

# DPF Core Principles and Community Guidelines (CP&CG)

- By participating in this meeting, you agree to adhere to the CP&CG
  - **Respect and support community members**
  - **Commit to constructive dialogue and take initiative**
  - Details of what this means, expectations for behavior, and accountability procedures are provided in the CP&CG document linked at:  
<https://snowmass21.org/cpcg/start>
- Everyone is invited to invoke the CP&CG as needed to encourage constructive and supportive collaboration
- The conveners of this meeting are your recommended first point of contact for reports of CP&CG violations occurring here
  - The conveners have received training in the CP&CG and how to handle reports
  - The CP&CG accountability procedure is designed to encourage early intervention and is flexible enough to appropriately address issues ranging from the discourteous to the egregious
  - Please do not hesitate to contact us!
- Snowmass is most successful when everyone's voice can be heard!

## COMMUNITY ENGAGEMENT FRONTIER

### Frontier Conveners

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### Description

The Community Engagement Frontier consists of several topical groups, namely applications, career pipeline and development, diversity and inclusion, physics education, public education and outreach, and public policy and government engagement. The objective is to improve and sustain strategic engagements with our communities in order to draw support for and strengthen the field of particle physics, while playing key roles in serving those communities.

These engagements take well-coordinated efforts in many areas where the communities of experts and non-experts can understand and communicate our field's value, maximize its impact on global socioeconomic development, and open its doors to broader participation. The efforts aim to support and encourage practical applications of research in particle physics and technology transfers to industries, career development and job opportunities for graduates and young physicists, encouragement and inclusion of diverse physicists reflecting the diversity in our communities, improvement in physics education to produce talented and qualified students, outreach to motivate pupils and students, and to communicate the essence and impact of physics research, and finally engagement with governments and policymakers in matters of education and research for continued funding supports.

### Topical groups

- [CommF1: Applications & Industry](#)
- [CommF2: Career Pipeline & Development](#)
- [CommF3: Diversity & Inclusion](#)
- [CommF4: Physics Education](#)
- [CommF5: Public Education & Outreach](#)
- [CommF6: Public Policy and Government Engagement](#)

# LOIs in CEF

- **73 LOIs — Sort, organize and condense 73 LOIs into White Paper Work Groups (WPWG)**
  - To be re-organized, re-grouped and condensed into a smaller set of White Papers
  - Encouraged authors of related / merged LOIs to work towards common White Papers
  - Active solicitations of regular reports on the progress on White Papers in each the relevant Topical groups
  - Interim reviews of White Papers

## Submitted LOI

Letters of Intent submitted to the Community Engagement Frontier (as primary frontier) [shown in this link](#). Here is the list of submitted LOIs that include CommF as primary or secondary topic. First index before “/” corresponds to the primary frontier used for the submission.

