

**Minutes of the Control Systems Society Board of Governors Meeting**  
**June 30, 2020**  
**Zoom in lieu of Denver, Colorado, USA**

**1. Call to Order and Approval of Agenda**

President A. Annaswamy called the meeting of the Control Systems Society (CSS) Board of Governors (BoG) to order at 12:00 PM (Mountain Time, US) on June 30, 2020. She welcomed all attendees and reminded BoG about the objectives of the meeting. After reviewing the meeting procedures, including the mechanism for voting on motions using Zoom, she asked the attendees to introduce themselves. The following members of the BoG were in attendance:

- Alleyne, A.
- Annaswamy, A.
- Balakrishnan, V.
- Beck, C.
- Bitmead, R.
- Cassandras, C.
- Cortes, J.
- Dadras, S.
- Di Benedetto, M. D.
- Duarte, M.
- Egerstedt, M.
- Franco, E.
- Gayme, D. F.
- Giua, A.
- Hespanha, J.
- How, J.
- Kalsi, K.
- Krstic, M.
- Lin, Z.
- Mostofi, Y.
- Padhi, R.
- Pappas, G.
- Parisini, T.
- Scherpen, J. M. A.
- Sun, J.
- Yildiz, Y.

Additionally, the following visitors attended the meeting:

- Bullo, F.
- Castañón, D.
- Chakrabarty, A.
- Chong, E.
- Devasia, S.
- Doyle, F.
- Fleisher, A.
- Patel, R.
- Samad, T.
- Taha, A.

**2. Approval of Minutes**

Quorum was established, and the meeting agenda approved with unanimous consent. Next, the minutes of the BoG meeting of December 2019, held in Nice, France were approved unanimously.

**3. Approval of Record of Electronic Motions of February, March, and May, 2020**

Next, the record of approval by BoG of various electronic motions was approved unanimously.

**4. Consent Agenda**

Annaswamy asked the BoG for approval of the consent agenda, and received unanimous approval.

Before moving to the discussion of action items, Annaswamy welcomed Santosh Devasia, the General Chair of ACC'20, who thanked the community for the strong support received by the

conference organization and praised the lessons learned from the virtual format.

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### Action Items

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Vice President for Member Activities, M. Egerstedt, presented the following motion.

- **Motion:** *Introduce an IEEE CSS member reduced registration tier for CCTA and CDC.*

Egerstedt explained that other IEEE societies make a distinction, when it comes to conference registration fees, between their members and just general IEEE members. The goal of the motion is to encourage CSS membership. The idea is for this to be financially neutral, with the reduction in cost for CSS members being offset by the increase in cost for non-CSS members. The roll-out for this initiative would be during 2021.

F. Bullo expressed support and suggested the possibility of rolling the CSS membership fee into the registration itself. Egerstedt mentioned that this implementation was considered, but eventually discarded given the need to actively manage the details, as opposed to the simplicity of simply creating an additional registration tier for CSS members. D. Gayme suggested putting a link on the conference registration page to become a member of CSS and get the conference registration discount. It was generally agreed that this was a good idea. The motion passed unanimously.

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Egerstedt then presented the following motion.

- **Motion:** *Increase the CDC student support levels to \$50K per year.*

Egerstedt prefaced this initiative by pointing out that CSS is in good standing financially, allowing us to use funds to serve our membership (particularly students). The current support model is \$40K for CDC and \$20K for CCTA, but there is more interest among students than there are funds when it comes to CDC, hence the motion.

R. Padhi proposed an amendment to allocate \$5k more for CCTA student support and maintain the 2:1 ratio between CDC and CCTA. D. Gayme asked if the increase in the motion was enough to cover the average shortfall. Egerstedt confirmed this to be the case, since CCTA student attendants are usually covered with the current support level. Regarding the proposed amendment, Egerstedt pointed out that that CSS does not want to run a surplus if it can be avoided, and that the current CCTA support of \$20K covers the demand from students. C. Cassandras proposed to lump both CDC and CCTA together into a student conference support bin. To the suggestion of spending for CDC support whatever extra money had not been spent in CCTA support in a given year, J. Sun clarified that these are separate budget items, and the money cannot easily be transferred from one to the other (IEEE, not CSS, is the actual entity that cuts the check for this support). Annaswamy seconded the suggestion of keeping an eye on CCTA support needs for the future in case they need adjustment.

