200th Division Meeting Minutes
Dynamics Systems and Control Division, ASME International
Fall 2021
Contacting the Division: dscd.exec@gmail.com

Date and Time: Monday, October 25, 2021 at 7:00 pm – 9:30 pm (ET)
Meeting hosted via Zoom

A G E N D A

7:00 pm 1. Chair's welcoming remarks Jordan Berg

Jordan welcomed everyone to the meeting.

7:05 pm 2. Approval of minutes Kam Leang

Kam presented the meeting minutes from the Division meeting during ACC 2021 and asked if there were questions or comments. No questions or comments were raised. Kam made a motion to approve the minutes. Jordan second. Kam sent a vote through zoom. Minutes were approved with 30/38 attendees voted YES.

7:10 pm 3. Recognition of service to DSCD Jordan Berg

Jordan recognized members' services to the community. See slides for details.

7:15 pm 4. Select Division updates/activities
(rapid 5-mins/each updates, for more info see attached detailed reports)

Updates were given. Please see slides for details.

4.1 Newsletter report Tuhin Das/Huazhen Fang

4.2 Treasurer's report Rajesh Rajamani

	4.3 Technical Committee report	Marcia O'Malley
	4.4 ASME updates	Barbara Zlatnik
	4.5 2021/2022 ACC report	Satadru Dey/ Minghui Zheng
	4.6 2021/2022 AIM report	Kok-Meng Lee
	4.7 DSCD PodCast Series and PodCast Producers	Hao Su/ Jingang Yi
	4.8 MECC 2021	Junmin Wang
	4.9 Awards Ceremony/Honors and Awards	Roberto Horowitz
8:15 pm	5. Division discussions	
	5.1 Future DSCC cancellation	Jordan Berg

Jordan summarized his slides, see attached.

Jordan opened the floor for discussion: Roberto H. -- it's important to anchor Nyquist Lecture and Awards Ceremony to some conference. George C. -- feels strongly that student participation and papers/presentations are important, especially connected to grants for funding. Unique aspect of academic community. Hosam F. -- feels like the community deserves a strong conference for networking, awards ceremony, etc. Junmin W. -- virtual meetings can be challenging but also useful to accommodate certain circumstances. Xiaobo T. -- notes that virtual meetings have broader reach and convenience of attendance. Strongly encourages people to come up with other ideas. Xu C -- announced plans to hold MECC 2022 and encourages the community to participate. Bin Y -- notes that MECC is doing well so could be something to consider as a venue, especially the international community involvement. Santosh D. noted in the chat box: "Since MECC is similar to ACC, having the meeting at MECC sounds good.". Eduarto M. supports by stating: "Since MECC is similar to ACC, having the meeting at MECC sounds good." Autl K. expressed that "ASME Conferences are not back in person quite yet. Planned to launch in person after mid-April 2022." Barbara noted that: "ASME Conferences are not back in person quite yet. Planned to launch in person after mid-April 2022." Roberto H. asked in the chat: "Can H&A Awards and Nyquist lecture be hold at the MECC?" Jordan answered by stating that Roberto's question depends on ASME's decision. If the Division articulates this as a preference it may help show support. George C. -- mentions the

Straw poll was given (81% participated). Results are: 44/49 yes, 2/49 NO, 3/49 ABSTAIN. Question: "As a DSCD member, I support holding Awards Ceremony/Nyquist Lecture at MECC".

Based on these results, the ExComm will pursue the Nyquist Lecture and Awards Ceremony at MECC.

5.2 Supporting ASME's Mission, Vision, and Strategic Priorities — Jordan Berg

Jordan discussed the division's focus to support ASME's mission, vision, and strategic priorities. He pointed out that ExComm and ASME leadership have met to discuss plans for connecting with the ASME TEC.

5.3 Updates on new initiatives from journals

Updates for publications were given. See slides for details.

