

FY'20 ACM Education Board and Education Advisory Committee
For the Period: July 1, 2019 - June 30, 2020
Chris Stephenson and Jane Prey, Co-Chairs
Beth Hawthorne, Vice Chair
Mehran Sahami, Past Chair

Executive Summary

This report summarizes the activities of the ACM Education Board and the Education Advisory Committee (EAC) in FY'20 and outlines priorities for FY'21. The membership of each organization is available from acm.org/education/education-governance. Below is a list of the Education Board's and EAC's major accomplishments for this past year.

Curricular Volumes

In Progress:

- CC2020
- Data Science
- Computer Science Interim (MOU under development)
- IS2020 (in partnership with AIS)

Completed:

- ACM Curriculum Guidelines for Associate-Degree Programs in Cybersecurity
- ACM Curriculum Guidelines for Two-Year Transfer Programs in Information Technology

International Efforts

- Educational efforts in China
- Educational efforts in India
- Educational efforts in Europe/Informatics for All
- Educational efforts in Brazil

Current Task Forces and Other Projects

1. Education in Ethics and Computing task force
2. Actionable Computing Enrollment and Retention (ACER) Data Analysis task force
3. Computing + X Curriculum task force
4. Resources for Instructors to Improve Teaching and Peer Mentoring Practices (EngageCSEdu)
5. NDC study
6. Learning@Scale conference

Activities and Engagements with ACM SIGs and Other Groups

ACM Organizations:

ACM CCECC, ACM India, ACM China, ACM Europe, SIGCAS, SIGCHI, SIGCSE, SIGGRAPH, SIGHPC, SIGITE, TOCE

Affiliated or External Groups

AIS, AITP/EDSIG, Code.org, ABET CSAB, CSforALL, CSTA, IEEE-CS, Informatics4All, IS2020, National Science Foundation, NCWIT, NDC Committee, ACM-W

Other Items

- Education Board membership rotation
- Education Advisory Committee membership rotation

Future Initiatives for FY'21

- Release of the Data Science Curricula
- Release of the CC2020 overview report
- Diversity, Inclusion, and Equity in Computing Education (DIE-CE) task force
- Standardization of ACM Curricula (StAC) task force

Highlights

This is a very short list of the many accomplishments of the year. For full view of the work to date, please see Section One: Summary of FY 2019-2020 Activities.

Special Projects

EngageCSEdu:

The EngageCSEdu repository and its contents have been transferred to ACM. The project is now being carried out as a special project of the ACM Education Board. An MOU between NCWIT and ACM detailing the final agreement of full transfer has been signed by both parties and the foundational technical work for the transfer of materials has begun.

Learning at Scale Conference:

The Learning at Scale (L@S) conference was created by the Education Board in 2014. Having shown a robust community, high-quality research, and financial viability, the meeting became an annual conference. The 2020 Learning at Scale (7th Annual) conference was held August 12-14 as a virtual conference due to the coronavirus pandemic.

NDC Survey:

The mission of the ACM NDC Committee is to produce the annual ACM NDC Study of Non-Doctoral Granting Programs in Computing, complementing the CRA Taulbee survey of doctoral-granting programs. The results of the 2018 survey (2018-19 NDC Study) were published in the September 2019 issue of ACM *Inroads*. The results of the review of the NCS 2016-17 data has been accepted for publication in *Inroads* and a final manuscript is being prepared.

Curricular Volumes

Cyber2yr2020: ACM Guidelines for Associate-Degree Cybersecurity Programs:

Cyber2yr2020 won the *Innovations in Cybersecurity Education* award in the Program Development category from the National CyberWatch Center. This award was publicly recognized at the 2020 virtual Community College Cybersecurity Summit (3CS) on August 4! Based on *Cyber2yr2020*, ABET/CSAB developed criteria for accrediting two-year programs in cybersecurity, which is a first for CSAB. The first reading of the program criteria is currently open for comment, while being piloted at three community colleges.

IT Transfer: Curriculum Guidelines for Two-Year Transfer Programs in Information Technology:

The Information Technology Transfer Curricula 2020: Curriculum Guidelines for Two-Year Transfer Programs in Information Technology are based on *Curriculum Guidelines for Baccalaureate Degree Programs in Information Technology* (IT2017). IT programs should prepare students with knowledge, skills, and dispositions in IT professional contexts that emphasize development of IT competencies. The goal of the IT Transfer Curriculum is to produce a subset of the IT2017 curricular framework and guidelines that will guide how two-year colleges could structure their IT transfer programs to help prepare transfer students for successful upper division study in programs that implement the IT2017 guidance. This work was led by the ACM Committee for Computing Education in Community Colleges (CCECC) with participation from SIGITE. A final draft was presented for feedback at the SIGITE conference, October 2019. The final IT Transfer Curriculum was released in May 2020 and initial dissemination efforts have begun.

CC2020:

Computing Curricula 2020 (CC2020) is a joint project launched by professional computing societies to examine the current state of curricular guidelines for academic programs granting degrees in computing and to provide a vision for the future of computing. The goal is to produce a comprehensive report and an online visualization tool that compares and contrasts these guidelines to situate and contextualize them in the landscape of computing education. The international project team represents organizations from academia, industry, and government. The CC2020 report draft has been reviewed by the Steering Committee and was sent to the broader 33-member task force for their reviews before being sent to all the task force members' communities, listservs, and industry globally in early 2020. The proof of concept and architecture of the visualization tool have been completed. The final report and the visualization are expected by December 2020.

Data Science Curriculum:

This task force seeks to define what the computing/computational contributions are to the new field of Data Science, in order to provide guidance for computer science or similar departments offering data science programs of study at the undergraduate level. The task force released and received feedback on a first draft of computing discipline-specific competencies for Data Science during fall 2019. The final Data Science curriculum is expected by December 2020.

Section One - Summary of FY 2019-2020 Activities

Education Board Strategic Priorities

The following are the strategic objectives for the Education Board (as agreed to by the Education Board and the Education Advisory Committee EAC).

- Provide a focus for ACM activity and leadership in the general area of computing education.
- Support the ACM's strategic objectives through activities and initiatives in computing education; this includes providing support for ACM's various Councils.
- Understand the education related needs and aspirations of ACM members—students, academics, practitioners (and their managers) and employers—and to respond appropriately on behalf of ACM.
- Provide leadership for the computing community in curricular development and curricular guidance; the community is to include all levels of education (specifically including K-12 activity) with the emphasis being on higher education, including two-year colleges
- Where possible, act on behalf of the computing community to increase the status and standing of computing education.
- Recognizing ACM's role as an international organization, understand the differing needs of the international community and to address these in Education Board and Education Advisory Committee considerations.
- Organize and manage meetings of the Advisory Committee, keeping committee members up-to-date with significant developments and generally managing the work of the committee.
- Approve ACM appointments to education-related bodies such as ABET, and keep informed about and engage in significant related activity.

