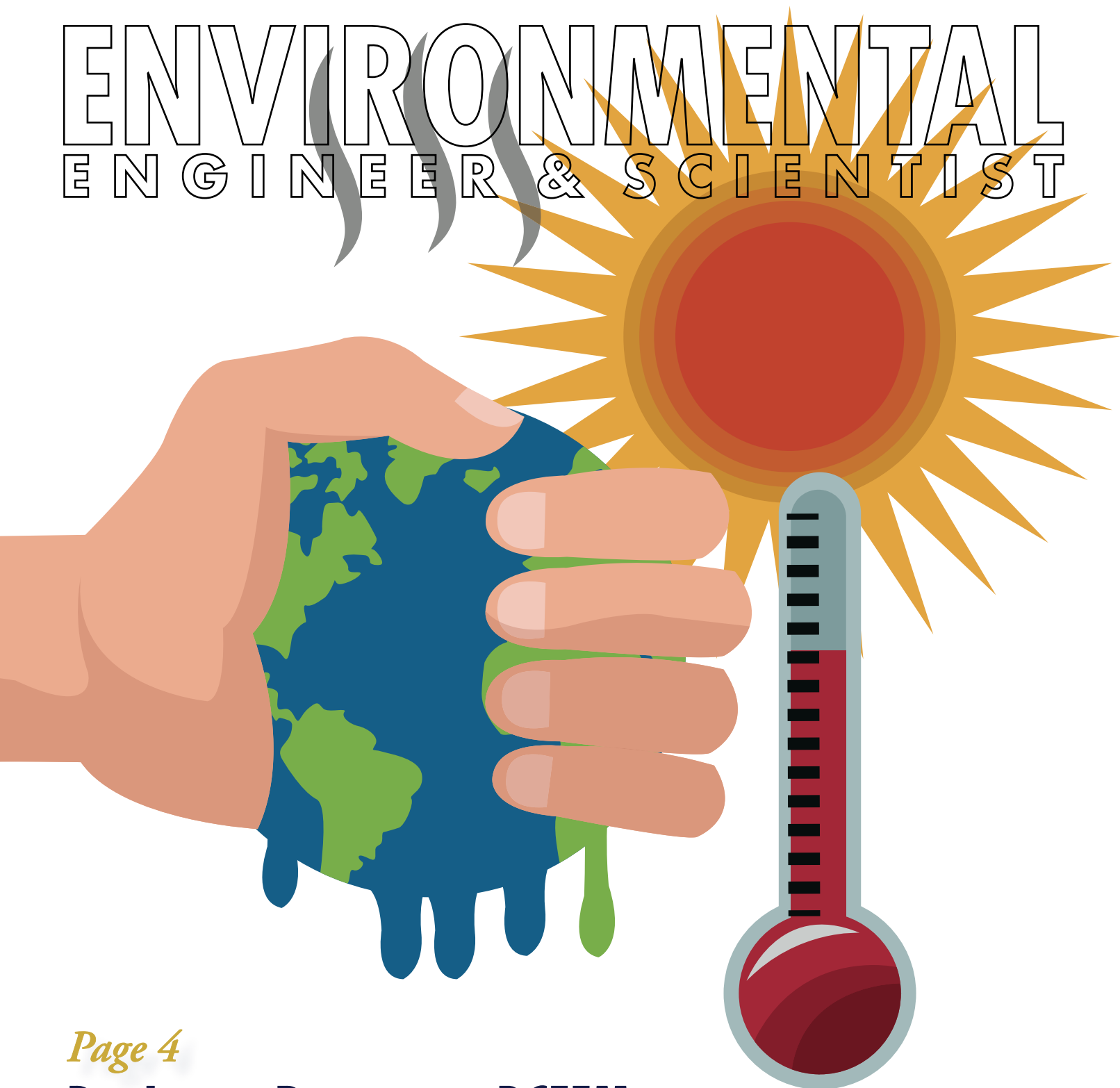


ENVIRONMENTAL ENGINEER & SCIENTIST



Page 4

Dr. James Patterson, BCEEM: A Call to Action

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FEATURES

In Memoriam:

Ann N. Clarke, Ph.D., BCES6

2021 Election Results9

Board Certification at a Glance:

Certification Status Categories.....10

Thank You For Your Support:

Academy Contributors.....13

Announcing Recipients of the Inaugural 2020 Environmental Engineering and Science Foundation Scholarships.....20

DEPARTMENT

President's Page: A Call to Action.....4

James W. Patterson, Ph.D., BCEEM

Executive Director's Page: Something Happening Here.....7

Burk Kalweit

AAEES Patrons Program19

Professional Services Directory22

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A Call to Action

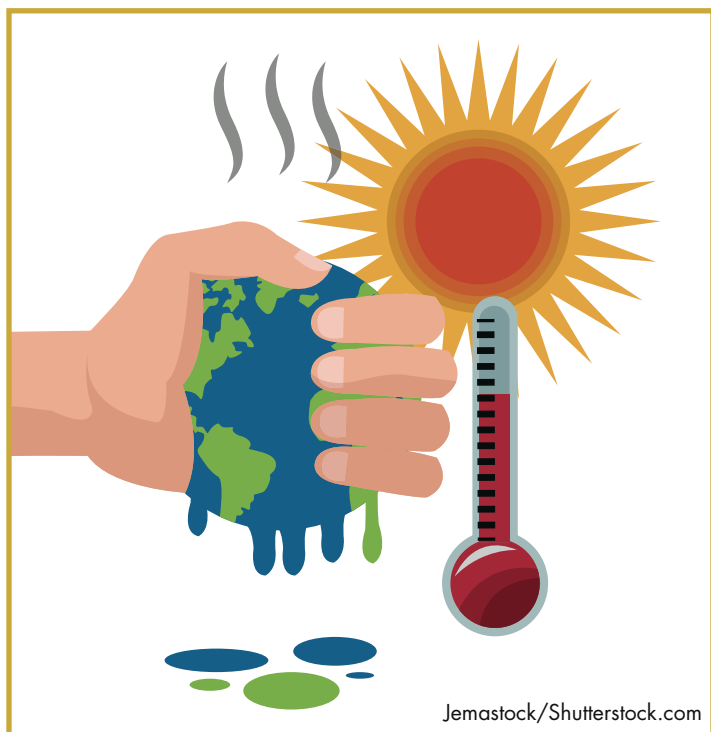
Climate change is due to environmental/atmospheric pollution. Relevant pollutants include carbon dioxide, methane and other ("greenhouse gas") chemicals including ozone, nitrous oxide, and chlorofluorocarbons. These pollutants collect in the atmosphere and adsorb and retain sunlight and solar radiation that has rebounded off of the earth's surface. Normally, this radiation would escape into space, but these pollutants, which can be retained in the atmosphere for years-to-centuries, trap the heat and cause the planet to get warmer. This summer, Siberia, one of the coldest regions on earth, has been experiencing a record-breaking heat wave with devastating wildfires and melting permafrost! In the U.S., the burning of fossil fuels to generate electricity (i.e., coal-burning power plants) is the largest source of heat-trapping pollution, constituting about two billion tons of carbon dioxide per year. The second largest source of such pollution is the transportation sector, generating about 1.7 billion tons per year. Since 2005, some progress has been made in the U.S. in reducing the production of these atmospheric contaminants, but much remains to be done.