5.3.1 TMECH — Ranjan Mukherjee

5.3.2 LDSC — Peter Meckl

5.3.3 JAVS — Vladimir Vantsevich

9:00 pm 6. Announcements

6.1 NSF updates/announcements — Irina Dolinskaya

Irina summarized NSF programs of interest to the DSCD Community. Eduardo noted that changes in C&P need to be updated with NSF. Miroslav K praised NSF's efforts and gave his input on contributions of the DSCD community. Irina noted the successful collaboration with the CS community through the FRR program.

6.2 DSCD open positions — Santosh Devasia

Santosh presented nominations, see attached.

9:15 pm 7. Open discussion

Jordan called for an open discussion. No discussion.

9:30 pm 8. Closure

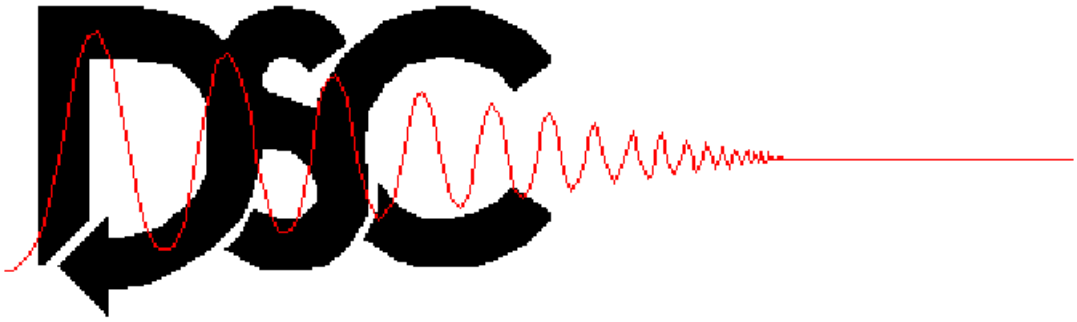
Jordan closed the meeting at 9:21 pm.

Attached Written Detailed Reports

1. Treasurer's report — Rajesh Rajamani
2. Newsletter report — Tuhin Das/Huazhen Fang
3. Technical Committee report — Marcia O'Malley

4.	ASME updates	Barbara Zlatnik
5.	2021/2022 ACC report	Satadru Dey/ Minghui Zheng
6.	2021/2022 AIM report	Kok-Meng Lee
7.	DSCD PodCast Series	Jingang Yi/Hao Su
8.	MECC 2021	Junmin Wang
9.	Journal of Dynamics Systems, Measurement, and Control	Ranjan Mukherjee
10.	ASME DSC Letters	Peter Meckl
11.	J. Autonomous Vehicles and Systems	Vladimir Vantsevich
12.	Transactions on Mechatronics	Xiaobo Tan
13.	Student Travel Awards	Nicole Abaid
14.	Secretary's report	Kam Leang
15.	American Automatic Control Council (AACC) Report	Santosh Devasia
16.	DSCD Website	Diane Peters
17.	Honors and Awards Committee	Roberto Horowitz

* Pending submission



199th Division Meeting Minutes
Dynamics Systems and Control Division, ASME International
2021 American Control Conference
Contacting the Division: dscd.exec@gmail.com

Date and Time: Tuesday, May 25, 2021 at 7:00 pm – 10:00 pm (ET)
Meeting hosted via Zoom

A G E N D A

7:00 pm 1. Chair's welcoming remarks Santosh Devasia

Santosh started meeting shortly after 7:00 pm, introduced all ExComm Members.

7:05 pm 2. Approval of minutes Kam Leang

Kam sent sign-in form: Google sign in: https://forms.gle/MLMoawx1h3Hz34S17

Kam shared the meeting minutes and asked for questions. No questions. Kam motion for approval, Robert Landers second.