[click here to view Lols submitted to this frontier](#) ↗

### 99 LoIs submitted to CommF

Nr	LOI PDF file	Date
1	<a href="#">AF/SNOWMASS21-AF0 AF0-CommF2 CommF0 Stancari-113.pdf</a>	29/08/2020
2	<a href="#">AF/SNOWMASS21-AF1 AF0-CommF4 CommF2 John Jowett-027.pdf</a>	18/08/2020
3	<a href="#">AF/SNOWMASS21-AF1 AF6-CommF0 CommF0 Thomas-248.pdf</a>	01/09/2020
4	<a href="#">AF/SNOWMASS21-AF7 AF6-CommF1 CommF0 Nanni-127.pdf</a>	30/08/2020
5	<a href="#">CommF/SNOWMASS21-CommF0 CommF0-067.pdf</a>	01/09/2020
6	<a href="#">CommF/SNOWMASS21-CommF0 CommF0-068.pdf</a>	01/09/2020
7	<a href="#">CommF/SNOWMASS21-CommF0 CommF0-069.pdf</a>	01/09/2020
8	<a href="#">CommF/SNOWMASS21-CommF0 CommF0-CF0 CF0-041.pdf</a>	31/08/2020
9	<a href="#">CommF/SNOWMASS21-CommF0 CommF4-CompF0 CompF7 DanielSKatz-038.pdf</a>	31/08/2020
10	<a href="#">CommF/SNOWMASS21-CommF1 CommF0-059.pdf</a>	01/09/2020
11	<a href="#">CommF/SNOWMASS21-CommF1 CommF0-AF0 AF0 Fujio Naito-046.pdf</a>	31/08/2020
12	<a href="#">CommF/SNOWMASS21-CommF1 CommF0-AF0 AF1 Bruhwiler-066.pdf</a>	01/09/2020
13	<a href="#">CommF/SNOWMASS21-CommF1 CommF0-AF0 AF7 Suarez-017.pdf</a>	27/08/2020
14	<a href="#">CommF/SNOWMASS21-CommF1 CommF0-AF6 AF7-IF2 IF9-CompF3 CompF5-047.pdf</a>	31/08/2020
15	<a href="#">CommF/SNOWMASS21-CommF1 CommF0-AF7 AF0-020.pdf</a>	30/08/2020
16	<a href="#">CommF/SNOWMASS21-CommF1 CommF0 Alan Todd-019.pdf</a>	29/08/2020
17	<a href="#">CommF/SNOWMASS21-CommF1 CommF0 Field Viewers Inc-072.pdf</a>	03/09/2020 <b>late</b>
18	<a href="#">CommF/SNOWMASS21-CommF1 CommF0 Field Viewers inc-071.pdf</a>	03/09/2020 <b>late</b>
19	<a href="#">CommF/SNOWMASS21-CommF1 CommF0 Kazuhiko Mase-024.pdf</a>	31/08/2020
20	<a href="#">CommF/SNOWMASS21-CommF1 CommF0 Masanori Matsuoka-033.pdf</a>	31/08/2020
21	<a href="#">CommF/SNOWMASS21-CommF1 CommF2-032.pdf</a>	31/08/2020
22	<a href="#">CommF/SNOWMASS21-CommF1 CommF2 LMatias-034.pdf</a>	31/08/2020

# Applications & Industry

- **Several LOIs to be organized in these topics**
  - Tech transfers from national lab perspective
  - Industry and vector developments for HEP labs
  - Joint workshop with Computation Frontier
  - FLASH radiotherapy
  - Launching spinoff companies from national labs
  - Engaging with big business
- **Not all the relevant topics covered in the LOI received**
  - Plan to widen the TG scope through outreach to other TGs, Frontiers and community at large

# Career Pipeline & Development

- [https://docs.google.com/spreadsheets/d/17P\\_HwRTM\\_5HH0NgV722GW2EipvS3CGZ37yBdGVzT8bc/edit?usp=sharing](https://docs.google.com/spreadsheets/d/17P_HwRTM_5HH0NgV722GW2EipvS3CGZ37yBdGVzT8bc/edit?usp=sharing)
- **Categories**
  - **Enhancing HEP research in 4-yr institutions and community colleges**
  - **Tackling Diversity and Inclusiveness in HEP**
  - **Retuning Physics Education and Early introduction of HEP in academic curriculum**
  - **Retention and reversing the brain drain in HEP**
  - **Facilitating transition to Industry Career**
  - **Enabling science and careers via the software, data and computing in HEP**
  - **Access to accelerators and instrumentation knowlegde for HEP and related careers**

# Diversity & Inclusion

- **Within D&I as Primary**

- Accessibility
- Funding Agency Recommendations
- Climate of the Field
- Educational Resources for the Field
- Lifestyle and Personal Wellness
- Under-represented/Marginalized Communities
- Recruitment, Evaluation, and Recognition
- Societal Impacts of Science Projects → New Topical Group

- ***Led by other TGs***

- Building the Pipeline
- Societal Impacts
- Education & outreach to under-represented communities

- **Un-grouped, to be redirected**

- one

# Physics Education

- **Five general grouping of LOIs**

- Career and Education
- General education K12 and up
- Particle physics specific education
- Global software issues and HEP
- Public Education Connections

