

Scientific and Technological Activities (STAC) 2018 Mid-Year Report to the AMS Council

Bruce Telfeyan, STAC Commissioner
David Stensrud, STAC Past Commissioner
Genene Fisher, STAC Incoming Commissioner

Photo from STAC Annual Meeting, Jan 7, 2018, Austin, TX



Front row: Paul Bieringer, Alex McCombs, Mohan Ramamurthy, Nazila Merati, Bruce Telfeyan, Genene Fisher, Ryan Fogt, Amy Butler, Kristie Ebi, Zhuo Wang, Dev Niyogi

Second row: Scott Collis, Jennifer Griswold, Sara Tucker, Cecilia Miner, Kathy Sherman-Morris, Curtis Alexander, Bruce Baker, Jeffrey Mirocha, Woody Roberts, Dave Stensrud, Andrew Molthan, Liz Satterfield

Third row: Eric Bruning, John Balbus, James Campbell, Jeff Collett, Ali Tokay, Rich Behnke, Kenneth Holmlund, John Eylander, Clark Evans, Tom Galarneau, Daniel Nietfeld, Mitch Goldberg, Phillippe Tissot

1. Introduction:

STAC is responsible to the Society and the Council for advancing science and technology by promoting the open exchange of ideas, strengthening our disciplinary communities, enhancing collaboration and dialog among these communities, embracing diversity, celebrating and fostering excellence, and cultivating the next generation of scientists and leaders. STAC has continued to carry out these primary roles by planning conferences, symposiums, maintaining an active membership and web site (both of which are updated at least annually); recognizing outstanding members via Society Award and Fellow nominations; informing the AMS Council of concerns and suggestions for improvement; and providing a brief summary to the Council/Commissioners after each conference, symposium, or other meeting(s).

2. Items for possible consideration by the AMS Council:

- a. STAC is supportive of a review the existing AMS Student Travel Grant rules that exclude the awards to students who are presenting at a conference or symposium. A disconnect exists between that policy and the rules for the \$1,500 available for conference and symposium program chair funds (reference

paragraph 10). Any portions of those funds used for student travel are restricted to students who are presenting (student presenter travel allowance).

- The rationale for the AMS Student Travel Grant restriction is most likely based on the assumption that students who present can get funding from their professor's research grants, but this is not always the case.
- The Student Travel Grant guidelines were set by the Executive Committee at the time of origination. STAC suggests that perhaps it is time to revisit those guidelines.
- A reasonable option might allow a travel grant to the extent that it would cover a shortfall that a deserving student (who is presenting) has from their sponsoring professor.

b. STAC fully supports and appreciates efforts by the AMS Staff to develop and put in place a more effective management process for the [AMS Statements](#) program. Perhaps the AMS Staff Statement contact could create a tracking tool (a spreadsheet) that could be available to all Commissioners. The tool might include:

- Titles of the statements
- Owning Commission and Board/Committee
- Approval date of statement
- Expiration date of statement
- Date when revision process should commence
- Chair of drafting committee (past, and current when applicable)

3. Conferences and Symposiums:

As a reminder, STAC consists of [thirty science committees](#) and [six inter-disciplinary boards](#). Fifteen STAC-led conferences and six special symposia were held in Austin during the 2018 Annual Meeting. Ten additional conferences have taken place since then during 2018 at various locations. Here is a listing of all the STAC conferences and symposiums through July 2018 (hyperlinks lead to the conference/symposium summaries):

- a. [17th Conference on Artificial Intelligence Applications to Environmental Science](#)
- b. [9th Session on Environment and Health](#)
- c. [Special Symposium on Impact-Based Decision Support Services \(WAF\)](#)
- d. [32nd Conference on Hydrology](#)
- e. [20th Conference on Atmospheric Chemistry](#)
- f. [12th International Conference on Southern Hemisphere Meteorology and Oceanography \(ICSHMO\)](#)
- g. [13th Symposium on Societal Applications: Policy, Research, and Practice](#)
- h. [15th Conference on Space Weather](#)
- i. [34th Annual EIPT Conferences](#)
- j. [20th Conference on Air Pollution Meteorology](#)
- k. 31st Climate Variability and Change
- l. 14th Annual Symposium on New Generation Operational Environmental Satellite Systems