The most apparent and serious consequence of global warming is extreme weather. The scientific community is in agreement that the earth's rising temperatures are fueling longer and hotter heat waves, more frequent droughts, more extreme rainfall events, and more powerful hurricanes. As one example, in 2015, climatologists concluded that an ongoing drought in California—the state's worst water shortage in 1,200 years—had been intensified by 15 to 20 percent by global warming. In addition, the odds of similar

droughts occurring in the future had approximately doubled over the past century! In a similar vein, in 2016, the National Academies of Science, Engineering and Medicine reported that it is now possible to attribute certain weather events, such as extreme heat waves, directly to climate change. Such heat waves have caused tens of thousands of deaths around the world in recent years. As another example, ocean warming has resulted in more energy-intensive tropical storms.

Over the past fifty years, the average global temperature has increased at the fastest rate in recorded history, and the trend is accelerating. For example, all but one of the 16 hottest years in NASA's 134-year record have occurred since 2000! The trend of temperature increases is not steady, and there have been years of both slower and more rapid temperature change. Scientists currently predict that, unless we can curb the releases of global warming emissions, average U.S. temperatures could increase by up to 10 degrees Fahrenheit over the next century! There are many consequences to such global warming, including melting glaciers (with consequent rising sea levels and coastal flooding), early snowmelt, and severe droughts which will result in dramatic water shortages and increase the risks of wildfires in the American West and elsewhere!

"Many people don't believe in climate change and its associated implications, because climate change does not have a direct and immediate effect on them."





Further, warming temperatures threaten to deplete groundwater supplies, among other risks!

We are Environmental Engineers and Environmental Scientists, and it is our responsibility to take up the challenges of controlling and reducing the releases of environmental pollutants which exacerbate climate change. Climate change is widely perceived as an issue limited to air contaminants and their consequences. However, a recent World Water Day Report released by the United Nations (*2020 UN World Water Development Report*, March 22, 2020) points out that drinking water and wastewater management systems are significant contributors to the carbon emissions which exacerbate climate change, and that as significant contributors to climate change, there is a need for countries to spend up to \$114 billion annually to build safe drinking water and wastewater management systems.

There is a further complication which cannot be ignored. Many people don't believe in climate change

" We are Environmental Engineers and Environmental Scientists, and it is our responsibility to take up the challenges of controlling and reducing the releases of environmental pollutants which exacerbate climate change.

and its associated implications, because climate change does not have a direct and immediate effect on them. To these individuals, the consequences of global warming seem very remote, in geographical location and time! As Environmental Engineers and Environmental Scientists, our challenge is not solely to address the reality and root causes of climate change, but to also enhance the general understanding and recognition of that reality and its root causes, and the inevitable dire consequences of climate change!

Jim



In Memoriam



Ann Neistadt Clarke, PhD, BCES Environmental Consultant, Business Leader, Dog Lover, and Martini Connoisseur

Ann N. Clarke, president of ANC Inc. of Brentwood, 73, succumbed at home with her husband Jim at her side, after a several months long illness.

Fondly remembered by her friends and family as a fiercely independent scientist with a love of tea (Earl Grey, *hot*), vodka martinis, space travel, sea otters, chocolate ice cream, classic science fiction, female detective stories, and large dogs.

From graduating top of her class from the magnet Philadelphia High School for Girls in 1964, Dr. Clarke went on to earn a BS in Chemistry from Drexel University in 1968, and from there did graduate work at The Johns Hopkins University until 1972, earning Masters Degrees in Chemistry and Geology. She completed her PhD in 1973 from Vanderbilt, and joined the environmental consulting firm Aware (later ECKENFELDER Inc.), where she led the *In Situ* remediation group during environmental remediation's earliest days. In the late-90s, she left Eckenfelder and started ANC Inc., and continued to do government and private environmental research. In the 2000s, she was also an adjunct professor in the School of Engineering at Vanderbilt University.

Her no-nonsense approach to environmental clean-up has benefitted us all. A role model in her field having worked on projects like Love Canal and the Tennessee Valley Authority, Dr. Clarke published many papers on soil and ground water remediation and was an active member of many scholarly societies, particularly Women

in Environmental Engineering, as well as being a fellow of the AAAS and a member of the American Academy of Environmental Engineers and Scientists. She served on an US Environmental Protection Agency advisory panel for several decades, on Nashville's Grassmere Nature Center Advisory Board and as a member of the National Library of Medicine Scientific Review Panel.

She was perhaps most proud of visiting all 50 states and many countries. When she wasn't travelling for work or fun, her free time was spent watching and reading science fiction, playing with her many dogs, and collecting sea otter prints and sculptures. Though she regretted never traveling into space, her trip on the Concord with Jim got her pretty close.

She is survived by her devoted husband of 48 years, Dr. James Clarke of Brentwood, TN, her niece/nephew Hildie/Joel Block of Arlington, VA (and their children, Cassia and Clarke Joy), many cousins, friends and her scientific community.

The family has asked that parties interested in providing donations make them in Dr. Clarke's memory to the Williamson County Animal Shelter, where she adopted several four-legged children.