Annaswamy first called a vote on Padhi's proposed amendment, which was declined with 10 in favor, 12 against, and 4 abstentions. After this, BoG voted on the original motion, which passed unanimously.

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Vice President for Technical Activities, J. Hespanha, presented the following motion.

- **Motion:** *To create a new IEEE CSS Technical Committee on Security, Privacy, and Resiliency.*

Hespanha explained that the scope of interest of the TC is on system-theoretic approaches to address the security, privacy, and resiliency of control systems and their applications in diverse areas, such as transportation, energy, water and gas distribution, and healthcare. The TC aims to engage researchers from multiple topical areas in CSS.

There was no discussion and the motion was approved with one abstention.

J. How asked if there is a process by which we review TCs and evaluate whether some need to be restructured or closed down. Hespanha explained that every TC writes an annual report of activities to BoG (presented at the December meeting) and that we keep an eye on non-performing TCs.

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Vice President for Conference Activities, A. Giua, presented the following motion.

- **Motion:** *To continue to ask all TCS-conferences to pay \$1000 (and \$1000/m if there are m sponsoring IEEE OUs).*

Giua explained that, starting in 2021, IEEE has adopted a new Full Cost scheme for technical co-sponsored (TCS) conferences. The new policy will change the current \$1000 fee + \$15/paper published in IEEE Xplore to \$1450 + \$22/paper. The motion seeks to make TCS conferences supported by CSS not experience any change with respect to the current model by having CSS absorb \$450 of the conference fee as well as the full \$22/paper cost if acquiring the proceedings. The rationale is that the increased full cost may discourage the organizers of small/medium size conferences from applying to CSS for technical co-sponsorship, and CSS believes that offering technical co-sponsorship is a valuable service to our members. It was emphasized that this motion will imply that we will apply this subsidy for cases where we have a multi-year agreement (ex. SICE, EUCA). Giua also pointed out that CSS receives a significant income from IEEE Xplore from the acquired proceedings. Finally, Giua pointed out that the financial impact of the motion does not take into account paper transactions. Typically, the Xplore distribution revenue from TCS conferences has been significantly higher than the cost for publication, and he does not expect this will change with the new scheme.

G. Pappas expressed support for the motion, in particular CSS absorbing the \$22/paper cost. The motion was approved with one abstention.

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Vice President for Conference Activities, A. Giua, introduced the following motion, which was presented by the General Chair for CCTA 2023, A. Alleyne.

- **Motion:** *To approve Bridgetown, Barbados as venue for CCTA 2023.*

Alleyne presented an overview of Barbados and the likely hotel venue (Barbados Hilton in Bridgetown). As an English speaking Caribbean island, Barbados borders the Atlantic Ocean on the east and the Caribbean Sea on the West. It is accessible by direct flights from the U.S., Canada, and the U.K. Alleyne has negotiated excellent rates with the hotel (refurbished in 2017). BoG expressed excitement about the venue and the prospects of attending CCTA 2023. D. Gayme questioned if the conference dates may conflict within the hurricane season, and Alleyne indicated that hurricane season starts later than the conference dates.

The motion passed unanimously.

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(T. Parisini, J. Hespanha, M. Di Benedetto, and J. Sun were not present when the following motion was considered.)

As Chair of the Nominating Committee, R. Bitmead provided the background on the Nominating Committee and its duties and procedures. R. Bitmead presented the following motion.