Minutes were approved 47/48 (based on members who arrived at the meeting when the motion was made)

7:10 pm 3. National Science Foundation Announcements Irina Dolinskaya

Irina provided updates on NSF and introduced Harry Dankowicz, new DSCD PD at NSF. There are 4 PDs in the DSCD program. Irina encourages submission of proposals to DSCD and encourages great research ideas. Please speak with the NSF DSCD team.

Irina announced ENG/ECCS call for PD applications.

Eduardo Misawa – made an announcement about support for PIs due to the impact on COVID – for example, recent Ph.D.'s who have graduated who can find a job; NSF can offer support. Also, at the national level there are additional discussions about increasing NSF budgets, etc.

Xiaobo asked about possible increase in NSF budget, and Eduardo mentioned to stay tuned and keep an eye out for NSF announcements.

7:30 pm 4. Select Division updates/activities
(rapid 5-mins/each updates, for more info see attached detailed reports)

4.1 Newsletter report Tuhin Das

Tuhin gave update, see attached. Santosh thanked Tuhin for his hard work on the newsletter and website.

4.2 Treasurer's report Rajesh Rajamani

Rajesh gave an update. Slides are attached. No questions were raised.

4.3 Technical Committee report Jingang Yi

Jingang gave his update. Slides are attached. No questions/comments were raised.

4.4 ASME updates Barbara Zlatnik

Barbara discussed updates, especially the TEC. Slides are attached.

Santosh asked about whether the website is changing, but Barb noted that it's just the TEC website that's being updated.

Questions: what is the role for the TEC sectors – Barbara says position titles are Vice Chair and Members at Large.

4.5 2021/2022 ACC report Satadru Dey

Satadru gave his update. Slides are attached.

4.6 2021/2022 AIM report Jingang Yi/

Jingang gave report on Kok-Meng's behalf. Summary is attached.

Kok-Meng Lee

8:00 pm 5. Division discussions

5.1 New initiatives of interest to the Division

5.1.1 DSCD PodCast Series Xiaobo Tan

Xiaobo summarized the PodCast series and thanked those involved. He also shared a link of Youtube Channel.

Santosh thanked Xiaobo for leading and also the team. Please send ideas/feedback to Xiaobo. Volunteers are needed. Please contact Xiaobo.

5.1.2 MECC 2021 — Junmin Wang

Santosh thanked Junmin's efforts. What's the status of 2022? Junmin mentioned Xu Chen and Qingze Zou about their interest to organize 2022. Currently under discussion to get approval.

5.2 ASME Webtools update — Santosh Devasia/ Robert Landers

Robert gave summary and opened up for comments.

Kamal was wondering about why ASME does not accept PaperPlaza? Robert responded by saying it's not secure, based on ASME's assessment.

Venkat Krovi mentions that the reasoning was not clear. Santosh mentions that ASME was close to allowing, but ASME leadership stated it was a no go.

Colin mentioned that there might have been more substantive reasoning.

Barbara requested, after the meeting, inclusion of ASME IT report on the security concerns with PaperCept (see below email from Barbara and attached reports)

Santosh emphasizes that what the Division members want is what should be best. Members support the plan to hold off until a viable tool is available. Jordan mentions that we are lucky to have members volunteer to provide an alternative until something improves with ASME. ASME is making a good faith effort and thus the Division will also be patient in good faith to give ASME time to develop an acceptable webtool.

Santosh also noted that in the past EBC quit.

5.3 Updates on new initiatives from journals

5.3.1 JDSMC — Ranjan Mukherjee

Huei Peng thanked Ranjan for reducing the time to publication. Huei thanked him for reducing and will encourage students to submit.

Andrew Alleyne asked about item 2.2; Ranjan pointed out that improving quality will improve impact factor, so Ranjan focused on a rigorous review process. Hopefully this will encourage more submissions from DSCD members.

Venkat Krovi – have you seen overlap with DSC Letters as an impact? Ranjan mentions that it could be impacting submissions to JDSMC. Not trying to compete, but it could have an impact.