- m. [Eighth Conference on the Meteorological Application of Lightning Data](#)
- n. 25th Conference on Probability and Statistics
- o. 22nd Conference on Satellite Meteorology and Oceanography
- p. 19th Symposium on Meteorological Observation and Instrumentation
- q. 2nd Symposium on High Performance Computing for Weather, Water, and Climate
- r. [Special Symposium on Meteorological Observations and Instrumentation](#)
- s. 16th Symposium on the Coastal Environment
- t. [Eighth Conference on Transition of Research to Operations](#)
- u. Sixth Aviation, Range, and Aerospace Meteorology Special Symposium
- v. [33rd Conference on Hurricanes and Tropical Meteorology](#)
- w. 33rd Conference on Agricultural and Forest Meteorology
- x. Fourth Conference on Biogeosciences
- y. [29th Conference on Weather Analysis and Forecasting](#)
- z. [25th Conference on Numerical Weather prediction](#)
- aa. 18th Conference on Mountain Meteorology
- bb. 15th Conference on Cloud Physics
- cc. 15th Conference on Atmospheric Radiation
- dd. [21st Conference on Air-Sea Interaction](#)
- ee. 23rd Symposium on Boundary Layers and Turbulence
- ff. 14th Symposium on the Urban Environment

4. Departing STAC Board and Committee Chairs:

We extend special thanks to these eight individuals who are completing their service as board or committee chairs within STAC. They have all served there sector of our science voluntarily and provided leadership and proper direction to each of their members. They are listed here with their years of service as the Chair:

- Mohan Ramamurthy, Board on Data Stewardship, 2012 - 2019
- Christine Chiu, Committee on Atmospheric Radiation, 2015 - 2019
- Jennifer Small Griswold, Committee on Cloud Physics, 2016 - 2019
- Thomas Galarneau, Committee on Mesoscale Processes, 2016 - 2019
- Masataka Murakami, Committee on Planned and Inadvertent Weather Modification, 2013 - 2019
- Kenneth Holmlund (Co-Chair), Committee on Satellite Meteorology, Oceanography, and Climatology, 2018 - 2019
- Mitch Goldberg (Co-Chair), Committee on Satellite Meteorology, Oceanography, and Climatology, 2018 - 2019
- Cecilia Miner, Committee on Aviation, Range, and Aerospace Meteorology, 2014 - 2019

5. Departing Commissioner and New Incoming Commissioner:

a. Special thanks to Dave Stensrud as he completes six years as a STAC Commissioner (2013 – 2019). Dave can take great pride for leading STAC while he transitioned from the government to the academic sector and took on the Department Chair position at Penn State University. He worked with the AMS Council and

leadership to loosen some bureaucratic rules on adding new members to STAC boards and committees. He also instituted STAC level awards which enabled the 36 boards and committees to recognize outstanding contributors in the sector of the science on a biennial basis.

b. Welcome to Ankur Desai as he joins STAC as the new Incoming Commissioner in January 2019.

6. STAC Board and Committee Awards:

This was the first year for the newly authorized STAC-level awards in accordance with the terms of reference approved in 2016 by the AMS Council:

<https://www.ametsoc.org/stac/index.cfm/stac-terms-of-reference/stac-terms-of-reference-for-awards1/> Ten STAC boards and committees took advantage of this

biannual opportunity and their nominations were approved by the STAC

Commissioners. The awards consist of presentation of a certificate, generally at the next B/C conference with appropriate recognition to include (when appropriate) an invited talk by the awardee. The next call for nominations for STAC Awards will be issued in January 2019 with nominations due by October 2019.