Current Priorities

At a virtual meeting of the Education Advisory Committee, August 2020, the following priority areas were identified:

- Diversity, inclusion, and equity in computing education,
- Standardization of ACM curricular guidelines (post-secondary levels: associate, baccalaureate, and masters),
- Retention in computing (post-secondary levels: associate and baccalaureate),
- Ethics in computing education,
- International outreach, and
- K-12 computing and research.

Education Advisory Committee (EAC) FY 2019-2020 Activities

The current work of the EAC is detailed below by activity with task membership, current status and lessons learned. Future plans can be found in Section 2.

Projects & Task Forces

Learning@ Scale Conference:

ACM Education Board/EAC representatives: Mehran Sahami and Yan Timanovsky.

The Learning@Scale conference was created through the ACM Education Board in 2014. After a successful first outing (showing that there is a robust community, high-quality research, and financial viability) the meeting became an annual conference. Each year has had 110-200 attendees. The 2020 conference was the seventh conference in this series.

Year	Submissions	Accepted	Rate	Location
2014	38	14	37%	Atlanta, GA (SIGCSE)
2015	90	23	26%	Vancouver, Canada (CSCW)
2016	79	18	23%	Edinburgh, UK (LAK)
2017	105	14	13%	Cambridge, MA at MIT
2018	58	24	41%	London, UK (AIED+ICLS)
2019	70	24	34%	Chicago, IL (AIED)
2020	72	18	25%	Online

The Seventh Annual ACM Conference on Learning@Scale (L@S) was held online because of the pandemic. The conference was originally planned to be held at Georgia Tech in May, but the virtual event took place August 12-14. There were 186 online attendees and a new workshop program was established with 8 workshops. The fundraising totaled \$7,500 plus the original budget of ~\$20,000 to host the conference resulting in a surplus. Given surpluses from this conference and prior conferences (2014-19), L@S is projected to have a total surplus of roughly \$100,000 at this point. So, the conference still seems financially viable.

NDC Survey:

ACM Education Board/EAC representatives: Jodi Tims (Co-Chair), Stuart Zweben (Co-Chair), and Yan Timanovsky (Co-Chair).

The mission of the ACM NDC Committee is to produce the annual ACM NDC Study of Non-Doctoral Granting Programs in Computing, complementing the CRA Taulbee survey of doctoral-granting programs. This annual survey provides data to the computing community on Degree Production, Enrollments, and Faculty from Bachelor's and Master's programs in Non-doctoral-granting Departments in Computing including demographic information by gender and ethnicity. Activities for the past year include:

- Completed the report on the 2018 survey (2018-19 NDC Study). The report was published in the September 2019 issue of *Inroads*.

- Analyzed 2016-17 NCS data (from 927 institutions) on CS enrollment, graduation, and retention. Stu Zweben's submitted article has been accepted for future publication and the final manuscript is being prepared.
- Obtained 2017-18 enrollment, graduation, and retention data from NSC for all six bachelor's areas (including Cybersecurity).

Actionable Computing Enrollment and Retention (ACER) Data Project

ACM Education Board/EAC: Zweben (Chair). Task force members: Mihaela Sabin, Cara Tang, Jodi Tims, Beth Hawthorn, Beth Quinn, Rodrigo Duran, Mark Weiss, Cindy Tucker, Chris Peitch.

This task force is continuing and extending the work carried out in previous years by the Retention in Undergraduate CS Education Task Force. Its purpose is to collect, analyze, and report annually to the computing community on enrollment and retention data in computing programs. The deliverables for this year include:

- ACM Inroads publication (December 2019).
- Conference paper accepted
- ACM Inroads paper under development
- Additional data gathered from the National Student Clearinghouse and analyzed.
- Tracking of computing program graduates who continued their study of computing upon graduation at both the associate-level and baccalaureate level.

Computing for Social Good Task Force:

ACM Education Board/EAC representative: Mikey Goldweber (Chair). Task force members: Alison Clear, Judith Gal-Ezer, Lisa Kaczmarczyk, and Rick Blumenthal.

The goal of this task force is to elevate the message that computing curricula should focus, at least in part, on how computing can play an important part in helping to solve the issues of the day. This task force came into being at the August 2019 EAC meeting. The activities for this year include:

- The task force wrote successful proposal for a Special Session to be held at the SIGCSE Technical Symposium in March of 2020 but the conference was cancelled.

Computing + X Curriculum Task Force:

ACM Education Board/EAC: Steven Gordon and Andrew Petersen. Task force members: Mark Weiss.

The activities for this year include:

- The EAC showed interest in supporting "CS+X" programs. "CS+X" is defined as interdisciplinary efforts that integrate computing with another domain.
- Created a short survey that solicited courses and programs that were perceived as being "CS+X".

- The survey was sent via ACM-curated lists to both Doctoral (CRA Taulbee list) and Non-doctoral (ACM NDC survey) institutions. All 105 respondents were North American.
- Less than 25% of respondents identified an explicitly interdisciplinary program. Most who reported having such programs also had graduate programs. This is likely an undercount.
- We found programs we would consider “X+CS” at responding institutions that did not claim them.
- There are a wide variety of CS+X courses being offered throughout North America (the exact content of many of the programs is difficult to define).
- Follow-up review of websites found they often do not fully describe options and that “CS+X” programs were not claimed by respondents.
- Is there a need for model curricula in some of the CS+X categories (e.g., Data Science, Computational Biology, Computational Science)?
- The report given at the 2020 EAC virtual meeting concluded this task force.

Education in Ethics and Computing Task Force:

ACM Education Board/EAC representative: Bobby Schnabel (Chair). Task force members: Jake Baskin, Tom Cortina, Amy Ko, Mehran Sahami, and R.Venkatesh.

This task force was formed in August 2018. It has the broad charter of undertaking activities that help the ACM community in conducting education in ethics and computing.

Here is the summary of activities:

- Participated in submitting a proposal to the CRA Snowbird Conference on Ethics in Computing Education which was accepted as a panel. That panel (and most others) now is postponed to July 2021 due to the coronavirus pandemic.
- Made progress on initial goal for task force, assembling a broad list of articles/ references on ethics and computing topics, and a taxonomy for that list.

