

# The APS DPB EOD subcommittee

## – Education, Outreach & Diversity

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## Snowmass Community Meeting: AFI Beam Physics and Accelerator Education

presented via Zoom



U.S. DEPARTMENT OF  
**ENERGY**

Office of  
Science

# The American Physical Society & the DPB

**Mission Statement:** *The American Physical Society (APS) is a nonprofit organization working to advance and diffuse the knowledge of physics through research journals, scientific meetings, education, outreach, advocacy, and international activities*

- 2nd largest organization of physicists in the world: > 55,000
- The Physical Review journals belong to APS
- 16 topical Divisions
- Accelerator science and technology is represented by the **Division of the Physics of Beams (DPB)**

## APS Yearly Membership rates:

First-time Members	FREE!
Undergrad Students	\$25/year
Grad Students	\$39/year
Early Career	\$79/year
DPB Membership	\$10/year

## Divisions

[Atomic, Molecular & Optical Physics \(DAMO\)](#)  
[Astrophysics \(DAP\)](#)  
[Biological Physics \(DBIO\)](#)  
[Chemical Physics \(DCP\)](#)  
[Computational Physics \(DCOMP\)](#)  
[Condensed Matter Physics \(DCMP\)](#)  
[Fluid Dynamics \(DFD\)](#)  
[Gravitational Physics \(DGRAV\)](#)  
[Laser Science \(DLS\)](#)  
[Materials Physics \(DMP\)](#)  
[Nuclear Physics \(DNP\)](#)  
[Particles and Fields \(DPF\)](#)  
[Physics of Beams \(DPB\)](#)  
[Plasma Physics \(DPP\)](#)  
[Polymer Physics \(DPOLY\)](#)  
[Quantum Information \(DQI\)](#)



# APS/DPB Education, Outreach & Diversity

## Subcommittee Membership –

Chair:	David Bruhwiler	RadiaSoft	1/20 to 12/22	
Vice-Chair:	Todd Satogata	JLAB / ODU	1/21 to 12/23	
Past Chair:	Pietro Musumeci	UCLA	1/19 to 12/21	rolling off
Members:	Linda Spentzouris	IIT	1/19 to 12/21	rolling off
	Geoffrey Krafft	JLAB	1/20 to 12/22	
	Yannis Papaphilippou	CERN	1/21 to 12/23	
	Chuyu Liu	BNL	1/22 to 12/24	
	David Fritz	SLAC	1/22 to 12/24	
Ex-Officio:	Camille Ginzburg	JLAB	(EC appointee)	
	Steven Lund	MSU & FRIB	(USPAS Director)	



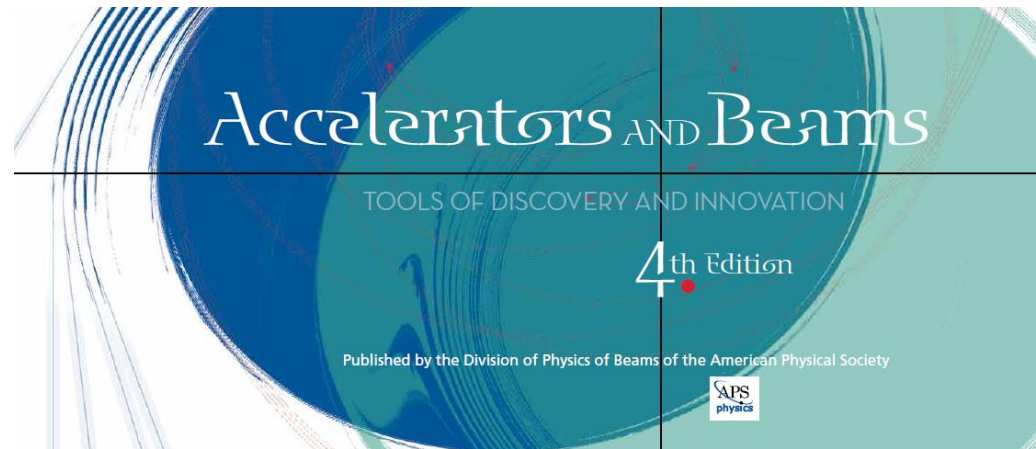
# 2022 plans of the EOD subcommittee

- During 2021, we decided to focus on the development of an updated brochure for the Division of Physics of Beams
- We've gotten started but are not that far along...

