Education (AOE) weekly field memo
- VT 4H

Steven Knowlton briefed members on VASE's finances (see appendix.) He noted that apart from recent part-time board administrative support, VASE is an all-volunteer nonprofit foundation registered as a 501c3. Its fiscal year runs July 1 to June 30. In 2023, VASE will run a second call for grant applications and intends to raise funds to match donations received by the Vermont Technology Council and by an anonymous donor. Thanks to their generous support, at present VASE's cash balance totals \$31,806.

VASE presently has a Board member and a general member serving on the State's Artificial Intelligence Commission. Both John Cohn and Donna Rizzo advise the State and are helping to craft a code of ethics. Notably, Vermont is one of the first states to create an AI division.

Following the recommendation of the membership, a site visit to the New Hampshire Academy of Science was made by VASE Board Directors. Jeff Finkelstein described how New Hampshire's academy is larger in budget and in size. Directors toured the NH facility. Jeff also cited efforts to reach out to Vermont's Department of Economic Development to spur workforce initiatives in the sciences and engineering. He *encourages VASE members to share their expertise with others in the State to spur advances in the sciences. Members are asked to update their contact information and bios for use as a liaison directory on the VASE website; please contact VTscieng@gmail.com*

VASE Questions for the membership – how do we increase our impact throughout VT?

To become a technical convener of scientific and engineering conversations, Sylvie Doublet described how VASE is exploring involvement with monthly science cafes in VT.

Attendees shared several avenues for collaborating with UVM's Science on Tap, AgroTek Innovation, STEM Ambassadors and Discover Engineering Day.

Michael Metz spoke of attracting a broader scope of TOY, SEG and HOST applicants. By utilizing VASE'S new administrative support (Mary Braun), VASE's membership, and its connections, VASE can grow its marketing, networking, and outreach efforts to expand the accessibility and diversity of its grants and activity statewide.

- Continue VASE's support of the many FIRST robotics teams across the state. Work closely with First Robotics VT and their significant new commitment in 2023 to expand First Robotics
- Establish an informal collaboration with the maker space Generator and its federally funded effort to support maker spaces and STEAM learning in middle and high schools across the state.
- Explore additional focus for VASE's impact
 - o artificial intelligence - VT task force on AI ethics, Generator's Reckless Ideas AI Symposium, ...
 - o liaison directory on the VASE website
 - o sponsor/expand "Science on Tap" (monthly science cafes in VT)

- To spur workforce development in science/ engineering in VT, Michael Metz described plans to
- Meet with Commissioners of Education and Economic Development to explore collaboration with regards to STEM education and increased funding for VASE STEM grants for increased impact across the state.
 - Seek collaboration with Depts of Education and Labor to increase employment in STEM fields by supporting high school graduates seeking to increase
 - o HS dual enrollment in STEM fields
 - o the number/variety of State approved Certificates of Value (COV) in STEM fields
 - o scholarships available from the Curtis Fund /VSAC and their COV grants program supporting postsecondary STEM education

The Curtis Fund is a supporting organization of the Vermont Community Foundation and is the largest private supporter of post-secondary education in Vermont thru its partnership with VSAC. The Curtis Fund COV program was started in late 2020 and has experienced 300% growth in its first two years.

Members, too, noted the need to spur workforce development in science and engineering in VT. Too many skilled in science and engineering leave the state and not enough training is available for teachers at the elementary and middle school levels in STEM education. Members suggest holding a science summer camp for teachers. While available housing is an inhibitor to growth in the job market, more can be done to inspire student and teachers in the sciences. High school graduation rates are high; enrollment in college is not. How can VASE help inspire enduring interests in science and engineering at an early age? What can we learn from the Catamount Commitment to apply to science and engineering education?

Regina Toolin noted that science and STEM education should not be treated as an option in schools. David Bradbury of VTC urges VASE to help rebrand and demystify STEM. Host a STEM open house day and display how students and teachers benefit by science education. Beth Kirkpatrick shared links to the Four Winds Nature Institute and their use of community-based volunteers in biologic nature programs.

Michael Metz and fellow Board directors are developing a fundraising case with research data and stories around STEM education, its impact on Vermont's economic development and the importance of a science savvy community.

- Fundraising begins with the VASE Board and VASE's membership to demonstrate strong support for its programs.
- VASE will also research and apply for grants from foundations with interest in STEM. (Mergens, Tarrant, Hoelh, ACCD ...)
- VASE will engage the general public with a focus on donors that demonstrate an interest in STEM education and/or supporting Vermont's 2022 Science and Technology plan https://static1.squarespace.com/static/5e7a76064770eb76b4ad8456/t/62ab3b1198dec56871f83b2e/1655388953179/68160_VTEpscor+Final_WEB_6.15.pdf
- In the future, VASE will advocate with VTC for increased funding beyond the current 3-year \$30K commitment

Board President, Grace Spatafora invited more of the general membership to participate in committee work (eg. grant reviews). She reviewed the goals for 2023 that will propel VASE to more fully realize its mission:

- administer our grant programs and begin to build and expand on them
- engage more of the VASE membership and grow the Board of Directors
- become recognized as a technical conscience and convener of scientific conversations
- promote computational literacy across the state of VT
- spur workforce development in the sciences and engineering in VT

Overall, VASE has re-energized its mission over the past several years bringing it into the 21st century and serving as a rich resource to the State of Vermont.

Moving forward, members were asked to help-

- a. nominate new VASE members (seeking more representation in terms of geographic locale, stage of professional development, and diversity in area of specialty)*
- b. send nominations for Teacher of the Year (due April 15)*
- c. spread the word about spring SEG and HOST grants (and help review grant requests)*
- d. increase VASE's visibility*
- e. attend the 2023 Fall Annual meeting*

APPENDIX



Summary of current fiscal year

July 1, 2023 =>

Starting balance:		\$22,592
Donations:	2 individuals	\$10,000
	VT Tech Council	<u>\$30,000</u>
12 HOST grants		\$12,830
6 Sm. Equip. grants		\$ 8,470
1 Teacher-of-year		\$ 1,000
Fall meeting		\$ 2,761
Salary		\$ 3,750
Other		\$ 1,975
Current balance:		\$31,806