Task Force to Develop Resources for Instructors to Improve Teaching and Peer Mentoring Practices:

ACM Education Board/EAC representative: Briana Morrison (Chair). Task force members: Jake Baskin, Michelle Craig, Leigh Ann DeLyser, Andrew Petersen, and Beth Quinn.

This task force was created to help to locate, vet, and develop as needed two distinct sets of materials: Resources to Improve Teaching and Resources for Peer Mentoring. Here is the summary of activities:

- The task force has concentrated on the first set of materials and has identified *EngageCSEdu* (engage-csedu.org) as a vehicle/platform for collecting vetted instructional materials that use an *Engagement Practice* to broaden participation in computing.

- Efforts are underway to convert *EngageCSEdu* from an NCWIT project to an ACM Publication. Allowing the materials to continue to be open-access will ensure the maximum usage by other faculty at the university and the community college and even high school level.
- A final MOU between ACM and NCWIT has been executed.
- An editorial advisory committee has been selected and agreed to serve.
- Transfer of the resources from NCWIT to ACM is in progress.

International Education Efforts

Educational efforts in China

ACM Education Board/EAC representative: Ming Zhang.

SIGCSE China was established in November 2016. The purpose is to bridge the gap between the Chinese and global computing societies, develop the world's cutting-edge computer education scientific research in China with international impacts, and create more opportunities for collaboration among vigorous computing educators. There are 622 members.

Summary of activities:

- CNCC 2019, the China National Computer Congress was held in Suzhou, Oct. 17-19, 2019. AI + Leading the Development of Society. There were 15 plenary keynotes, 3 panels, 79 sessions, and 8000+ attendees.
- CECC 2019, Computer Education Conference of China was held in Xiamen, Dec. 6-8, 2019. A joint conference of Computing Advisory Committees of MOE China. There were 2 plenary keynotes, 8 talks, 15 sessions, 200 speakers, and 3000+ attendees.
- ACM TURC, the ACM Turing Celebration of China was held in Hefei, May 16-17, 2020 and included SIGCOMM China, SIGMOBILE China, SIGMOD China, SIGOPS China, SIGSAC China, SIGCSE China, SIGAI China, SIGAPP China.
- FCES 2020, Future Computing Education Summit was held both online and in person in Dongguan, Guangzhou, July 18-19, 2020. There were 4 plenary keynotes, 2 panels, 7 sessions, 46 speakers, 23000+ attendees.
- IWCE 2020, International Workshop on Computing Education was held August 22, 2020.

Educational Efforts in India

ACM Education Board/EAC representative: R. Venkatesh.

The committee has continued its focus on contributing to undergraduate curriculum development, teaching subjects, and bringing computing to schools. In 2018, India started summer schools on specific areas, aimed at encouraging students to undertake research in those areas. India also organized five summer schools. We have been holding regular workshops on teaching programming, setting exam papers and evaluation, and curriculum.

CSPathshala has reached more than 750 schools and more importantly our recommended curriculum has been adopted by government run schools.

Summary of key activities:

- *CSPathshala* - Bringing Computational Thinking to Schools
 - New education policy
 - More than 3000 students reached
 - Integrating curriculum with Math, in Meghe and Chennai
 - The 2nd CTiS (Computational Thinking in Schools) conference was held virtually because of the coronavirus pandemic and provided a platform for teachers to share experiences and resources, as well as interact with computer scientists. There were two feeder meets, the AP and Meghe groups.
- COMPUTE conference on Education Research
- Education webinars for both students and faculty
- Programming course task force

Educational Efforts in Europe: Informatics for All:

ACM Education Board/EAC representatives: Judith Gal-Ezer and Andrew McGettrick

Informatics for All is a Coalition involving ACM Europe, the Council of European Professional Informatics Societies (CEPIS) and Informatics Europe. The Coalition is managed by a Steering Group chaired by Wendy Hall and members Judith Gal-Ezer and Andrew McGettrick from ACM Europe, Gerald Futschek and Austėja Trinkunaite from CEPIS, and Michael Caspersen and Enrico Nardelli from Informatics Europe.

Here is a summary of activities:

- Engaged with the European Commission of the EU.
- Worked with Informatics Europe and CEPIS to foster education in CS.
- Increased the number and activities of ACM chapters.
- Work with ACM SIGs to increase the number of ACM conferences in Europe and provide ACM awards best papers.
- Encouraged nominations of ACM European members for the advanced member grades and ACM Awards.
- Supported ACM Summer Schools in Europe.
- Supported gender equality in European computing landscape.
- Collaborated with other organizations
- Supported the Heidelberg Laureates Forum.
- Continued important Informatics for All work - www.informaticsforall.org
 - Rome Declaration with more than 250 signatures created to promote the introduction in schools of informatics education as a scientific subject.
 - Translated into some languages
 - PISA Mathematical framework, Science Framework

- Engage with the new EU Commissioners (Georgi Dimitrov)
- Online Workshop (March, following Brussels Workshop)
- School Curriculum with CEPIS (Andrew, Michael, Enrico, and Judith)
- Extending the coalition to include IFIP

Educational Efforts in Brazil

ACM Education Board/EAC representatives: Itana Gimenes, Education Director of the Sociedade Brasileira de Computação (the Brazilian Computing Society)

Here is a summary of activities:

- Created a Covid Centre group to support members and community with information and political issues.
- Organization of SBC main conference which includes the Computing Education Workshop (WEI).
 - CSBC was scheduled to July 15th, moved to next November.
 - The online CSBC theme is Artificially Human or Humanly Artificial? Challenges for Society 5.0
 - A panel about Education in the Context of Society 5.0
- The Task Force on Retention (ACER) will also be analyzing data from the Brazilian Government (INEP) for SBC accessible sites.

Curriculum Efforts

Cyber2yr2020: ACM Guidelines for Associate-Degree Cybersecurity Programs:
ACM Education Board/EAC representatives: Cara Tang

The final draft of the curricular guidelines for the ACM Guidelines for Associate-Degree Cybersecurity Programs was released for global public comment in July 2019. After ACM Education Board approval in January 2020, the final guidelines were released and initial dissemination efforts began. The final report of *Cyber2yr2020* won *the Innovations in Cybersecurity Education* award in the Program Development category from the National CyberWatch Center. This award was publicly recognized at the 2020 virtual Community College Cybersecurity Summit (3CS) on August 4! Based on *Cyber2yr2020*, ABET/CSAB developed criteria for accrediting two-year programs in cybersecurity, which is a first for CSAB. The first reading of the program criteria is currently open for comment, while being piloted at three community colleges.