Micky Caruntu – thank Ranjan for his hard work.

5.3.2 LDSC — Peter Meckl

Marcie – would you consider pre-tenure AEs? Peter says it's preferred by ASME, but Peter can formally override.

Santosh – how does submitting focused sections work? Send proposals to Peter. 6-7 pages, but maybe 8 if it's a strong paper. Papers should be compact.

5.3.3 JAVS — Vladimir Vantsevich

Vlad gave his update. Slides are attached.

Questions: None.

5.4 Awards Ceremony/Honors and Awards — Jordan Berg/ Roberto Horowitz

Jordan mentioned that the DSCD awards ceremony will be within the MECC program, but ASME will provide the virtual platform for the ceremony.

Roberto reported on the Honors and Awards, and Prof. Sastry as the Oldenburger Medal. Awards Ceremony will be hosted by MECC. Roberto reminds everyone about upcoming awards.

9:00 pm 6. Open discussion

Santosh asked for any discussions.

CCTA – Andrew Alleyne will be General Chair in 2023 and invite all DSCD members, Bridgtown Barbados. http://ieeecss.org/event/7th-ieee-conference-control-technology-and-applications
Room rates: $180/night!

9:30 pm 7. Closure

Santosh ends the meeting at 6:55 pm MT, and passes the gavel to Jordan Berg, the new DSCD Chair.

Special Service to DSCD

Santosh Devasia: Executive Committee Chair (2020-2021)
Eric Tseng: Honors Committee (2015-2021)
Ranjan Mukherjee: Advisory Committee (2017-2021)
Ranjan Mukherjee: Nominating Committee (2017-2021)
Xiaobo Tan: IEEE/ASME TMECH Man. Committee: (2018-2021)
Santosh Devasia: Design, Materials, and Manu. Segment (2019-2021)
Satadru Dey: DSCD Conference Program Rep. (2020-2021)
Tuhin Das: Newsletter Editor (2020-2021)
Tuhin Das: DSCD Webmaster (2019-2021)

Thank you for your service!

Congratulations!

New DSCD ASME Fellows

(July 2020 – October 2021)

Xiaoqi Chen, Swinburne University of Technology
Karolos Grigoriadis, University of Houston
Jin Oh Hahn, University of Maryland
Perry Li, University of Minnesota
Marcio de Queiroz, Louisiana State University
Sivakumar Rathinam, Texas A&M University
Greg Shaver, Purdue University
Anil Srivastava, University of Texas Rio Grande Valley

Journal of Dyn. Systems, Measure. and Control
Associate Editors Completing their Terms in 2021

Ming Xin, University of Missouri
Dumitru Caruntu, University of Texas Rio Grande Valley
Suman Chakravorty, Texas A&M University
Bin Xian, Tianjin University
Fengjun Yan, McMaster University
Douglas Bristow, Missouri Univ. of Science & Technology
Fen Wu, North Carolina State University
Davide Spinello, University of Ottawa
Ou Ma, University of Cincinnati
Inna Sharf, McGill University
Soo Jeon, University of Waterloo
Daniel Chen, University of Saskatchewan

Thank you for your service!

IEEE/ASME Transactions on Mechatronics Technical Editors Completing their Terms in 2021 (Member of ASME)