Contact:

Hildie S. Block
703-241-4136
703-728-0014

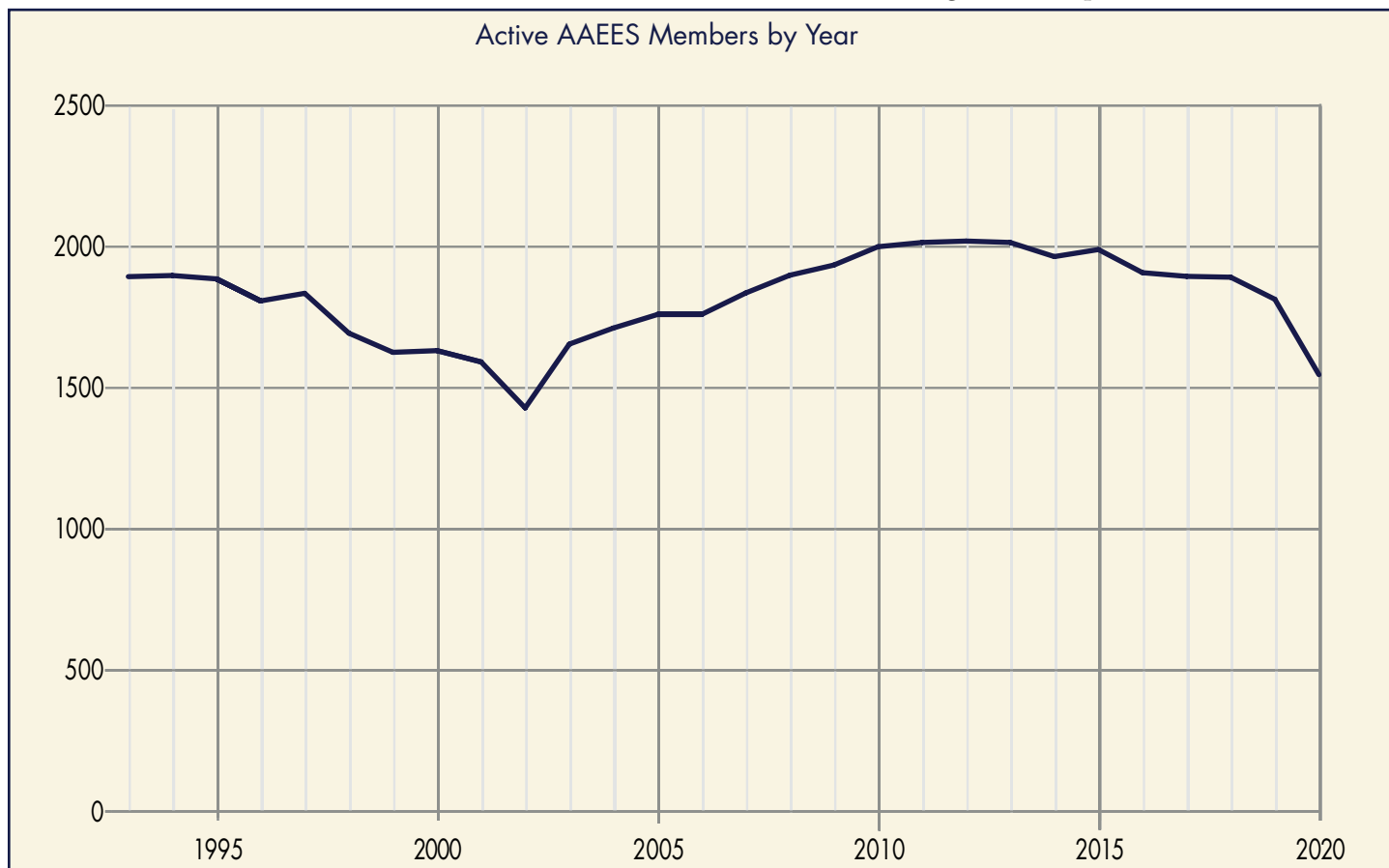


Something Happening Here

With apologies to Buffalo Springfield, borrowing from their classic recording that debuted on the Ed Sullivan show in 1966, it just seemed like a great way to kick off this article about what's happening with regard to membership at the Academy. The title of the song that begins with the lyric, "Something happenin' here," is actually *For What It's Worth*. And in order to be appropriately arcane, those words actually do not appear in the song. But the song does a great job of delivering a sense of ominous foreboding, one that offers up the observation that what's happening 'ain't exactly clear.'

I employ the musical reference because it is so appropriate to describing my state of mind after having taken a look at the Academy's membership numbers going back almost 30 years. The conclusion could be readily drawn that there was indeed something happening here, and what it is remains a topic for speculation because clear linkages of cause-and-effect are hard to elicit from the available data. One thing that is entirely certain from an analysis of membership data is that we have been going through a cycle of the membership being stuck in a range between 1500 and 2000 members since the early 1990s.

The graph below depicts what has happened over time. Starting in 1993, there was a gradual but steady pattern of decline as the total active members went from just under 2000 to below 1500 in 2001. Thankfully, this proved to be an inflection point as the number of total certified members rebounded by over 200 in 2002. While this quick turnaround was welcomed, it was not a quick recovery as it took eight years for the count of total board-certified active members to exceed 2000 again. This is where the story begins to lose its luster. The graph reveals how, during the time period between 2010 and





"Has there been a tectonic shift in the past 3 to 5 years that reduces the value of board certification for practicing environmental engineers and scientists?"

-- something whose effects we can see even though we cannot see the dark matter itself?

Another candidate for an explanation for these unexpected trends had been the so-called "Boomer" effect. This is a concern that demographics were playing against the ability of the Academy to maintain, and possibly even grow, its audience. The thinking was that as the baby boom generation hit retirement age, there would be a sudden increase in retirements that would lead to Academy members deciding not to renew their certification as they were no longer working in the field. While this may have been part of the factor behind the decline, you can see in the attending chart that as the 'baby bust' began to be felt in 2010, there was no matching decline in Academy membership. There was some speculation that members might have been delaying their retirement to age 70 or more, but that still left a mismatch of declining numbers and rising ages. An argument can be made that the Boomer effect might have been delayed by a few years because of this, but the evidence was just not there to make a convincing case.

Another theory that has been floated speculates that the reason we are seeing membership decline is that the world has changed radically in terms of its ability to drill down on the growing data file that we all have in the public domain. The rise of social media and its ability to deliver reams of information on any of us at the opening of a Google search may be replacing the certification process as a qualifying activity for determining who are the

2018, the Academy was in essentially a holding pattern, as the number of members wavered at 2000 ± 50 for that entire time span. There was, however, a breakout year that occurred in 2019. Unfortunately, the breakout occurred at the bottom of the distribution as the total number of board-certified environmental engineers and scientists fell by 50. This was followed by a surprising continuation of the movement on the down side, as the total active membership in 2020 stands at roughly 1540. This calculates to a decline in membership of close to 20% in just two years.

Returning to my musical introduction in the context of the Academy's membership issues, I think it may be appropriate to set aside the Buffalo Springfield album and pull out something from our best blues favorites. It certainly does appear that, for the Academy and the trends in membership since 1993, (with apologies to BB King), *the thrill is gone*. What we collectively need to determine is whether or not, again borrowing from Mr. King, *the thrill is gone for good*. Or put another way, have there been some fundamental changes in the rationales behind individuals' taking a bold career step in applying for board certification? Has there been a tectonic shift in the past 3 to 5 years that reduces the value of board certification for practicing environmental engineers and scientists? Is this what is being reflected in the rapid decline in active membership? Is this what might be termed the 'dark matter' of the environmental engineering and science community



2021 Election Results

The 2021 Election Teller's Committee verified the results on June 25, 2020, for tabulation of the votes for the 2021 Election. This year, AAEEES conducted the elections electronically using a secured online service.