- **Motion:** *To approve the following 2021 Executive Committee slate:*
  - *President: Thomas Parisini (2021,2022)*
  - *~~President-Elect:~~*
  - *Past President: Anuradha Annaswamy*
  - *VP-Conference Activities: Alessandro Giua*
  - *VP-Finance Activities: João Hespanha*
  - *VP-Member Activities: Marika Di Benedetto*
  - *VP-Publication Activities: Andrew Alleyne*
  - *VP-Technical Activities: Jing Sun*
  - *Director of Operations: Jorge Cortés*

Bitmead discussed the changes made to the CSS Constitution and Bylaws that went into effect in May 2020. He spent some time explaining how the move to the two-year presidency means that, during the first year, there is no President-Elect, and during the second year there is no Past President.

J. Scherpen sought clarification on who chairs the Nominating Committee when there is no Past President, and Bitmead clarified that it is the President.

The motion was approved unanimously.

(T. Parisini, J. Hespanha, M. Di Benedetto, and J. Sun rejoined the meeting.)

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Bitmead then presented the following motion.

- **Motion:** *To authorize ExCom to make a deposit into the CSS Fund with timing to acquire approval at the November 2020 IEEE Board of Directors meeting. The amount will be determined by ExCom within the range [\$700K, \$1M].*

Bitmead provided the background for the motion. In 2019, CSS made an historic surplus of \$3.1M, with \$1.57M from operations, roughly \$0.91M from publications and \$1.47M from conferences, and \$1.69M from investments of our Reserves. This adds to CSS 2020 money of \$0.783M under the 50%-spending rule, being 50% of the \$1.566M operating surplus excluding Projects. CSS is on track to make a more moderate surplus and to underspend on budgeted monies of \$189k, including projects. Projects largely include student travel to attend conferences, outreach and inclusion efforts, for which the CSS Fund was set up. The approval process for the contribution to the fund requires approvals by: 1. IEEE Technical Activities Board Finance Committee; 2. IEEE Finance Committee; and 3. IEEE Board of Directors. The final meeting of the Board of Directors for 2020 is in November. By September-October we should be apprised of the likely end-of-2020 CSS financial position. If the money is not contributed to the fund, it would move to CSS Reserves at the end of 2020, with some perhaps returning via 50%-spending rule in 2021.

D. Castañon inquired about what type of activities can be funded with the CSS Fund. Egerstedt

stated that the fund can be used for outreach, humanitarian activities, new membership initiatives, student travel support, fellowships, etc. The fund also protects CSS from financial variations from year to year. T. Samad asked if other societies have similar funds, and Bitmead responded affirmatively, clarifying that the CSS fund was patterned by then President F. Bullo and VP Financial Activities M. Egerstedt after the Power and Energy Society Fund. F. Bullo had a question about the exact numbers on the financial information in the background of the motion, and Bitmead deferred until the financial report to be presented later by Sun for further clarifications. C. Beck inquired in particular about the significant amount that CSS makes from conference activities, and Bitmead and Sun explained that many items contribute to it, including registrations and paper downloads through IEEE Xplore. R. Padhi asked if the fund could be used for new CSS chapter activities, and Bitmead confirmed this to be the case. J. Cortes brought up the question of whether \$1M was the right upper bound for the motion given CSS projected financials. After some discussion, the general agreement was that it was, and it seems reasonable to start cautiously adding money to the fund keeping in mind the surplus for forthcoming years.

The motion passed unanimously.

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### **Informational Items**

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#### **2020 Elected BoG Members**

R. Bitmead informed BoG that a ballot consisting of nine candidates was sent by IEEE on 6 April 2020 to all IEEE CSS members for the election of six members to the Board of Governors. The IEEE CSS BOG members elected for a three-year term from 1 January 2021 to 31 December 2023 are:

- Danny Abramovitch
- Graziano Chesi
- Naomi Ehrich Leonard
- Maurice Heemels
- Christophe Prieur
- Sarah Spurgeon

Bitmead also informed BoG that, as part of the transition to the two-year presidency, it is the responsibility of the Nominating Committee this year to appoint 3 members to BoG for a 2-year term and another 3 members for a 1-year term. This must be done before the December meeting. He welcomed suggestions from BoG to be sent directly to the Nominating Committee.