IT Transfer: Curriculum Guidelines for Two-Year Transfer Programs in Information Technology:
ACM Education Board/EAC representatives: Cara Tang and Mihaela Sabin.

The Information Technology Transfer Curricula 2020: Curriculum Guidelines for Two-Year Transfer Programs in Information Technology are based on *Curriculum Guidelines for*

Baccalaureate Degree Programs in Information Technology (IT2017). IT programs should prepare students with knowledge, skills, and dispositions in IT professional contexts that emphasize development of IT competencies. The goal of the IT Transfer Curriculum is to produce a subset of the IT2017 curricular framework and guidelines that will guide how two-year colleges could structure their IT transfer programs to help prepare transfer students for successful upper division study in programs that implement the IT2017 guidance. This work was led by the ACM Committee for Computing Education in Community Colleges (CCECC) with participation from SIGITE. A final draft was presented for feedback at the SIGITE conference, October 2019. The final IT Transfer Curriculum was released in May 2020 and initial dissemination efforts have begun.

CC2020:

ACM Education Board/EAC representatives: Alison Clear(Chair). Project members: Alison Clear, John Impagliazzo, Shingo Takada, Ming Zhang, Abhijat Vichare, Allen Parrish, Steve Frezza, Arnold Pears, Pearl Wang, Ernesto Cuadros, Heiki Topi, Las Waguespack, and Gerrit van der Veer.

Computing Curricula 2020 (CC2020) is a joint project launched by professional computing societies to examine the current state of curricular guidelines for academic programs granting degrees in computing and to provide a vision for the future of computing. The goal of the initiative is to produce a comprehensive report and an online visualization tool that compares and contrasts these guidelines to situate and contextualize them in the landscape of computing education. Ultimately, the project strives to help programs prepare graduates both academically and professionally to meet the challenges in the 2020s. The international project team represents organizations from academia, industry, and government.

The principal project sponsors are the Association for Computing Machinery (ACM) and the IEEE Computer Society (IEEE-CS) with additional sponsorship from Association for Information Systems (AIS), and Association for Information Technology Professionals (AITP/EDSIG). The project collaborators include Special Interest Group for Computer Human Interaction (SIGCHI). There is also a 33-member task force representing a further eight countries, making a global coverage of 13 countries.

The Steering Committee commenced their work in March 2017 with a survey of the current status of the curricular. We then planned a three-year project which would include a report and visualization tools to reflect the combination of all the areas of computing, concentrating on the ACM/IEEE-CS approved curricular.

The CC2020 report is in final draft form and has been reviewed by the Steering Committee. At the beginning of 2020, the final draft report was sent to the broader 33-member task force for their reviews and then was sent to all the task force members' communities, listservs, and industry globally. The proof of concept and architecture of the visualization tool have been completed. The steering committee is processing the last round of feedback and making final

edits. The completed report and visualization tools are scheduled for completion by December 2020.

Data Science Task Force

ACM Education Board/EAC representatives: Andrea Danyluk (Co-Chair) and Paul Leidig (Co-Chair). Task force members: Lillian (Boots) Cassel, Andrew McGettrick, David Culler, Hongzhi Wang, Christian Servin, and Scott Buck.

At the August 2017 ACM Education Council meeting, a task force was initiated to add to the broad, interdisciplinary conversation on data science, with an articulation of the role of computing discipline-specific contributions to this emerging field. Specifically, the task force is seeking to define what the computing/computational contributions are to this new field, in order to provide guidance for computer science or similar departments offering data science programs of study at the undergraduate level. The task force began its work in February 2018, released a first draft for comment in January 2019, and is now in the process of preparing a second draft for release this fall.

Here's a summary of activities:

- January 2019
 - Released first draft of computing discipline-specific competencies for Data Science. www.cs.williams.edu/~andrea/DSTF/index.html
 - Presentation at EAAI (Educational Advances in AI) and poster session at AAAL, Honolulu, HI (Danyluk, Buck)
- February 2019
 - Curriculum draft announced to SIGCSE mailing list
 - F2f meeting of task force prior to SIGCSE, Minneapolis, MN
 - Special Session at SIGCSE (Cassel, Danyluk, Leidig, Servin)
 - Participated in BoF at SIGCSE (Building Bridges for Data Science Education, organized by Mine Cetinkaya-Rundel, Duke University)
- March 2019
 - Comment period formally ended on 3/31 (comment link is still live)
 - Knowledge Area reorganization; formation of working groups to include participation from outside the task force
- May 2019
 - Presentation at Conference Board of the Mathematical Sciences (Danyluk, Rebecca Nugent, CMU, co-author of National Academies report on Data Science)
 - Panel presentation at CompEd, Chengdu, China (Wang)
- June 2019
 - Participation in ACM Data Science Summit, San Francisco, CA (Leidig)
- July 2019
 - Participation in ITiCSE Working Group on Data Science Education (McGettrick)
- August – November 2019
 - Panel presentation at Joint Statistical Meetings, Denver, CO (Danyluk)
 - F2f meeting of task force prior to EAC meeting in Toronto

- Task force conference calls; working group conference calls
- December 2019
 - Second draft report released for public review and comment
- January – November 2020
 - Outreach to gather feedback on the Draft 2 Report
 - Special Session at SIGCSE 2020
 - SIGCSE Bulletin article
 - Poster at SDSS 2020
 - Panel at ITiCSE 2020
 - SIAM Session on Diversity in Data Science
 - Various mailing lists
- Other Task Force Work
 - Soliciting / reviewing example data science courses
 - Edits based on feedback
 - Accessibility of curriculum document
- December 2020
 - Final Data Science Curricular Guidance

SIGs and Other Organizations Reports

SIGCAS

ACM Education Board/EAC representative: Mikey Goldweber.

SIGCAS addresses the social and ethical consequences of widespread computer usage. SIGCAS' main goals are to raise awareness about the impact that technology has on society, and to support and advance the efforts of those who are involved in this important work. Our members are computer professionals from both industry and academia, as well as ethicists, psychologists, sociologists and others. www.sigcas.org/about-sigcas/

Summary of activities:

- Members of SIGCAS wrote a success proposal for a Special Session for the 2020 SIGCSE Technical Symposium. Sadly, this event, designed for a face-to-face audience was cancelled due to the coronavirus pandemic.
- The group also assisted with SIGCAS in proposing a successful pre-symposium all-day event. The first half of the day was focused on incorporating the use of Humanitarian Free Open Source Software (HFOSS) projects into the classroom. The second half was focused on educating attendees on incorporating CSG-based assignments throughout the undergraduate curriculum Ethics (w/COPE).
- FY'20 was a big year for this area due to the publication of the revised ACM Code of Ethics.
- Social Media. SIGCAS runs an active social media presence (primarily Twitter) focusing on ethics in our digital world.