The unofficial winners in the election of 2021 Officers and Trustees are:

- **Daniel B. Oerther** - President-Elect
- **David A. Vaccari** - Vice President
- **David M. Gaddis** - Trustee-at-Large
- **Leslie Lopkee Chau** - Trustee-at-Large

Confirmation of their election will take place during the 2020 Fall Board of Trustees Meeting. Their official terms begin on January 1, 2021.

President-Elect **Lilia A. Abron** will also assume the role of President beginning January 1.

We'd like to thank the service of the following individuals whose term on the Board end on December 31:

- **Merlyn L. Hough**, representing AWMA
- **Fred Ellerbusch**, representing APHA
- **Robert E. Sommerlad**, representing ASME
- **James D. Fitzgerald**, Trustee-at-Large

AAEEES thanks the 2021 Election Teller's Committee for taking the time to tabulate the votes:

- **Christian Davies-Venn**, Ph.D., P.E., BCEE
- **Mark H. Houck**, Ph.D., P.E., BCEE
- **M. Susan Merther**, BCES



Lilia A. Abron



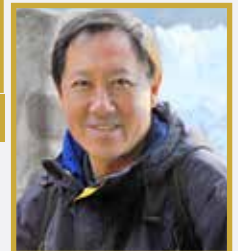
Daniel B. Oerther



David A. Vaccari



David M. Gaddis



Leslie Lopkee Chau

superior performers in a given professional area. If we lend credence to the notion that individuals can manage their careers effectively by managing their social media presence, then board certification is not as strong an indicator of individuals' competence in 2020 as it was in 1956 when the Academy was founded. Board certification was clearly a solution to a need that existed at that time. The thing we don't know is whether the answer that was compelling in 1956 still has the ability to draw interest from experienced and super-competent environmental engineers and scientists today. The unsettling decline in Academy membership in the past few years appears to indicate that the answer might be no.

That leaves us with a need to dig a little deeper. We have a strong program that succeeds at its mission of putting board certification candidates through a rigorous and meaningful process that, upon completion, satisfies the need to prove that our certificate holders are among the best of the best in the environmental engineering and science domain. So we are good on that side.

Where we are not so good is maintaining our membership rolls. We see that something is clearly happening, but we have not yet managed to find a convincing cause that is connected to our troubling effect. One of

Executive Director's Page, *continued on page 12*

Board Certification At A Glance

BOARD CERTIFICATION STATUS

All Board Certified Environmental Engineers, except Honorary Members, must maintain a valid license or certificate of registration to practice engineering for placement and continuance in any membership class.

All Board Certified Environmental Engineering Members must possess a Baccalaureate or higher degree in environmental engineering (or any other engineering field acceptable to the Board) from a college or university of recognized standing and at least 20 years of experience. Board Certified Environmental Engineering Members do not possess a P.E. License.

All Board Certified Environmental Scientists must possess a Baccalaureate or higher degree in environmental science (or any other science field acceptable to the Board) from a college or university of recognized standing.

All Board Certified Environmental Engineers, Board Certified Environmental Engineering Members, and Board Certified Environmental Scientists must comply with the Academy's continuing professional development requirements to ethically represent that they are board-certified in connection with their duties and the practice of engineering or science.

Below is an explanation of the categories.

ACTIVE CERTIFICATION

Active: A Board Certified Environmental Engineer, Board Certified Environmental Engineering Member, or Board Certified Environmental Scientist in active practice, certified in one or more specialty, who maintains all the requirements for certification.

Life: One who has been a Board Certified Environmental Engineer, Board Certified Environmental Engineering Member, or Board Certified Environmental Scientist in good standing for an uninterrupted period of at least 20 years and is at least 65 years of age and who maintains all the requirements for certification.

Emeritus: One who has been a Board Certified Environmental Engineer, Board Certified Environmental Engineering Member, or Board Certified Environmental Scientist in good standing, who is no longer engaged in the practice of engineering or environmental science, who has voluntarily relinquished or allowed to expire any and all licenses or certificates of registration to practice engineering or environmental science, or who is classified as "Inactive" or "Retired by the State Licensing

Board(s) in which he/she is licensed which precludes the practice of engineering or environmental science.

Honorary: One who possesses one or more of the following characteristics may be designated an Honorary Member:

- has attained a position of eminence in the environmental engineering field;
- has made a singular noteworthy contribution, or a sustained contribution, to the advancement of environmental engineering; or
- has performed outstanding service over a relatively long period of time in the advancement of the affairs of the Academy.

INACTIVE CERTIFICATION

Those persons who comply in all respects with Academy requirements, except for continuing professional development, are granted certification by the Academy in Inactive status. Such members may restore their certification to active status by demonstrating to the Academy's satisfaction that they have continued their professional development during the period when their certification was inactive.

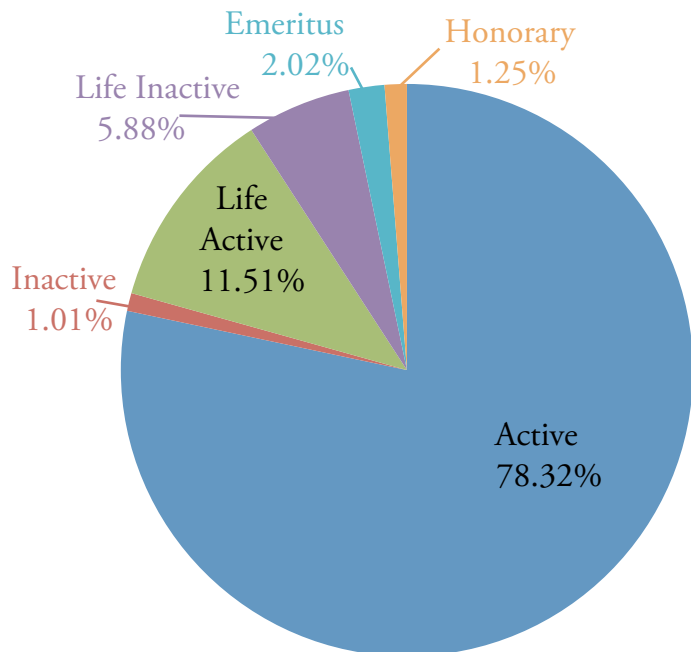
Those with an Inactive certification may not ethically represent that they are board-certified in connection with their duties and the practice of engineering or environmental science. However, they may continue to affix the title "BCEE," "BCEEM," or "BCES" to their name.