Here are the STAC-level awards for 2018:

- STAC Outstanding Service Award:
Magdalena Anguelova on behalf of the **AMS Committee on Air-Sea Interaction**
Citation: “*For her tireless and enthusiastic commitment to serving and advancing the air-sea interaction community*”
- STAC Distinguished Scientific/Technological Accomplishment Award:
Vladimir Krasnopolsky on behalf of the **AMS Committee on Artificial Intelligence Applications to Environmental Science**
Citation: “*For his contributions to advancing the application of artificial neural networks to earth science problems and in particular emulations of complex multidimensional mappings*”
- STAC Outstanding Service Award:
Jiwen Fan on behalf of the **AMS Committee on Atmospheric Chemistry**
Citation: “*For outstanding service to the AMS Atmospheric Chemistry Committee and for raising the stature of atmospheric chemistry within AMS*”
- STAC Outstanding Service Award:
Wendy Marie Thomas on behalf of the **AMS Board on Environment and Health**
Citation: “*For her visionary and tireless efforts to establish the AMS Board on Environment and Health, and securing a strong linkage of the AMS to Health Awareness Issues*”
- Distinguished Scientific/Technological Accomplishment and Outstanding Service Award

Thomas M. Whittaker on behalf of the **AMS Board on Environmental Information Processing Technologies**

Citation: “*In recognition of outstanding and sustained contributions to atmospheric sciences and technology, and outstanding service to EIPT and the AMS*”

- STAC Outstanding Early Career Award
Justin R. Minder on behalf of the **AMS Committee on Mountain Meteorology**
Citation: “*For advancing our understanding of orographic precipitation and mountain snowpack in the current and warmer climates*”
- STAC Outstanding Service Award:
Robert P. McCoy on behalf of the **AMS Committee on Space Weather**
Citation: “*For his pioneering work in establishing the Space Weather Science and Technology Committee and integrating space weather into the AMS*”
- STAC Distinguished Scientific Accomplishment Award
Chidong Zhang on behalf of the **AMS Committee on Tropical Meteorology and Tropical Cyclones**
Citation: “*For his contribution to the large-scale circulation, atmospheric convection, and air-sea interaction in the tropics, including leadership in the international field program DYNAMO/CINDY2011*”
- STAC Outstanding Early Career Award
Curtis Raymond Alexander on behalf of the **AMS Committee on Weather Analysis and Forecasting**
Citation: “*For leading the research organization that created NOAA’s hourly-updating, radar-initialized, storm-resolving High-Resolution Rapid Refresh (HRRR) weather model*”
- STAC Outstanding Service Award
Ronald L. Holle on behalf of the **AMS Committee on Atmospheric Electricity**
Citation: “*For sustained contributions as a leading voice in lightning safety through research into lightning fatalities, application of lightning datasets, and service in the development and promotion of policies and best practices that reduce lightning casualties*”

7. STAC Best Practices:

The [STAC Best Practices Document](#) is in its fourth year of existence and we continue to update and expand it. We combined our past experiences with those of other successful STAC committees and created a living document that helps STAC board and committee Chairs and members. Its main purpose is aid STAC volunteers to understand their responsibilities and what they can do to help build their science community. We mention this document every chance we get and it continues to have a very positive impact. The vast majority of STAC members want to make a difference,

but some simply do not know how to contribute in the most effective ways. This helps them find their direction to be fully involved.

- STAC Commissioners are asking that B/C Chairs give stronger consideration to having a Vice-Chair than had previously been the case. This increased emphasis is due to the reality of the workload of serving as a chair in addition to full-time professional duties. Many Chairs need a backup to assist with matters such as recruiting new members, planning conferences, chairing AMS statement drafting committees, keeping the B/C website updated, transitioning to a new Chair, and numerous other duties. A Vice-Chair can be exceedingly beneficial in ensuring that important efforts are completed and also serve as a backup contact point for the Commissioners. Note: twenty of the thirty-six boards and committees now have a Vice-Chair.

8. Named Sessions: STAC has played an increasingly larger role with named sessions at conferences and symposiums. Named sessions are discussed in The Guidelines for Society and Commission Awards and described as follows:

"A named session honoring an individual may be held within an existing specialty conference or symposium on the recommendation of the STAC Commissioner and approval by the Executive Committee. Except for extraordinary circumstances, there should be a limit of two special sessions per specialty conference."