SIGCHI

ACM Education Board/EAC representative: Olivier St-Cyr

The Human-Computer Interaction (HCI) Community of Practice is a group of educators and industry partners interested in advancing and promoting HCI Education. The community currently lives on Facebook: [facebook.com/groups/HCI.Education](https://www.facebook.com/groups/HCI.Education).

Summary of activities:

- The HCI Living Curriculum is now online (<http://hclivingcurriculum.org/>) and we have started populating it with the different events we have ran in 2019-2020 and the different HCI education resources we have gathered in the past year.
- SIGCHI has approved an HCI Education task force in Fall 2019. The task force presented a report to the SIGCHI Executive Committee outlining HCI Education priorities, projects, and budget in January 2020. We are currently working with the SIGCHI Executive Committee on who to execute projects related to these priorities.
- The 2020 EduCHI symposium was approved by the CHI conference in April 2020. Due to COVID, the symposium moved online on April 26th, 2020 and was very successful.

SIGCSE

ACM Education Board/EAC representative: Mary Anne Egan

The scope of SIGCSE is to provide a global forum for educators to discuss research and practice related to the learning, and teaching of computing, the development, implementation, and evaluation of computing programs, curricula, and courses at all education levels, as well as broad participation, educational technology, instructional spaces, and other elements of teaching and pedagogy related to computing.

Summary of activities:

- Conferences held, or tried to hold amid the coronavirus pandemic, during 2020 include:

Conference	Location	Attendees	Paper Acceptance
Technical Symposium	Portland, OR, USA	2000*	31%
CompEd every other year	India in 2021	----	----
ITiCSE (moved online)	Trondheim, Norway	391	36%
ICER (moved online)	Dunedin, New Zealand	288**	23%

* There were over 2000 people registered for the Technical Symposium. The committee, with the board's approval, provided refunds for attendees who did not feel safe coming to the conference. We still had approximately 900 people on site when the Governor of Oregon disallowed any gatherings of more than 200 people, so it was cancelled hours before the opening keynote.

** The highest in-person attendance was 157.

- The SIGCSE Board funded ten special projects, a half day pre-symposium event for SIGCSE Committee on Computing Education in Liberal Arts, provided support for CRA-WP grad cohorts, and 20 travel-grants for first-time attendees to the technical symposium. We also held a workshop for Department Chairs, two doctoral consortia, and ten working groups.
- The special grants we funded are:
 - Developing Physical Manipulatives and Games for Teaching Advanced Data Structures
 - Decoding Doctoral Student Departure: Faculty and Student Perspectives
 - Dive into Systems - A Free Online Textbook for Introductory Computer Systems Topics
 - A 50-year retrospective on academic integrity and computer ethics in CS Education
 - Developing Ethics Modules for Core CS and DS Courses
 - The Crossroads of Computer Science: Stories of ‘Sideways’ and ‘Hidden’ Computer Scientists
 - Developing Coding Instruction Videos for K12 Hearing Impaired Students Using American Sign Language
 - The Firsts: Exploring the Intersectional Experiences of Black Women in Computing Who Were First to be Conferred Ph.D.s in Computing/Computer Science at Colleges/Universities
 - Mastery Learning in Programming Courses
 - An Online Tool for Easy-to-set-up and Auto-gradable Full Tracing Exercises
- Affinity Group meetings and an International Attendees Buddy program were instituted for the first time this year at the Technical Symposium. Unfortunately, with the conference canceled hours before the opening keynote address, we were not able to fully implement these programs.
- Three annual SIGCSE awards were given:
 - the Test of Time Paper
 - Outstanding Contribution to CS Education
 - Lifetime service to the Computer Science Education Community.

SIGGRAPH

ACM Education Board/EAC representative: Susan Reiser

The SIGGRAPH Education Committee, chaired by Ginger Alford, works to support educators in computer graphics and interactive techniques. The committee undertakes a broad range of projects and activities in support of the multidisciplinary (computer science, engineering, art) education community, such as developing curriculum guidelines, providing instructional

resources, organizing SIGGRAPH conference-related activities and outreach. Here is the summary of activities:

- Transitioning to a virtual SIGGRAPH2020 with a robust Education Program.
- Groovy Graphics, similar to SIGCSE's Nifty Assignments, assignments presented at SIGGRAPH2019 have been added to cgSource, with links to the full versions that live behind a paywall in the Digital Library (which is currently open in response to the pandemic).
- Work has begun on curated lists for curriculum: FX Simulation Fundamental (complete), Animation (underway), Traditional Computer Graphics (underway), and Digital Fabrication (underway).

SIGHPC

ACM Education Board/EAC representative: Steve Gordon

Over the past year, the SIG conducted several efforts to support computational science education. These have included the continuation of an international fellowship program, awards, travel grants to students, an online seminar series on computational science education, expanded participation in education chapter activities in both the US and Europe, and participation in several major conferences. Here is a summary of activities:

- SIGHPC again awarded 12 fellowships as part of the SIGHPC Computational and Data Science Fellowships. Of those awarded, 75% were women and 42% are underrepresented minorities in the area of study. SIGHPC also provides an award for outstanding Ph.D. dissertation and Emerging Leader in Technical Computing. The award winners can be found on the SIGHPC website (www.sighpc.org).
- The SIGHPC Education chapter has continued its webinar series on computational science. Topics have included integrating computational science in the physics and chemistry curriculum, student mentoring, and several other computational science education topics. The chapter also organized workshops on HPC training and education at SC2019, ISC2020, and the PEARC2020 conference. The event details along with YouTube videos of the webinars can be found at <https://sighpceducation.acm.org/events.html>.

SIGITE

ACM Education Board/EAC representative: Mihaela Sabin.

SIGITE provides a forum for the interaction of practitioners, educators, and others in the field of Information Technology Education to exchange ideas and engage in activities that advance the knowledge of its members, the curriculum, teaching, and the development and transfer of innovative concepts and applications in technology and pedagogy. Here is a summary of activities:

- The 20th ACM SIGITE 2019 annual conference, Tacoma, WA, had more attendees than last year (153 vs 145), 88 submissions (vs. 101 previous year), 56 papers (22 accepted, 39%)
- The 21st ACM SIGITE 2020 annual conference will be in Omaha, Nebraska, Oct 7-9, virtual format. Record number of submissions (118), overall submission rate 45%, increased quality of papers, new tracks (Teacher Experience Abstracts and Work in Progress Papers).
- 2-year IT Transfer Curriculum report was released in May 2020.

