

Activities of the University Fusion Association

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Princeton University / PPPL

Presented at the Fusion Power Associates meeting
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UFA is a registered non-profit organization dedicated to the advocacy of university fusion research and education.

The UFA membership and governance is strong and active

President: Dylan Brennan (Princeton University)
Vice President: Uri Shumlak (University of Washington)

Executive Committee:

Paul Bellan (Caltech)
Michael Brown (Swarthmore)
Troy Carter (University of California Los Angeles)
Richard Ellis (University of Maryland)
Martin Greenwald (M.I.T.)

William Heidbrink (University of California Irvine)
Michael Mael (Columbia)
David Maurer (Auburn University) *
Francois Waelbroeck (University of Texas)
Harold Weitzner (New York University)

Secretary/Treasurer: Brian Nelson (University of Washington)
Past President: David Anderson (University of Wisconsin-Madison)

Newly Elected Members for 2015 (replacing members finishing terms 1/2015):
Scott Parker (University of Colorado)
David E. Newman (University of Alaska-Fairbanks)
Thomas R. Jarboe (University of Washington)
Mohamed A. Abdou (UCLA)

Current membership approximately 200, steady in 2014
Almost entirely faculty and researchers at over 60 institutions nation wide

Annual activities of the UFA are numerous and diverse in advocacy of university fusion programs

Activities primarily include representation at events, hosted events, white papers, and community communications. Coordinated by frequent ExComm communication.

Highlights of 2014 Meetings and Outreach:

- Annual APS/DPP meeting
- Fusion Day – one pager
- Magnetic Fusion Program Leadership
 - Several meetings; Visits to Congress, OMB, DOE
 - White paper: “Perspectives on Ten-Year Planning for the Fusion Energy Sciences Program”
- FESAC contributions “The Role of Universities in Discovery Science in the FES Program”
- Contribution to FESAC Work Force Development subcommittee based on 2013 survey.
 - Ongoing effort to track trends over recent years: identify significant impacts, compliment FES effort
- Fusion Power Associates Meeting

Many of the issues raised at these and related events are reviewed by the UFA ExComm. Contributed papers and/or responses are commented on (often at length) by the ExComm and UFA responses are voted on by the ExComm for UFA endorsement.

Annual UFA General Meeting at the APS-DPP open to all and strongly attended beyond UFA membership

Presents an opportunity for a community wide Town Hall format with Q/A interaction

Presentations over the past two years:

2014

Mark Koepke (West Virginia U.), FESAC Chair “2014 Activities of the Fusion Energy Sciences Advisory Committee (FESAC)”

Ed Synakowski (DOE) keynote presentation “FES Considerations for Strategic Planning”

Steve Gitomer (NSF) and Slava Lukin (NSF), “NSF’s Plasma Physics Program”.

2013

E. Synakowski (DOE) “Update on the Fusion Energy Sciences Program”

D. Meade (Fusion Innovation Research and Energy): “Framework for a Roadmap to Magnetic Fusion Energy: Status Report”

M. Mauel: “Building a Consensus in the Formation of Science Strategy”

The pdf documents for the talks are pertinent to the proceedings of this FPA meeting, and are available on our site at universityfusion.org and on the FIRE website fire.pppl.gov.

UFA White Paper Contribution to FESAC Made Three Points

1) Opportunities for Innovation Leverage University Funding

- Universities create valuable national partnerships between DOE/Federal and state and private institutions, leveraging significant resources to our research.

2) 10 Year Plan Must Come From Community-Wide Effort

- We must engage in a process with experts in all aspects
- Part of the US plan should look beyond ITER and develop the science and technology to make fusion energy economically viable.

3) To revitalize university engagement, opportunities for universities should be explicit and exciting in the 10-year plan.

- Several ideas were presented How we can restore long-term stability to university funding in fusion science.
- One idea: **a new initiative: Re-Launch the FESRCs**
Reasonable number of Fusion Energy Science Research Centers (FESRCs) would be created each year.
Successful model elsewhere (Energy Frontier Research Centers) and in recent past in FES

Give universities an opportunity and they will come up with innovations that contribute strongly to the US program objectives.

STABILITY is extremely important in university funding

Our university programs in fusion science provide critical contributions to the mission

- education
- high quality research
- leadership
- innovation
- advocacy

The size of university programs change on long timescales, especially in the incremental direction. Instantiation of any new university faculty position or program is difficult at best.

The stability of funding for fusion research is Key to the sustainment of a robust university community

- research programs are large, long term investments by university, private or state
- tenure track positions are difficult to establish and invaluable to this community
- partnership based on trust
- recent abrupt cuts are having a devastating effect at universities
 - number of smaller research programs have been shuttered
- UFA is concerned about the long term future of our university fusion education
 - enduring impact on workforce provision / university footprint

Universities are an essential part of the US fusion program, need STABLE support!