Inactive: A Board Certified Environmental Engineer, Board Certified Environmental Engineering Member, or Board Certified Environmental Scientist, certified in one or more specialties, who satisfies all Academy requirements except those pertaining to the continuing professional development requirements.

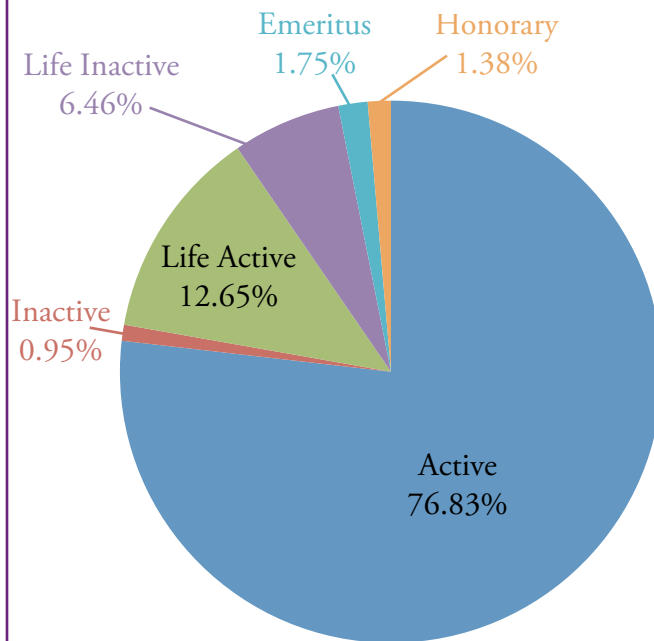
Life-Inactive: One who has been a Board Certified Environmental Engineer, Board Certified Environmental Engineering Member, or Board Certified Environmental Scientist in good standing for an uninterrupted period of at least 20 years and is at least 65 years of age and satisfies all Academy requirements except those pertaining to the continuing professional development requirements.

On the following page is a breakdown of AAEE's Board Certified individuals by status as of June 30, 2020.

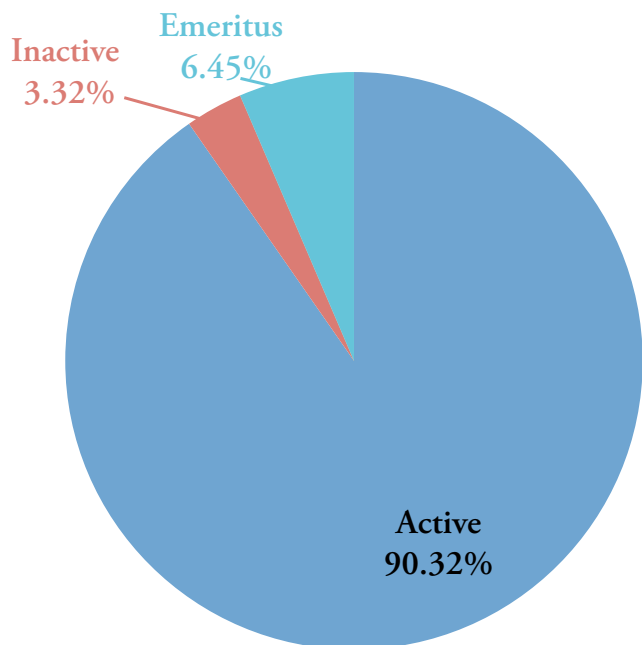
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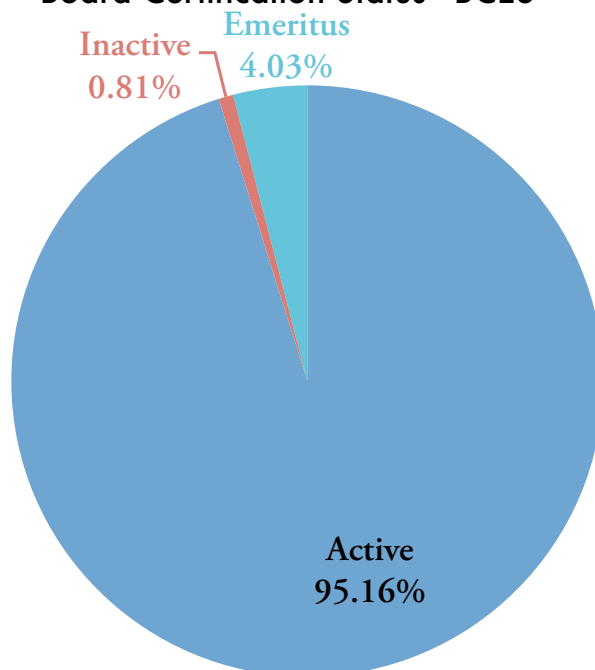
Board Certification Status - BCEE



Board Certification Status - BCEEM



Board Certification Status - BCES





"Being board certified will never lose you a contract or a promotion. However, being board certified will most likely never win you a contract or a promotion either.

Being board certified will never lose you a contract or a promotion. However, being board certified will most likely never win you a contract or a promotion either. It's a *nice-to-have* feature that needs to somehow migrate to a superior status as a *gotta-have* feature.

Which takes us full-circle back to the Buffalo Springfield. It would seem that there is indeed something happening here. Obviously, what it is certainly is not exactly clear. However, the task at hand certainly is. We, as individuals and collectively, need to find out what is going on and what might be done about it. The Academy has the smarts and the wherewithal to find the answers it needs. From those answers, it can begin the process of crafting a path to take into account where the world is headed and how the Academy can get on the same course.

And here is my final pitch. As a member of the Academy, we need your help now more than ever. We have lots of volunteer positions that are critical to the definition of the Academy's future. Take a look and see what you think might be one that matches your experience and talents. Then give us a call, and we'll figure out how to put you and your skill set to work for the Academy and its members.

Burk

A

Don't Let Another Year Go By!

Now, more than ever, verification of expertise is of growing importance. As an AAES Board Certified Individual, your experience and technical/management skills are fully supported.

You - our current **Board Certified Environmental Engineers**, **Board Certified Environmental Engineering Members**, and **Board Certified Environmental Scientists** - are the Academy's best ambassadors and recruiters. You know who among your colleagues are deserving to become Board Certified. **Give them the benefit of your encouragement!**

Have them begin by going to <https://www.aaes.org/becomeboardcertified>.