Committee for Computing Education in Community Colleges (CCECC)

ACM Education Board/EAC representative: Cara Tang.

A standing committee of the ACM Education Board since 1991, the global mission of the CCECC is *to serve and support community and technical college educators in all aspects of computing education*. The CCECC engages in curriculum and assessment development, community building, as well as advocacy in service to this sector of higher education. For more see ccecc.acm.org/about, ccecc.acm.org/about/charter, and ccecc.acm.org/about/members. Here is the summary of activities:

- Cyber2yr2020 – curricular guidelines for Associate Degree programs in Cybersecurity
 - Project started April 2018
 - Completed final draft with endorsement from ACM Education Board, Jan. 2020
 - Initial dissemination (mostly through online channels due to COVID)
 - Winner of Innovations in 2020 Cybersecurity Education Award from the National CyberWatch Center
- Cooperation with ABET in developing criteria for accrediting 2-year programs in Cybersecurity, based on Cyber2yr2020 guidelines, first reading criteria currently open for comment
- IT Transfer – curricular guidelines for IT transfer programs based on IT2017
 - Project started August 2018
 - Completed final draft with endorsement from ACM Education Board, May 2020
 - Initial dissemination (mostly through online channels due to COVID)
- Contributions to ACER committee (Actionable Computing Enrollment and Retention data)
 - Analysis of data on Associate-level students in CS, IT, and Cybersecurity
- Continuing presence at various conferences to support and build community, get feedback, and disseminate publications (physical events limited this year due COVID, and compensated with more online presentations)
 - Presentations, community college receptions, booth, sponsorship, or other activity at various conferences including SIGITE, SIGCSE, 3CS, CAE Community Symposium, ITiCSE, NICE Working Group, National CyberWatch webinar

- Continuing outreach via our web site, educator mailing list, social media, YouTube channel

CSTA

ACM Education Board/EAC representatives: Jake Baskin CSTA CEO, (Jane Prey and Bobby Schnabel serve on CSTA Board of Directors).

2019-20 was an outstanding programmatic year for CSTA. There has been lots of activity but a few key accomplishments:

- The annual conference grew to over 2900 registered attendees in a virtual environment, with 98% attendee satisfaction and exceeding all net revenue goals.
- CSTA grew to over 90 CSTA chapters, and implemented our new chapter rubric, with 78% meeting their growth goal for the year. Chapters held PD events supporting over 2500 unique participants over the program year.
- CSTA was awarded an EIR grant from the US Dept. of Education to fund CSforEL, a 4-year project to increase enrollment and success in AP CS for English learners in Southern California, Arizona and New Mexico. We kicked off our pilot PD in July of 2020.
- CSTA released the new 2020 CSTA Standards for CS Teachers, which will guide professional learning for the field
- CSTA re-launched the PD Committee to evaluate professional development opportunities for teachers.
- CSTA had a very successful first cohort of equity fellows, the first round of projects can be found at csteachers.org/equity.

Other Items

Education Board Rotation and EAC Rotation

The ACM Education Board and Advisory Committee rosters at the end of FY 2020 were as follows:

* denotes members whose terms ended at the end of FY'20 and Advisors rotating off

** denotes members who are no longer continuing

Education Board:

Members

Co-Chair	Jane C. Prey* (new Past Chair FY'21)
Co-Chair	Chris Stephenson
	Elizabeth K. Hawthorne (new Co-Chair FY'21)
Vice Chair	
Past Chair	Mehran Sahami *(new Chair Emeritus)
Members	Scott Buck *
	Tracy Camp **
	Andrea Danyluk
	Andrew McGettrick
	Alison Derbenwick Miller
	Paul Tymann **

R. Venkatesh
 NEW MEMBER FY'21
 Cara Tang (promoted from the EAC)
 Mihaela Sabin (promoted from the EAC)
 Michele Craig (promoted from the EAC)
 Paul Leidig (promoted from the EAC)
 Briana Morrison (promoted from the EAC)

ACM

Headquarters Yan Timanovsky
 Ex-Officio Jake Baskin (CSTA Executive Director)

Education Advisory Committee:

Members	Affiliation
Tom Cortina	Carnegie Mellon University
Michelle Craig	SIGCSE; University of Toronto (promoted to the Ed Board)
Janice E. Cuny	National Science Foundation **
Leigh Ann Delyser	CSforAll (CSNYC)
Mary Anne Egan	SIGCSE; Siena College
Susan Eisenbach	SIGPLAN; Imperial College London
Judith Gal Ezer	ACM Europe Council; The Open University of Israel
Armando Fox	Berkeley University
Mikey Goldweber	SIGCAS; Xavier University
Steve Gordon	SIGHPC
Shuchi Grover	STEM/CS Ed Researcher/Consultant/Trainer *
Chris Hundhausen	TOCE Editor *
Amy Ko	University of Washington **
Paul Leidig	CSAB rep; Grand Valley State University; Data Science Co-Chair (promoted to Ed Board)
Itana Gimenes	Brazil: Universidade Federal de Minas Gerais – UFMG
Brianna Morrison	University of Omaha (promoted to Ed Board)
Andrew Peterson	University of Toronto*
Beth Quinn	NCWIT
Donna Reese	CSAB rep; Mississippi State University (Emeritus)*
Susan Reiser	SIGGRAPH; University of North Carolina at Asheville
Mihaela Sabin	SIGITE, University of New Hampshire (promoted to the Ed Board)
Bobby Schnabel	University of Colorado-Boulder; Ed Council Ethics Task Force
Olivier St-Cyr	SIGCHI rep; University of Toronto
Cara Tang	CCECC Chair; Portland Community College (promoted to the Ed Board)

Peter Thiemann	SIGPLAN; University of Freiburg*
Jodi L. Tims	ACM-W; Northeastern University
Ellen Walker	Hiram College
Mark Allen Weiss	SIGCSE rep; Florida International University*
Pat Yongpradit	Code.org
Ming Zhang	ACM China; Peking University
Stu Zweben	NDC Study; The Ohio State University (Emeritus)

NEW MEMBERS FY'21

Diana Burley	American University
Christina Gardner-McCune	University of Florida
Alvaro Monge	California State University, Long Beach
Fay Cobb Payton	North Carolina State University
Chris Piech	Stanford University
Lisa Smith	Intel Corp.
Andrew Williams	University of Kansas, School of Engineering
Cindy Tucker	Bluegrass Community and Technical College
Andrew Williams	University of Kansas
Yan Timanovsky	Headquarters Liaison

Advisors

Alison Clear	CC2020; (SIGCSE); Eastern Institute of Technology
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Section Two – Future Plans

Priorities for FY'2020 - 2021

During the previous FY much progress was made on a number of fronts. New members of the Education Board and EAC are now in place. Below is a list of focus areas for FY2021.