- **Ungrouped or to be re-directed**

- Mostly related to international education & outreach

# Public Education & Outreach

- **Early Career long-term organization**
  - Public Education and Engagement is on the radar in terms of important future work for early career physicists.
- **Education and Outreach to under-represented communities**
  - Multiple Lols that are joint with D&I, focus on ethics and justice
- **Facilitating access to HEP data for educational purposes**
  - Particle physics playground (python!), network of detectors at schools (2), dedicated shared database with curriculum/activities/ideas
- **Expanding FNAL's international outreach reach through European Networks**
- **Expanding to non-traditional outlets**
  - Music and cultural festivals, integrated arts research



# Public Policy & Government Engagement

- **Group organized around 4 broad topics**

- HEP congressional advocacy (funding)
  - No LOI
- HEP congressional advocacy (non-funding)
- HEP non-congressional advocacy
- Public policy and government engagement training and education
  - No LOIs

- **Other LOIs un-grouped, to be re-directed to other TGs**

# CEF Breakout Sessions: Tuesday

- CEF Intro (this session)

- 11:00-11:30

- #118: Cross-community Mobility in Science

- 13:00-14:00

Rectangular Map

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Tue 06/10

11:00	1. EF Intro (#cpm_intro)	2. NF Intro	3. CF Intro	4. AF Break and Chat	5. RF Acceleration Probes of Light Dark Matter (keV-...)	6. TF EFTs for new physics sensitivities	7. UF Break and Chat	8. CE Intro: CEF...	9. IF Intro and LOI	10. CompF Intro and LOIs	92. Non-perturbative QCD dynamics at colliders	130. Enabling technology for low mass and ps timing...	136. Heavier particle dark matter > 10 GeV	72. Dark Energy, Origins (Inflation and Light ...)	Zoom 15 Break	Zoom 16 Break	145. QCD phase...	Zoom 17 Break...	Zoom 18 Break	171. AF2 organiza with contribu Zoom 19	175. Acceleration research centers and test facilities	179. AF7_Target and Sources organization with contribu		
12:00	129. Higgs Factories Marc Ross, Meenaks	109. Determining the Masses and Nature of Neutrinos. Andre de Gouvea, Carlo Giunti, Louis...	77. Quantum Sensors for Wave and Particle... Break and Chat	Zoom 4	Zoom 5 Break and Chat	125. Zoom 6 Break	Zoom 7	Zoom 8	Zoom 9	Zoom 10 Break and Chat	Zoom 11 Br...	131. Physics requirements for HEP colliders	Zoom 13 Break and C...	139. Testing LambdaCDM cosmology	Zoom 15	Zoom 16	Zoom 17 Break	Zoom 18	Zoom 19 Break and C...	Zoom 20 Break and C...	Zoom 21 Break and Chat			
13:00	Zoom 1 Break and Chat	Zoom 2 Break	102. The Roles of QIS in HEP	126. BSM: direct and indirect searches	108. Acceleration Probes of Lig... Break and Chat	Zoom 6	122. Capabilities needed to execute underground experiments in a broad range of research	118. Cross-community Mobility in Science	69. Instrumentation for Future Colliders	Zoom 10	124. Lattice Gauge Theory for High Energy Physics	Zoom 12	74. Atomic to Cosmic: Wave Dark Matter and Beyond	Zoom 14 Break and C...	149. Organizing the Early Universe origins, relics, and B...	146. Small Projects to En...	61. Energy and Power and Time structure goals for Neutrino Frontier programs	172. Near-term applications of ultimate beams and colliders	176. Grand challenge of ultimate high energy colliders	180. SRF and magnets for High...				
14:00	127. Searches for dark sectors. Bryce Littlejohn, Caterina Doglioni, Eric Prebly, Ian Shoemaker	71. Instrumentation for Future Colliders	Zoom 3	Zoom 4	Zoom 5	Zoom 6	Zoom 7	Zoom 8	Zoom 9	Zoom 10	Zoom 11	70. Instrumentation for Future Colliders	Zoom 13	68. Computing in Collider Physics	Break and Chat	142. Analysis techniques for joint cosmological constraints	132. Collider Data Analysis Strategies	80. Computing Requirements & Opportunities for the Energy Frontier	Zoom 18 Break and Chat	Zoom 19 Break and C...	Zoom 20 Br...	Zoom 21 Break and Chat		
15:00	Zoom 1	97. Neutrino as Probes of Standard and BSM ...	Zoom 3	101. Higgs as a probe of new physics	29. Low-energy precision experiments	Zoom 6	141. Gravitational wave ...	Zoom 7	Zoom 8	51. Requirements for low background and underground detectors	123. Data Handling and AI/ML	40. Exotic Hadron Spectroscopy and Interpretation	64. Computing Needs of the Accelerator Frontier	Zoom 12	Zoom 13	Zoom 14	143. Simulations for joint cosmological constraints	Zoom 16	Zoom 17 Break...	Zoom 18	Zoom 19	174. AF1 organiza with contribu	177. AF7_rf organiza with c...	183. Intermediate lepton collision energies between 500 GeV and 3 T...
16:00																								