THANK YOU FOR YOUR SUPPORT



Academy Contributors

Contributions and sponsorships that the American Academy of Environmental Engineers and Scientists and the Environmental Engineering and Science Foundation receive are vitally important to the infrastructure and longevity of many programs. We are pleased to recognize the individuals on the following pages for contributing to various funds during 2019.

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While most contributions are donated during the specialty certification renewal process, members may log in to their account on the AAEEES Center at any time to donate to any of the following funds:

- AAEEES General Fund. This fund is for supporting AAEEES infrastructure.
- Environmental Engineering and Scientist Fund. This fund supports improvements to editorial quality of the AAEEES quarterly periodical, *Environmental Engineer and Scientist*.
- Excellence in Environmental Engineering and Science (E3S) Fund. This fund aids the publicity of the program.
- Kappe Lecture Fund. This fund is used to support and ensure continuance of the Kappe Lecture Series.
- In addition to during the specialty certification renewal process, donations to these funds can be made year-round either by logging in to the AAEEES Center, or by mailing a check to Academy headquarters. AAEEES is a 501(c)(6) organization. Your donation may be reported as a business expense. Consult your tax advisor for details.

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Mosure, Thomas E.	Powell, OH	Wong, Joseph Ming-Lup	El Sobrante, CA
Newberry, Conrad F.	Pacific Grove, CA	Zaslavsky, Yury J.	Irvine, CA
Nichol, George D.	Carmichael, CA	Zegel, William C.	Gainesville, FL

ENVIRONMENTAL ENGINEER AND SCIENTIST (JOURNAL) FUND

Adin, Avner	Herzliya, Israel	Goodrich, Robert R.	Morristown, NJ
Cota, Harold M.	San Luis Obispo, CA	Holt, Leonard L.	Santa Rosa, CA



Lindmark, Ulf M.	Westlake Village, CA	O'Brien, Parnell	Homer Glen, IL
Lipsky, David	Flushing, NY	Reaves, Ray D.	Oklahoma City, OK
Matlock, Marty D.....	Fayetteville, AR	Stensel, H. David	Seattle, WA
Mbachu, Frank C.....	Houston, TX	Troy, Marleen A.	Wilkes-Barre, PA
Middlebrooks, E. Joe	Superior, CO	Valsaraj, Kalliat T.	Baton Rouge, LA
Mohanka, Shyam S.....	Schenectady, NY	Vasuki, Nuggehalli (N.C.)	Dover, DE

EXCELLENCE IN ENVIRONMENTAL ENGINEERING AND SCIENCE (E3S) FUND

Adin, Avner	Herzliya, Israel	Holt, Leonard L.	Santa Rosa, CA
Archer, Hugh V.	Harrisburg, PA	Huang, C.P.	Newark, DE
Arora, Madan L.	Pasadena, CA	Kuhn, Paul A.	Maple Grove, MN
Bentwood, Richard W.....	Glendora, CA	Lindmark, Ulf M.	Westlake Village, CA
Bhayani, Kiran L.	Salt Lake City, UT	Mack, Reynold A.	White Bear Lake, MN
Carpenter, A. Dayton	Charleston, WV	Mohanka, Shyam S.....	Schenectady, NY
Corson, John T.	Kingsford, MI	Reaves, Ray D.	Oklahoma City, OK
Cota, Harold M.	San Luis Obispo, CA	Rebenschied, Jeffrey Edmund.....	Cypress, TX
Dee, William P.....	Davenport, FL	Rodenbeck, Sven E.....	Lawrenceville, GA
Eklund, Carl W.	Carmel, CA	Troy, Marleen A.	Wilkes-Barre, PA
Gearhart, Gregory A.	Clinton, MS	Vasuki, Nuggehalli (N.C.)	Dover, DE
Glenn, Mark	Altoona, PA	Velazquez, Jose F.	Denver, CO
Hirschbrunner, Dennis C.	Columbus, NE		

KAPPE LECTURE SERIES FUND

Chen, Jeffrey J.	Palo Alto, CA	Monroe, Edward W.	Pittsburgh, PA
Corson, John T.	Kingsford, MI	Murthy, Prahlad N.	Wilkes-Barre, PA
Dewling, Richard T.	Chatham, NJ	Novotny, Vladimir	Newburyport, MA
Dombrowski, Paul A.	Holyoke, MA	Shelton, Stephen P.....	Boise, ID
Dominy, Matthew	Gilbert, AZ	Torrens, Kevin D.....	Upper Saddle River, NJ
Grady, C.P. Leslie.....	Rockingham, VA	Troy, Marleen A.	Wilkes-Barre, PA
Hungerford, Michael D.	Edwardsville, IL	Vasuki, Nuggehalli (N.C.)	Dover, DE
Lindmark, Ulf M.	Westlake Village, CA	Wheeler, Robert W.	Morgantown, WV
Lue-Hing, Cecil	Town & Country, MO	Whitman, Ira L.....	Cranbury, NJ
Masteller, Earl H.	Vero Beach, FL	Young, James Clinton	Fayetteville, AR
Mohanka, Shyam S.....	Schenectady, NY		

ENVIRONMENTAL ENGINEERING AND SCIENCE FOUNDATION

The Environmental Engineering and Science Foundation (a 501(c)(3) organization) is listed in IRS Publication 78, Cumulative List of Organizations described in Section 170(c) of the Internal Revenue Code of 1986. As such it is eligible to receive tax-deductible charitable contributions.

Environmental Engineering and Science Foundation General Fund. The general fund for the Environmental Engineering and Science Foundation.

The Fred Pohland Memorial Fund. This fund supports the Frederick George Pohland Medal which is awarded annually to an individual who has made sustained and outstanding efforts to bridging environmental engineering research, education, and practice.

The K-12 Student Competition Fund. This fund is used to support ongoing K-12 student competitions.

The Students & Young Professionals Fund. This fund supports student activities in environmental engineering and environmental science at colleges and universities. The S&YP Fund is used to facilitate events on or off-campus that will assist students in their academic advancement, enhance their understanding of the profession, and support their career aspirations.

The W. Brewster Snow Award Fund. This fund supports the W. Brewster Snow Award, which is awarded annually to an outstanding engineering student pursuing or recently completing a Masters degree in Environmental Engineering or closely-related degree program.

The W. Wesley Eckenfelder Fund. This memorial fund was established in the name of W. Wesley Eckenfelder Outstanding Graduate Research Award, the W. Wesley Eckenfelder Industrial Waste Management Medal, the W. Wesley Eckenfelder Distinguished Leadership Award, and the W. Wesley Eckenfelder University Lectures.

Donations can be made online at:

<https://www.eesfoundation.org/Donate.php>.