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#### **Covid Control Community Project**

Annaswamy presented information on the joint CSS-IFAC website, the Corona Control Community Project, for information on the coronavirus and the control community at <https://covid.ieeecss.org>. She encouraged everybody to use it and advertise it among local networks.

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#### **CDC Going Virtual**

Giua informed BoG that CDC 2020 will be a completely virtual event, running from Monday to Friday. The weekend prior will be devoted to workshops. 1-day workshops will be split as 2 ½-day workshops. This schedule will permit the organizers to concentrate the program in a few

hours per day, allowing people with different time zones all over the world to attend it.

T. Samad mentioned that IFAC had stretched the program of the World Congress turning it into a 2-week conference. G. Pappas suggested that CDC 2020 should provide free registration for CSS student members, and the rest of BoG expressed support for this idea. Responding to a question by Parisini, Annaswamy explained that BoG will have to vote on virtual registration rates for CDC 2020 electronically.

### Awards Ceremony at the CDC

Since CDC 2020 will be completely virtual, J. Cortés asked the BoG for suggestions regarding the format of the Awards Ceremony. He mentioned two models have emerged during the pandemic: either postponing it to the next year or holding it virtually. J. Scherpen thought the ceremony should not be delayed and Bitmead agreed. Many on the BoG thought that the winners should be acknowledged virtually at CDC 2020, but be presented with a physical award at CDC 2021. Cortés and Annaswamy requested that ideas and suggestions for format be forwarded directly to them.

### Update on CSS Technically Co-sponsored Conferences

Giua provided an overview on the impact of the COVID19 pandemic on the status of CSS TCS conferences for 2020, see table below. Many have gone virtual or are postponed/cancelled, with a number of them scheduled for later in the year having made no decision yet.

Conference	Dates	Changes	Venue	PA	Summary		
ICC	Dec 16-18		Mumbai, India	Y	canceled	1	5%
ICARCV	Dec 13-15		Shenzhen, China	Y	postponed to 2021	4	20%
ANZCC	Nov 26-27	virtual	Gold Coast, Australia	Y	postponed fall 2020	2	10%
ICSC	Oct 14-16	2021	Caen, France	Y	virtual	4	20%
ICSTCC	Oct 8-10		Sinaia, Romania	Y	hybrid	2	10%
Allerton	Sep 29-Oct 2	2021	Monticello, IL, USA	Y	no changes (yet)	7	35%
VSS	Sep 9-11	2021	Rio de Janeiro, Brazil	Y			
MMAR	Aug 24-27	2021	Międzyzdroje, Poland	Y			
ICCA	Jul 6-9	plan: postponed + hybrid	Sapporo, Japan	Y			
CCC	Jul 27-29	plan: hybrid	Shenyang, China	Y			
MED	Jun 16-19	Sep 15-18, advance pub	St Raphaël, France	Y			
WiOpt	Jun 15-19	virtual	Volos, Greece	Y			
ICUAS	Jun 9-12	Sep 1-4, advance pub	Athens, Greece	Y			
CCDC	May 23-25	Sep 1-4, virtual, advance pub	Hefei, China	Y			
ECC	May 12-15	virtual synchronous	St Petersburg, Russia	Y			
ISCS	March 3-5	canceled, proc published	Tokushima, Japan	Y			
INDICON	Dec 11-13		New Delhi, India	N			
CEECT	Dec 10-13		Melbourne, Australia	N			
CPHS	Dec 3-5		Shanghai, China	N			
ICCAS	Oct 13-16		Busan, S. Korea	N			
					TOT	20	

### Update on IEEE Virtual Conferences

Annaswamy provided an update on the impact of COVID19 across IEEE. Across the board, IEEE conferences have become virtual, postponed or cancelled (approximately, in proportions 80%, 15%, and 5% respectively). Conference surplus has come down; but so have expenses (~1% loss of total income). Expected to have lingering effects (all of 2020; some in 2021; possibly in 2022). Virtual registration rates average \$100 (while regular registration may be \$500 to \$800). Several conferences have been allowing non-author participants to register for

free. Annaswamy pointed out that some version of virtual conferences is here to stay.