New Ideas for FY'2020 – 2021

- New task force to address the Standardization of ACM Curriculum across the volumes of Computer Science, Information Technology, Cybersecurity, Data Science, Information Systems, Computer Engineering, and Software Engineering.
- New task force on Diversity, Inclusion, and Equity in Computing Education (DIE-CE)
- NDC data analysis
- Actionable Computing Enrollment and Retention (ACER) data analysis
- Education in Ethics and Computing task force
- 2020 NDC study
- Final transition of *EngageCSEdu* repository resources and work products from NCWIT to ACM.

Plans for Future Work

Learning@ Scale Conference

ACM Education Board/ EAC representatives: Mehran Sahami and Yan Timanovsky.

Future plans include:

- Planning for the Learning@Scale 2021 conference is underway. The event will be collocated with the eMOOCs conference at Hasso Plattner Institute in Potsdam, Germany. The joint conference will take place June 22-25, 2021.
- The organizing committee is considering options for a hybrid (in-person and online) conference. Concerns remain that in-person meeting or travel from US to Europe may not be possible at that time.
- The Call for Papers is being finalized.

NDC Survey

ACM Education Board/EAC representatives: Jodi Tims (Co-Chair), Stuart Zweben (Co-Chair), Yan Timanovsky (Co-Chair).

Future plans include:

- Obtain National Student Clearinghouse (NSC) data for 2019-20 to report bachelor's-level student data on enrollments and degrees for all six curriculum areas, including cybersecurity and possibly data science.
- Consider including retention data.
- Addressing ongoing struggles with obtaining faculty data via surveying units. Options include:

- Stop reporting faculty information.
- Engage the community to determine value and encourage participation.
- Target article for September 2021 *Inroads*, consistent with past years' publication schedule.

Actionable Computing Enrollment and Retention (ACER) Data Project

ACM Education Board/EAC representatives: Stu Zweben (Chair).

Future plans include:

- Analyze 2019-20 data (including data from Brazil) and prepare report(s) based on it.
- Publish results in suitable venue(s).
- Work on a multi-year data report based on retention data from the National Student Clearinghouse. Publish results in suitable venue(s). (It will be interesting to compare with data from the present COVID period.)
- Work with area leaders (e.g., Paul Leidig, Mihaela Sabin, and Cindy Tucker) to obtain and analyze data from the NSC about 2019-20 CS students who were not retained and possibly other computing disciplines, such as IT and Cybersecurity. Assess utility of this data for future investigations.

Computing for Social Good Task Force

ACM Education Board/EAC representative: Mikey Goldweber (Chair)

Future plans include:

- Prepare and run a Special Session on Computing for Social Good at the SIGCSE Technical Symposium in March 2021.
- The task force is exploring the creation of a set of Webinars for disseminating the "how to" portion of the canceled 2020 Special Session.

Education in Ethics and Computing Task Force

ACM Education Board/EAC representative: Bobby Schnabel (Chair)

Future plans include:

- Figure out the task force's role in constructing an ethics and computing taxonomy, and possibly help research and develop this taxonomy. Need more agreement on the taxonomy.
- Figure out the task force's role in creating an ethics and computing "repository" (courses, references, modules) and begin moving this forward. Initial plan is to create a crowd-sourced list of references on topics related to ethics and computing.
- Coordinate with related ACM efforts, including COPE and Computing and Social Responsibility.
- Create and distribute initial communications to the ACM community.
- We had planned to have a student assistant help us make progress on these goals this summer, and then a pandemic happened. Need to revisit student assistance.

Developing Resources for Instructors to Improve Teaching and Peer Mentoring Practices - CSEngageEdu:

ACM Education Board/EAC representative: Briana Morrison (Chair).

Future plans include:

- We are hopeful that during the 2020 calendar year the initial launch of *EngageCSEdu* as an ACM publication will occur. Initially, the *EngageCSEdu* platform will continue to reside on an NCWIT-owned server and maintained through joint efforts of NCWT and ACM Pubs. Eventually, complete ownership would be ACM Pub's responsibility which will involve migrating the existing platform to an ACM server, likely at a significant one-time cost. However, we are aware that ACM does have a Development Fund available to fund this effort if so desired.
- In the next year the task force intends to concentrate on looking at the second set of resources, those for peer mentoring.

Diversity, Inclusion, and Equity in Computing Education (DIE-CE) Task Force

ACM Education Board/EAC representatives: Alison Derbenwick Miller (Co-Chair) and Pending confirmation (Co-Chair).

This is a newly-instantiated committee. Future plans include:

- Finalize committee Co-chairs
- Develop CS education focused activities that support its scope and mission.
- Collaborate with other ACM diversity focused committees.

Standardization of ACM Curricula (StAC) Task Force

ACM Education Board/EAC representatives: Cara Tang (Co-Chair) and Mihaela Sabin (Co-Chair)

This is a newly-instantiated committee as of August 2020 at the virtual EAC annual meeting.

Future plans include:

- Rough plan:
 - Year 1: Plan the work, survey what is out there, collect opinions from those who have been involved.
 - Year 2: Do the work, write the StAC document.
- Draft rough scope for StAC
- Form StAC task group
- Survey Chairs of recent curricular projects
- Recommendations should address both content of the curricular guidelines document and the experience of developing the curricular guidelines

CC2020

ACM Education Board/EAC representative: Alison Clear (Chair)

Future plans include:

- Release of the final curriculum report and visualization tools by December 2020.

Data Science:

ACM Education Board/EAC representatives: Andrea Danyluk (Co-Chair) and Paul Leidig (Co-Chair)

Future plans include:

- Finish updates and address issues of accessibility.
- Gather and evaluate course examples for inclusion in final document.
- Release of final curriculum document by December 2020.