EESF GENERAL FUND

Compton, Glenn	Phoenix, AZ	Paulson, John.....	West Plains, MO
Dolan, Roger	Carmel, CA	Vasuki, Nuggehalli (N.C.)	Dover, DE
Kaylor, Frank.....	Brentwood, CA		

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Boulos, Paul

Denver, CO

STUDENT & YOUNG PROFESSIONALS FUND

Stander, Leo

Cary, NC

W. WESLEY ECKENFELDER FUND

Hempel, Debra

Tampa, FL

In 2019, the Environmental Engineering and Science Foundation started the EESF Scholarship Campaign.

The Environmental Engineering and Science Foundation (EESF) has as its Mission “to secure and direct resources to advance environmental engineering and science in the areas of research, education and practice”. Towards that end, the Board of EESF created four annual scholarships for Environmental Engineering and Environmental Science students at the undergraduate and Master’s levels.

The goal of the 2020 Environmental Engineering and Science Foundation Campaign was to fund the four scholarships at a level of \$2,500 per student per year for an annual goal of \$15,000 to provide future funding.

Thanks to the individuals below, the Foundation reached this goal!

The four recipients of the inaugural EESF Scholarship are listed on page 20.

2020 EESF SCHOLARSHIP CAMPAIGN

Adamski, Robert	Brooklyn, NY	LaFever, Howard	Cazenovia, NY
Bogdanoff, Debra	Whittier, CA	Lue-Hing, Cecil	Town & Country, MO
Buzby, Mary	Barnegat Light, NJ	Mihelcic, James	Tampa, FL
Caballero, Ross	Pacific Palisades, CA	Miller, Griff	Philadelphia, PA
Canzano, Pat	Dover, DE	Murray, William.....	Buda, TX
Chamberlain, James	Norman, OK	Nolen, Hunter.....	New Braunfels, TX
Corneille, Richard	Redlands, CA	Oerther, Daniel.....	Rolla, MO
Dee, William	Davenport, FL	Russell, Larry	Berkeley, CA
Dzombak, David.....	Pittsburgh, PA	Selna, Michael	Huntington Beach, CA
Flynn, Brian.....	Austin, TX	Shawwa, Ayman	Walnut Creek, CA
Freedman, David	Clemson, SC	Stahl, James	Rancho Palos Verdes, CA
Garner, Gordon.....	Prospect, KY	Vasuki, Nuggehalli (N.C.)	Dover, DE
Ghirelli, Robert	West Covina, CA	Velazquez, Jose	Denver, CO
Hagan, James	Chadds Ford, PA	Vicory, Alan	The Villages, FL
Harkness, Gregg.....	Orlando, FL	Vicens, Guillermo.....	North Andover, MA
Johnson, Carl	Wauwatosa, WI	Westerhoff, Paul.....	Scottsdale, AZ
Kellogg, Steve	Shelton, CT	Wu, Chang-Yu	Gainesville, FL
Klinger, Rachel	Jacksonville, FL		



AAEES Patrons Program

The American Academy of Environmental Engineers and Scientists has been in existence for 60 years, credentialing professionals in environmental engineering and science, educating the public about the value of environmental systems, working with ABET (the Accreditation Board for Engineering and Technology) as the Lead Society in the accreditation of over 60 college and university Environmental Engineering programs, and providing recognition for noteworthy projects and programs in the annual Excellence in Environmental Engineering and Science competition.

The Academy has greatly benefited from the collaborative spirit and active participation of its sponsoring societies. However, from the standpoint of economic support, the Academy's endeavors have focused on individual membership and the actions of these individuals in implementing its goals. To sustain the Academy's programs and enhance their effectiveness, the Academy is implementing a Patrons Program that is being offered in three categories:

- Corporate/Consulting firms, and
- Public Agency/Government organizations.

It is the Academy's firm belief that the synergistic impact of individual membership activities, coupled to support by the organizations in which they work, will create a powerful success model that will enable the Academy to better implement its organizational goals and mission.

The Patrons Program umbrella is expansive. Its intent is to have our patrons effectively co-brand with the Academy for everything that it does in outreach to either members or the general public.

The list below is a summary of the Patrons Program elements that participants receive.

- Featured recognition of Patrons on the AAEES website with a direct link to the Patron's website. We will establish a rotating schedule of all Patrons' content that features a noteworthy event or project undertaken within their overall portfolio. AAEES staff will work with Patrons' staff to structure their content and format. This aspect of the program benefits both the Patron and the Academy in publicizing the profession, its relevance, and its accomplishments.
- Oral and visual recognition (signage/logo) for Patrons at all AAEES events.
- Prominent recognition/logo display in *Who's Who in Environmental Engineering and Science*.
- Prominent recognition/logo display in the Environmental Engineering and Science Resource Guidebook.
- A listing in the *Environmental Engineering and Science Resource Guidebook*, featuring the Patron organization's Board Certified staff and its overall capabilities, at no-charge.
- Two complimentary tickets to the annual AAEES Awards Luncheon and Conference in Washington, DC.
- Two complimentary entries for the E3S competition.
- Waiver of certification application and examination fees for a Patron's employees.

- Prominent publication space/logo recognition in the *Environmental Engineer and Scientist* quarterly magazine.

The Patrons Program is much more effective in providing consistent recognition for our Patrons. Wherever the Academy goes and wherever Academy materials appear, those of its Patrons also appear.

In establishing the Patrons Program the Academy acknowledges and appreciates the past economic support of corporate, agency, and academic entities. Their support for individual events and programs has been beneficial to the Academy. We believe that the Patrons Program outlined here will be more effective in achieving the goals of the Academy in developing its programs, and more effective in providing the recognition that our Patrons seek for their sponsorship of the Academy.

Administratively, the Patrons Program enables Patrons to support the full slate of Academy activities through one annual contribution. We are setting annual Patron contribution commitments of \$8,000 for Corporate/Consulting category and \$6,000 for Public Agency/Government category.

We invite you to consider having your organization become an Academy Patron. Your decision to participate will trigger our sending you a simple 'Patrons Program Participation Agreement' that lists the program features and benefits. This will be followed by contact from the Academy staff to determine your preferred invoicing and form of payment information. We will also need to have Patrons' staff contact information to ensure that we have requisite materials -- accurate logos, entity identification, website links, and other items -- to enable us to create the content we will use to maximize your exposure and recognition as an Academy Patron.

Should you have questions please contact: Burk Kalweit, AAEES Executive Director (BKalweit@aaees.org).