V. Balakrishnan suggested that, due to the virtual trend, we need to rethink and articulate the value of in-person conferences in the future. Parisini emphasized that these challenges also present opportunities to increase the space for discussion and interaction among conference attendees. Annaswamy reinforced this point, stating the possibilities enabled by platforms like Youtube and Slack. Egerstedt stated that the carbon footprint of our conferences is significant, and going virtual could help reduce this.

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## **CSS Control Forum**

A. Taha (Electronic Information Chair) and A. Chakrabarty (Electronic Outreach Coordinator) presented plans for creating a Control Forum. Taha explained that the idea is to establish a forum to enhance visibility of CSS-related information and news and facilitate discussions among the community on topics of interest such as research questions, coding problems, sharing codes, jobs, and journals' CFPs. The forum is envisioned as a real-time E-letter, where information is sorted out and organized into themes. While the model presented by Taha was similar to the Power Systems Forum, he mentioned that its actual implementation will require dedicated funding. Initial discussions with Conference Catalysts (CC) suggest they have plug-and-play options that may allow them to go live as early as October 2020. Forum users would be able to select the frequency with which they receive email notifications.

BoG expressed enthusiasm for the initiative and offered various suggestions going forward. D. Gayme warned about receiving too many emails from the platform to avoid causing user fatigue, something that could be avoided with the mentioned ability to select the frequency of notifications. Samad questioned the advantages over other platforms like Facebook or LinkedIn, to which A. Chakrabarty responded that these do not have as much flexibility (e.g., sharing code) and are not used for the types of activities envisioned by the Forum. R. Padhi asked about what type of format (website, smartphone app), and offered the possibility of using Slack as a viable option (without the need to resort to CC, something strongly seconded by Parisini). Alleyne wondered if the Forum will eventually render the eLetter unnecessary, something to which Taha agreed.

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## **Reimbursements Grants for Child Care**

Egerstedt described the plan to implement the CSS Child Care Reimbursement program approved by BoG meeting in December 2018, at Miami Beach, Florida. Grants of up to \$500 per family will be given as reimbursements for reasonable expenses (incurred when bringing children to the conference or leaving children at home while attending the conference) after the conference. The expenses must be documented and the process will be managed by the Diversity and Inclusion (DI) Chair, a new conference organizing committee position. Egerstedt expressed excitement about having recruited Richard Murray as the DI Chair for CDC 2021

D. Gayme questioned if \$500 will be enough. Egerstedt stated that this is a starting point to lower barriers and both he and Annaswamy pointed out that the initial implementation can be taken as an experiment to try to best serve the needs of the community which can be revised afterwards. Alleyne mentioned caregivers that are not salaried and raised the issue of the type

of documentation required to justify expenses, bringing up the possibility of offering templates and guidelines to parents as to what will be acceptable forms of documentation (e.g., D. Gayme asked about whether a copy of the check paid to a caregiver, with childcare in the purpose line, would qualify, to which Bitmead responded negatively based on IEEE practice). F. Bullo, which as 2018 President, set in motion the initiative, explained that the program is set up as a grant (with minimal needs for receipts and formal oversight) instead of as a reimbursement, because the latter is taxable. If the amount were beyond \$600, then it will require a much more onerous process, triggering the collection of tax id numbers of the parents, etc. Y. Mostofi suggested the idea of creating various levels of support in the future to account for differences in caring costs (e.g., newborns). Parisini supported adjusting the support amounts based on the child's age, and urged BoG not to take a US-centric view in addressing the issue. F. Bullo explained that the guidance from IEEE to set up the program emphasized avoiding discretion in decision making to minimize the chances of litigation. Annaswamy stated that other organizations are watching us for this effort, and Egerstedt confirmed that the Robotics and Automation Society wants to mimic the initiative. There are already a number of existing programs out there, including by SIAM, APS, AMS, and IEEE NPSS. Some universities have also set up dependent care travel grant programs.