- **Breakdown of topics:**

- Energy
- Medicine
- Education
- Science
- Technology (jobs, economy)
- International collaboration
- National Security

The existing brochure is available on APS website:



<https://engage.aps.org/dpb/resources/external-links>

DPB Physics of Beam Brochure



# The Community Engagement Frontier (1)

- Jeroen van Tilborg (LBNL) is the liaison with the Accelerator Frontier
- I am the liaison between CEF and the Computational Frontier
  - Here are a few relevant connections for this topical group –
- **CommF2: Career Pipeline & Development**
  - Sudhir Malik (UPRM), Julie Hogan (Bethel U.),  
Aneliya Karadzhinova-Ferrer (Ruder Boskovic Institute)

- The US has ~600 enrolled PhD students in HEP
- US Postdocs ~200; US undergrads ~1000 (HEP aspirants)
- The HEP worldwide number (without US) is ~6000
  - ➔ ~ 8000 individuals who need HEP relevant training

*Investment in software training is essential for our community!*

# The Community Engagement Frontier (2)

- CommF4: Physics Education

- Randal Ruchti (Notre Dame), Sijbrand de Jong (Radboud), Sudhir Malik (UPRM)

Most important is to scale up software training efforts, with all the HEP facilities and institutions working together towards common materials and approaches

For training, we need a change in attitude. No big science is possible without a trained workforce. People who invest their time in training need to be supported (financially and otherwise) by their institutions and the community. It cannot be done on a voluntary basis – that cannot scale.

<https://iris-hep.org> & <https://hepsoftwarefoundation.org> offer documentation.  
....any feedback regarding how these can be improved in the future?

# The Community Engagement Frontier (3)

- **CommF3: Diversity & Inclusion**

- Mu-Chun Chen (UCI), Yi-Hsuan C. Lin (SNOLAB),  
Carla Bonifazi (UFRJ), Johan S. Bonilla (UC Davis)

- A relevant LOI offers an opportunity to work together:  
“Making the most of our (old) Computing Resources”

[https://www.snowmass21.org/docs/files/summaries/CompF/SNOWMASS21-CompF0\\_CompF0-CommF3\\_CommF0\\_Samuel\\_Meehan-033.pdf](https://www.snowmass21.org/docs/files/summaries/CompF/SNOWMASS21-CompF0_CompF0-CommF3_CommF0_Samuel_Meehan-033.pdf)

- Initially led by Sam Meehan (CERN); it's now a non-profit:
  - Kente Connect ([www.kenteconnect.org](http://www.kenteconnect.org))
  - aims to support digital literacy in Ghana

# The Community Engagement Frontier (4)

- **CommF5: Public Education & Outreach**

- Sarah Demers (Yale), Kathryn Jepsen (SLAC)  
Don Lincoln (FNAL/Notre Dame), Azwinndini Murongo (NMU)

- **CommF7: Environmental & Societal Impacts**

- Véronique Boisvert (URAL), Ken Bloom (UNL)  
Mike Headley (SDSU/SURF/SDSTA)

- A relevant LOI offers an opportunity to work together:

“Ethical implications for computational research and the roles of scientists”

[https://www.snowmass21.org/docs/files/summaries/CommF/SNOWMASS21-CommF6\\_CommF3-CompF3\\_CompF6\\_brian\\_nord-054.pdf](https://www.snowmass21.org/docs/files/summaries/CommF/SNOWMASS21-CommF6_CommF3-CompF3_CompF6_brian_nord-054.pdf)



**Thanks for your time and attention!**

**Feedback & Questions ...?**