AAEES PATRONS

Public Agencies

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Los Angeles Department of Water and Power
Orange County Sanitation District
Sanitation Districts of Los Angeles County

Consulting Firms

AECOM
CDM Smith
Geosyntec





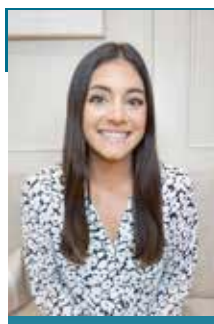
ANNOUNCING RECIPIENTS OF THE INAUGURAL 2020 ENVIRONMENTAL ENGINEERING AND SCIENCE FOUNDATION SCHOLARSHIPS



UNDERGRADUATE ENVIRONMENTAL ENGINEERING

Vicky Wanjohi

Rutgers University with a focus in Water Resources. Vicky's goal is to *"help build and maintain infrastructures that are resilient to the effects of climate change and that can provide a high level of quality to all individuals"*. Having completed her Associate degree at Raritan Community College, Vicki has already started coursework at Rutgers and is co-leader of the Rutgers Engineers Without Borders Kenya Project.



MASTER'S DEGREE IN ENVIRONMENTAL ENGINEERING

Sophie De Respino

University of Texas at Austin with focus on water and wastewater technology. Sophie's goal is to *"advance knowledge of sustainable water treatment technology by focusing on mechanisms and innovations at the molecular level"*. Following completion of her undergraduate degree at the University of Alabama, she has started coursework at UT Austin where she is a Graduate Research Assistant.

UNDERGRADUATE ENVIRONMENTAL SCIENCE

Nicole Kemler

UC Berkeley, Conservation and Resource Management with focus in Environmental Policy and Human Health. Nicole aspires to *"improve the level of sustainability expected from large corporations"*. While completing her Associate degree at Southwestern College, Nicole served as a Watershed Educator for the Resource Conservation District of San Diego and as a sustainability intern at The Living Coast Discovery Center in Chula Vista, CA.



MASTER'S DEGREE IN ENVIRONMENTAL SCIENCE

Jasmine Walker

The Ohio State University with focus on the Environment and Natural Resources. Jasmine's ambition is to conduct *"research that traces harmful chemicals including emerging contaminants"*. Jasmine completed her undergraduate degree at Central State University. She was an intern with Montgomery County Environmental Services, participated in NASA summer research, and started the first chapter of MANRRS (Minorities in Agriculture, Natural Resources and Related Sciences) at Central State.



ENVIRONMENTAL ENGINEERING AND SCIENCE FOUNDATION SCHOLARSHIPS

The Environmental Engineering and Science Foundation (EESF) has as its Mission “to secure and direct resources to advance environmental engineering and science in the areas of research, education and practice”. In line with its mission, EESF has created four annual scholarships for Environmental Engineering and Environmental Science students at the undergraduate and Master’s levels.

Four \$2,500 scholarships are being awarded for:

- Undergraduate Environmental Engineering
- Undergraduate Environmental Science
- Master’s level Environmental Engineering
- Master’s level Environmental Science

The two undergraduate scholarships target students from Community Colleges.

The 2020 scholarship recipients emerged from a highly competitive process that considered academic achievement, resume, essay, and letters of recommendation.

EESF was able to attract a sizable number of applicants and the quality of their qualifications was outstanding.

It is our privilege to introduce the four outstanding recipients and provide excerpts from their resumes and essays.

ABOUT THE ENVIRONMENTAL ENGINEERING AND SCIENCE FOUNDATION

The Environmental Engineering and Science Foundation’s primary purpose is to recognize and promote excellence in Environmental Engineering and Science. As a result, the public will become more aware of the important role Environmental Engineers and Scientists play in managing global, national and regional environmental challenges. To accomplish its goals, the Foundation dedicates its resources to education, research and awards focused on outstanding Environmental Engineering and Science achievement.

The Environmental Engineering and Science Foundation was established in 1998 to serve as a non-profit partner of the American Academy of Environmental Engineers and Scientists (AAEES) and shares many common purposes with that organization.

DONATE

The Environmental Engineering and Science Foundation (a 501(c)(3) organization) is listed in IRS Publication 78, Cumulative List of Organizations described in Section 170(c) of the Internal Revenue Code of 1986. As such it is eligible to receive tax-deductible charitable contributions.

<https://eesfoundation.org/donate/>

If you wish to contribute specifically to this scholarship program, please visit:

**[https://www.eesfoundation.org/
donate/ScholarshipCampaign.php](https://www.eesfoundation.org/donate/ScholarshipCampaign.php)**



**Environmental Engineering
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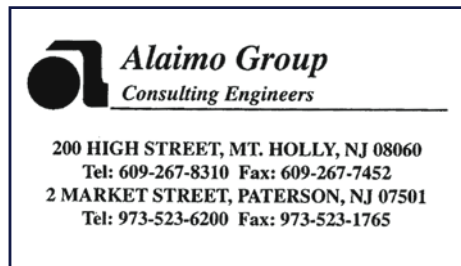


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Environmental Communications Award



Your organization has been especially successful in communicating complex and challenging issues to the public and other important audiences. Through your efforts, citizens, environmental conservation groups, town councils, state and national legislative bodies, private sector companies, and others have come to realize the value and importance of your projects, and their economic and public health benefits. If that sounds familiar to you, get the recognition you deserve by entering the AAEES Environmental Communications Award competition.

Here are the criteria for judging the Environmental Communications Award:

Innovative approach to messaging or branding

- ❖ Future value to the water engineering profession
- ❖ Creativity and clarity in portraying and communicating the messages
- ❖ Effectiveness in delivery and achieving desired outcome
- ❖ Integrated Design Approach

This Award is designed to recognize environmental communication efforts by industrial entities; municipal, state and federal governments; and consulting firms who work to convey the important environmental messages to their constituencies and other interested parties.

The deadline to submit all entries is March 1, 2021.

Entry guidelines, submission forms, and previous winning entries available at
<https://www.aees.org/ecompetition/>.



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Call for Entries 2021

Excellence in Environmental Engineering & Science

The Excellence in Environmental Engineering & Science (E3S) Awards competition is the **Gold Standard** for identifying state-of-the-art projects in environmental engineering and science. Awards and presentations are held in late spring at the National Press Club, Washington, DC.

Entries are accepted in the following categories:

- ❖ Design
- ❖ Industrial Waste Practice*
- ❖ Planning
- ❖ Small Firms
- ❖ University Research
- ❖ Environmental Sustainability
- ❖ Operations/Management
- ❖ Research
- ❖ Small Projects

**The top prize for Industrial Waste Practice will also be presented with the W. Wesley Eckenfelder Industrial Waste Management Medal sponsored by AquAeTer*

Entry guidelines, submission forms, and winning entries from previous years are available at: **<https://www.aees.org/e3scompetition/>**.

**Entries must be submitted by
February 1, 2021.**



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