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### **CSS Technical Committees (TCs) Student Prizes**

Hespanha described plans for creating TC-specific Student Prizes, as part of an initiative to increase the value of TCs to our members. He provided a description of the rationale, the timeline, and the nomination and selection processes. At the moment, we are ready to move forward with 2 prizes: one by Hybrid Systems + Discrete-Event Systems, and Health and Medical Systems (perhaps adding Systems and Synthetic Biology). Systems Identification and Adaptive Control Networks and Communication Systems are open to jointly participating in a third prize.

Hespanha asked for feedback from BoG. E. Franco asked if the winners have to be TC members. Hespanha responded that the idea is to promote participation and recognize talent, particularly from students, in TCs (the first time around, he does not plan to enforce the requirement that the student author must be a TC member at the time of paper submission to widen the field of potential applicants). E. Franco suggested adding the requirement that the student must be the 1st author, something that Hespanha was going to bring up at the CSS Technical Advisory Board. Egerstedt said that we should not micromanage the initiative and let TCs handle it with the guidelines provided.

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### **OJCS Timeline**

Alleyne provided an update on the timeline for the new journal Open Journal of Control Systems. At present, a CSS search committee is recruiting candidates for the Founding Editor in Chief, with a goal of having her/him approved and in place by the end of calendar year 2020. 2021 will see the development of the Editorial Board and the launch of the journal mid to late 2021. Padhi sought clarification regarding publication fees, which are in fact set by IEEE at the range \$1,750-\$2,995. It was mentioned that the CSS Fund could help offset this cost for authors from developing countries.

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## **CSS Budget Update**

J. Sun presented CSS's financial highlights from 2019 and CSS's financial status for 2020. The outlook is financially balanced for 2020 and uncertain for 2021. The summary financial status for 2020 is that periodicals are on track for both revenue and spending. Membership revenue remains about the same. Travel budget is expected to be 50-75% underspent. There is a big uncertainty about conferences, with a forecast of 50% reduction in both income and expense. The overall picture for 2020 is revenues reduced by \$579K and expenses reduced by \$954K. Under the 50% spending, \$783K (50% of net operating surplus of 2019: \$1,566K) is available.

T. Samad asked about the status of IEEE in general, and Annaswamy explained that the organization is in an overall wait-and-see mode. 2020 seems to be ok, with big uncertainties looming in for 2021 (insurance claims for conference venues, costs coming down). Egerstedt added that IEEE membership numbers are coming down, and journal access subscriptions will be suffering at universities worldwide. Bitmead mentioned that a large portion of the CSS budget surplus is due to the money coming from investments, and if at any given year, IEEE does do well in this regard, then we will see a significant impact in our numbers. Regarding journal access subscriptions by universities, F. Bullo pointed out that scientific publishing is a very profitable business: as a token, over the last decade, IEEE has consistently increased subscription costs by 4% yearly. For next year, however, IEEE plans to decrease them by 2% (accounting for inflation, this would represent a 4-5% actual decrease). Giua added that, on the CSS conference side, revenues are about 60% of what they would normally be. D. Castañon offered some perspective about the last financial crisis in 2004, when IEEE took 20% of all cash reserves to balance the operating budget.

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### **Activity Reports**

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No additional activity reports beyond the CSS Budget Update, were presented during the meeting. BoG members were referred to the material contained in the agenda and reports document for full details on all activity reports.

Alleyne briefly mentioned the recent L-CSS review by the IEEE Periodicals Review and Advisory Committee (PRAC), which was very positive, and commended Elena Valcher, the EIC, for an excellent job.

Bullo encouraged CSS members to participate as volunteers in IEEE-wide committees treating important policies that directly affect the societies, including ours.

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### **Other Business**

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Annaswamy asked if there was any additional new business or old business, and hearing no response adjourned the meeting.

The next BoG meeting will take place virtually in association with CDC2020. Time and date are still to be determined.

The meeting was adjourned at 4:30pm, MT time.