Committee for Computing Education in Community Colleges (CCECC)

ACM Education Board/EAC representative: Cara Tang (Chair)

Future plans include:

- Disseminate Cyber2yr2020, including program example collection and mappings to other frameworks.
- Continue cooperation with ABET on accreditation of associate-degree cybersecurity degree programs.
- Disseminate IT Transfer2020 including program example collection and mappings to other frameworks.
- Collaborate with ACER EAC committee to complete and publish report on enrollment and retention data.
- Revise and update our Bloom's verbs list. This is an important tool in associate degree curriculum guidelines, to facilitate formulation of computing-based competencies / learning outcomes.
- Continue support of other ACM groups and projects with community college perspective, as appropriate (e.g., Data Science task force, SIGCSE community college liaison).
- Continue presence at conferences and outreach via various channels.
- Continue maintaining web site as a resource for educators, and educator mailing list.

CSTA

ACM Education Board/EAC representative: Jake Baskin CSTA CEO, (Jane Prey and Bobby Schnabel serve on CSTA Board of Directors)

Future plans include:

- Invest in virtual professional learning and community opportunities.
- Develop a regular webinar series.
- Provide more in-depth professional development modules.

- Work with chapters to increase the professional development they offer, with a specific focus on supporting local conversations on addressing racism in CS.

Educational Efforts in China

ACM Education Board/EAC representative: Ming Zhang.

Future plans include:

- The ACM China Turing Award Celebration Conference 2020 (TURC 2021) will be held on May 23-24, 2021, in Hefei, China.
- Promote MOEC + NSFC joint grants (emerging engineering education).
- International Workshop on Computing Education (IWCE) August 2021.

Educational Efforts in India

ACM Education Board/EAC representative: R. Venkatesh

Future plans include:

- Continue *CPathshala*: the national education initiative of computational thinking.
- Continue education webinars for both students and faculty.
- Continue programming course task force.
- Organize COMPUTE 2021 International symposium on education research.

Educational Efforts in Europe: Informatics for All

ACM Education Board/EAC representatives: Andrew McGettrick and Judith Gal-Ezer

Future plans include:

- Increase the number and activities of ACM chapters.
- Work with ACM SIGs to increase the number of ACM conferences in Europe and provide ACM awards best papers.
- Encourage nominations of ACM European members for the advanced member grades and ACM Awards.
- Support gender equality in European computing landscape.

Educational efforts in Brazil

ACM Education Board/EAC representatives: Itana Gimenes, Sociedade Brasileira de Computação (the Brazilian Computing Society)

Future plans include:

- Organization of SBC main conference which includes the Computing Education Workshop (WEI). CSBC was scheduled to July 15th, moved to next November, online due to the coronavirus pandemic.
- Rodrigo Duran will continue working with the ACER task force.
- Continuing work on improving engagement and retention in computing courses and careers.

- Working in partnership with the SBC industry board to identify competence deficiencies in Brazilian industry.
- Looking at the possibility of expanding the post-graduation access into a certification.
- Working on introducing computing into basic education (school and high school).
- Exploring the impact of the ACM 2020 on National Curricula.

SIGCAS

ACM Education Board/EAC representative: Mikey Goldweber.

Future plans include:

- Collaborate with other ACM SIGs on issues relating to Computing for Social Good-Ed focus (including HFOSS and ethics focus).
- Submit a pre-conference workshop to virtual SIGCSE 2021.
- Interested in running workshops at regional educational, and conferences from other SIGs, but currently lack funding for this (this is a decision of the SIGCSE Board).

SIGCHI

ACM Education Board/EAC representative: Olivier St-Cyr.

Future plans include:

- Continue to populate the HCI Living Curriculum site, <http://hclivingcurriculum.org/>.
- Plan to run 4 to 5 online events to increase participation in community of practice and gather more resources on HCI education.
- Eventually transition the EduCHI Symposium to the EduCHI stand-alone conference.
- The HCI Education Task Force will present a report to the SIGCHI Executive Committee outlining HCI Education priorities, projects, and budget. SIGCHI EC is currently looking at ways to establish budget for projects, leverage the ACM website servers, and establishing funding for a few students to help us with projects.
- From the Spanish-speaking community, lead by HCI-collab network and AIPO society, in 2019 they did the action "One Year of HCI Webinars in Spanish"
- Following the success of the "One Year of HCI Webinars in Spanish", plan to develop 2nd year. Have submitted an article to ACM INTERACTIONS magazine explaining the details.
- Prof Mac van der Merwe (University of South Africa) will present a talk on 'Challenges and opportunities for teaching HCI at a distance: Reflections from The University of South Africa' at the 2 September 2020 event of the Protea SIGCHI Chapter.

SIGCSE

ACM Education Board/EAC representative: Mary Anne Egan.

Future plans include:

- Continue making changes to the leadership and governance processes for our conferences. Both ITICSE and ICER have steering committees to manage the direction of the conferences including recruiting and supporting conference committee members.

- SIGCSE 2021 will be a virtual conference.

SIGGRAPH

ACM Education Board/EAC representative: Susan Reiser.

Future plans include:

- Continue progress on website and curriculum efforts.
- Transition to a virtual SIGGRAPH2020 with a robust Education Program.

SIGHPC

ACM Education Board/EAC representative: Steve Gordon.

Future plans include:

- Continue the awards programs by SIGHPC.
- The SIGHPC Education chapter will continue its webinar series and is expected to sponsor additional education and training workshops. The next scheduled workshop is a virtual workshop in conjunction with SC2020 November 9 - 19, the International Conference for High Performance Computing, Networking, Storage, and Analysis.

SIGITE

ACM Education Board/EAC representative: Mihaela Sabin.

Future plans include:

- Future SIGITE conferences have been scheduled for:
 - 2021 in Salt Lake City, hosted by Brigham Young University.
- ABET CSAB/CAC IT Subcommittee received approval for the Second Reading of the IT program criteria updates, July 2020.
- Three SIGITE members on the IT subcommittee will hold a panel at SIGITE 2020 in October to discuss implementation steps.
- SIGITE has been participating with six members on the IT Program Subcommittee of the ABET CAC/CSAB, charged with updating the IT Program accreditation criteria in light of the IT2017 Report, *Curriculum Guidelines for Baccalaureate Degree Programs in Information Technology*, released in December 2017. This is a multi-year process with the end-goal of having the updates approved by ABET/CAC/CSAB in 2020 and the new IT Program Criteria in place for site visits in 2021.
- Strategic Directions
 - Continue successful practices at SIGITE conferences, such as IT Chairs meeting and Standing Conference Planning Committee.
 - Add a special conference track for master's thesis and doctoral research
 - Increase student travel scholarships,
 - Attract and recruit community college faculty to the SIGITE membership and conferences.

~~~ end of report ~~~