# CEF Breakout Sessions: Wednesday

- Community Engagement Across the Frontiers

- 11:00-12:15 →

- #119: HEP and Accelerator Workforce, Careers, and Training

- 13:00-14:30 →

- #57: Connection with Industry

- 14:00-15:00 →

- CEF Planning

- 15:00-16:00 →

Wed 07/10

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11:00	Plenary: Community Engagement Across the Frontiers (#cpm_plenary_engagement_across_frontiers) Breese Quinn																
12:00	Zoom Webinar																
13:00	Break and chat Zoom 1	Break 2 Zoom 2	150. Dark matter complementarity #cpm_topic	190. Discussion of accelerator project i...	Break 5 Zoom 5	151. Dark Energy Strategy Zoom 6	Break 7 Zoom 7	Break 8 Zoom 8	Break 9 Zoom 9	Break 10 Zoom 10	Break 11 Zoom 11	Break 12 Zoom 12	Break 13 Zoom 13	Break 14 Zoom 14	Break 19 Zoom 19	Break 20 Zoom 20	Zoom 21 Break
14:00	26. Energy Frontier discovery machines Dmitri Denisov, Ian Shipsey...	110. Baryon and Lepton Number Violating processes Zoom 2	75. Cosmic Probes of Dark Matter Physics - #cpm_topic Laura Newburgh, Lindley ...	44. New accelerator concepts for high intensity beams Zoom 4	41. Anomalies in Flavor Physics Angelo Di Canto, Ethan...	Zoom 6 Break and Chat Zoom 6	115. Neutrinos, dark matter, and underground facilities Zoom 7	Zoom 8	119. HEP and Accelerator Workforce, Careers, and Training Dr David Ruhwiler, Steve ...	84. Computing Requirements & Opportunities in Theory Zoom 10	28. Theory Challenges in Precision Measurements Alexey Petrov, Doreen Wackerth...	99. Advances in Event Generation and Detector Simulation Zoom 12	148. Future gravitational wave facilities Bangalore Sathy...	137. High energy and ultrahigh energy neutrino experiment Zoom 14	184. Sources and targets for future accelerators Frederique...	186. High field (Schwinger) and Machine Detector Interface... Zoom 21	189. AF7_magn organization with contributors Alexand...
15:00	201. EF Planning (#cpm_ef_p... Zoom 1	202. NF Planning Elizabeth Worcester, Kate ...	203. CF Planning Zoom 3	204. AF Planning Steve Gourlay, Tor R...	205. RF Planning Zoom 5	206. TF Planning Aida El-Khadra, Usaba C...	207. UF Planning Jeter Hall, K...	208. CEF Planning Breese Quinn, Ketev...	209. IF Planning Jinlong Zhang, Petra Me...	210. CompF Planning Zoom 10	Zoom 11	Zoom 12	144. New facilities for dark energy Brenna Flaugh...	138. Synergy of astroparticle physics and collider physics Zoom 13	185. High power proton b... Zoom 19	188. Plasma acc for fi... Zoom 20	Zoom 21 Break and Chat