In the past, named sessions were uncommon and not frequently used. In recent years, STAC has been highlighting them as a way to recognize outstanding members of the various science communities, especially as STAC Commission Awards (previously) could not be used to do this. Our hunch is that named sessions will continue to be used by certain committees who are more proactive in recognizing their community members and that this will slowly spread to other committees. Thus, named sessions are getting increased attention and are now used more frequently.

The named session requires a [Proposal for Named Session](#) form submitted to the STAC Commissioner who then endorses (if appropriate) and forwards the nomination to the AMS Executive Committee for approval.

During 2018, five named sessions have either occurred or will occur at STAC conferences/symposia, all have been approved by the Executive Committee. They are as follows:

Conference	Honoree	Theme	Conference Location, Year
Mountain Meteorology	James Steenburgh	Orographic Precipitation	Sante Fe, NM, 2018
Climate Variability and Change	Piers Sellers	Innovations in Earth Observations	Austin, TX, 2018
Climate Variability and Change	Jay Fein	The Legacy of Jay Fen	Austin, TX, 2018

33rd Conference on Hurricanes and Tropical Meteorology	Bill Gray	Tropical cyclones. Title: "Bill Gray Session: Up moist, down dry"	Ponte Vedra Beach, FL, April 16-20, 2018
38th Conference on Radar Meteorology	David Atlas, Roger Lhermitte, and Edwin Kessler	A tribute to the science and engineering contributions as well as the lives of Atlas, Lhermitte, and Kessler	Chicago, IL, Aug 2017
23rd Conference on Applied Climatology	Kelly Redmond	Kelly Redmond: Observations of an Extreme Climatologist	Asheville, NC, June 2017

9. Named Symposiums:

STAC passed along three proposed named symposia for the 2020 Annual Meeting to the AMS Executive Committee (via Keith Seitter). Refer to the [August 2018 STAC Report to the AMS Council](#) for specific information on these nominations.

In terms of background information, the Named Symposium is a higher and more distinctive level of recognition than the Named Session. It is normally a one-day event comprised of three or four sessions (it can have a poster session in addition to oral presentations). It requires the full 18-month planning time-frame accorded to a specialty conference. Nominations ([Proposal for Named Symposium](#)) are due to the STAC Commissioner by May 1 of the year prior to the next Annual Meeting, or roughly 19 months before the proposed event.

10. STAC Board/Committee (B/C) Teleconferences: The two STAC B/C Chair teleconferences have been held in 2018

- The minutes to the 29 June call are at this link:

<https://www.ametsoc.org/index.cfm/stac/news-reports/monthly-stac-newsletter/minutes-for-stac-chair-teleconference-29-june-2018/>

- The minutes to the 17 Oct call are at this link:

<https://www.ametsoc.org/index.cfm/stac/news-reports/monthly-stac-newsletter/stac-chair-teleconference-17-oct-2018/>

11. STAC Support to the Editor of the *Glossary of Meteorology (GoM)*:

The *GoM* continues to be a much-used tool for our Society and with our global community. STAC Boards and Committees are actively involved in supporting the *GoM* by providing expert input on requests for new or updated glossary terms. Ward Seguin works closely with STAC Chairs as requests for new or revised terms need attention. A new submission form for updates to the Glossary has been fielded

(<https://www.ametsoc.org/index.cfm/ams/publications/glossary-of-meteorology/add-change-or-update-a-glossary-term/>) which should streamline the

entire process. For 2018 through December 10th, Ward reports that he received 48 suggestions for either revisions or new additions

- There were 31 existing term revision suggestions received in 2018
- There were 17 new term suggestions received in 2018.
- There were two hold-over suggestions from 2017. One was accepted and the Glossary has been updated for that term.
- There were 28 revised terms added to the Glossary
- There were 11 new terms added to the Glossary
- There are currently 8 terms still undergoing review.

12. Request for Meeting Funds (Program Chair Funds):

The Program Chair of each AMS sponsored conference or symposium can request up to \$1,500 to support student awards, student presenter travel allowance, abstract fees for guest speakers, invited speaker travel support, and special activities. A quick look at the requests indicates that the most common use of the program chair funds is for student awards which can be up to a maximum of \$200 per award, followed by invited speaker abstract awards. STAC handles these fund requests for all AMS conferences whether within STAC or from other Commissions (as per agreement through the AMS Meetings Coordinator). Also by arrangement with Claudia Gorski's staff, routine requests are approved by the AMS Meetings Coordinator while those requests requiring closer examination are reviewed by the STAC Commissioner.

13. STAC Newsletter:

The STAC Newsletter (now a bi-monthly effort) has continued to be a success as it keeps the STAC members better informed. The periodic newsletters are also sent to all 468 STAC members, the Council, Commissioners, and AMS Staff through the AMS Community. Refer to: <https://www.ametsoc.org/stac/index.cfm/news-reports/monthly-stac-newsletter/>

14. STAC and the AMS Community:

STAC makes full use of the AMS Community with two separate Community pages. One is for the STAC Board and Committee Chairs and Vice-Chairs and the second includes all 468 STAC member-volunteers.

15. Membership Breakdown of STAC Boards and Committees:

The update for 2018 is now completed thanks to invaluable assistance from the Director of Member Services, Beth Farley. The report is at this link: [2018 Membership Breakdown for STAC Boards and Committees](#) and attached here as well:



2018 Membership
Breakdown of STAC

We have updated the spreadsheet (now for the third consecutive year) which provides a breakout of STAC B/C membership by seven different categories. This effort is helpful

in viewing some demographics of our STAC volunteers (now numbering 468 individuals).

- Since 2016, we have seen our number of female members of STAC grow from 129 to 167, now constituting 36% of STAC members (compared to 21% of overall AMS membership).
- Among student members of STAC, since 2016, we now have 26 female volunteers, some 53% of all STAC student members (compared with 39% of AMS student members who are female).
- Some 8.3% of our STAC volunteers are from nations other than the US while in 2016 nearly 12% were from other nations.
- Colorado, California, and Maryland continue to have the greatest representations of any state with 165 of the 468 volunteers.
- STAC continues to attract younger members as the mean age of members is 42 compared to 44 back in 2016.
- Our student members have a mean age of 28 and our board and committee chairs continue to have a mean age of 46.

16. Annual Awards

STAC was involved with the AMS Annual Awards again this year under the guidance of the AOC. We successfully met the new, accelerated schedule to determine the results of the judging. This table covers the awards with STAC involvement:

Award	Responsible B/C (and Commission)
The Charles L. Mitchell Award	WAF (STAC)
The Award for an Exceptional Specific Prediction	WAF(STAC)
The Francis W. Reichelderfer Award	WAF, BOGM, Coastal Environment, Hydrology (STAC and Professional Affairs)
The Helmut E. Landsberg Award	Board on Urban Environment (STAC)
The Award for Outstanding Achievement in Biometeorology	Board on Atmospheric Biogeosciences (STAC)
<i>The Robert E. Horton Lecturer in Hydrology</i>	<i>Committee on Hydrology (STAC)</i>
<i>The Bernard Haurwitz Memorial Lecturer</i>	STAC
<i>The Walter Orr Roberts Lecturer in Interdisciplinary Sciences</i>	STAC
The AMS Journalism Award	STAC Commissioner Review
Outstanding Contribution to the Advance of Applied Meteorology	Professional Affairs Commission with input from Applied Climatology
The Banner I. Miller Award	Committee on Tropical Cyclones and Tropical Meteorology (STAC)

Italics indicate that the award for this year was decided in 2017. Next award will be made in 2019 for CY 2020 presentations.

17. As always, STAC appreciates the support of the AMS Staff and values our collaborative efforts with and support from the AMS Council and the five other Commissioners.

A handwritten signature in black ink that reads "R. Bruce Telfeyan". The signature is written in a cursive style with a large, prominent "R" and "T".

R. BRUCE TELFEYAN
Commissioner,
AMS Scientific and Technological Activities Commission