Panfeng Huang, Northwestern Polytechnical University

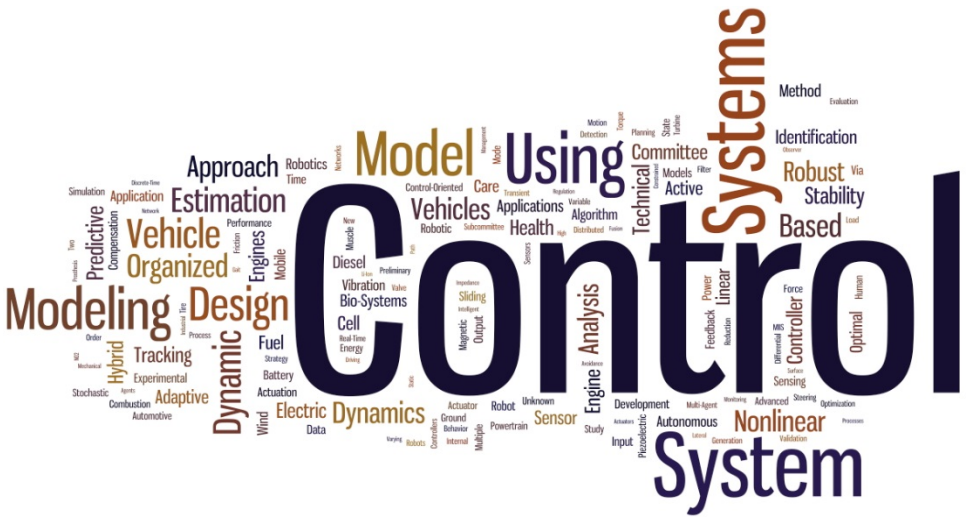
Seiichiro Katsura, Keio University

Sandipan Mishra, Rensselaer Polytechnic Institute

Tarunraj Singh, University at Buffalo (SUNY Buffalo)

Lan Chao-Chieh, National Cheng Kung University

Thank you for your service!



DSCD Newsletter SUMMER 2021

August 31, 2021

DYNAMIC SYSTEMS AND CONTROL DIVISION NEWSLETTER

IN THIS ISSUE

Editor's Note

Dear colleagues,

As we bring the summer 2021 newsletter of ASME DSCD, we hope that all members of the community are safe and healthy. This issue reports several exciting news and updates.

We introduce the IEEE Open Access Journal of Control Systems, which is a new journal that aims to publish high-quality papers on the theory, design, optimization, and applications of dynamic systems and control. The journal announces a special section on Machine Learning and Control.

In Honors and awards, Dr. Marcia O'Malley was named Associate Dean for Research and Innovation for the George R. Brown School of Engineering at Rice University, effective May 1, 2021. In addition, we report Dr. Rajesh Rajamani's research on smart bicycles that has received wide publicity. It was featured in IEEE Spectrum as well as on the NPR.

Next an interview of Prof. Clarence W. de Silva is presented where he talks about the origin, myths, current trends and opportunities in robotics. We hope you will enjoy reading it.

We report the release of a book titled *Force and Position Control of Mechatronic Systems* by *Tong Heng Lee, Wenyu Liang, Clarence W. de Silva and Kok Kiong Tan*.

We next post an announcement of the MECC 2021, an announcement from the IEEE/RAS Technical Committee for Telerobotics and an MECC 2021 workshop announcement on Safe Control and Learning under Uncertainty. This is followed by calls for papers in two upcoming focused sections/special issues, in *IEEE Open Access Journal of Control Systems* and in *IEEE/ASME Transactions in Mechatronics.*

We hope all DSCD members enjoyed a happy and relaxing summer 2021. Thank you for your continued support of the DSCD Newsletter and we look forward to your future submissions.

Best Regards,
Editor: Tuhin Das, University of Central Florida
Associate Editor: Huazhen Fang, University of Kansas

New Journal

IEEE Open Journal of Control Systems

The IEEE Open Journal of Control Systems is a new publication of the IEEE Control Systems Society. The journal aims to publish high-quality papers on the theory, design, optimization, and applications of dynamic systems and control.

The Editorial Board demonstrates the breadth of areas covered within the journal. The journal's main mission is the promotion of open access to all control systems research and education publications, including software, and data. Some journal highlights include:

- Special emphasis areas are the interplay between data science and control, and the interdisciplinary connection of dynamic systems and controls with diverse applications in biological, social, cognitive, and cyber-physical systems.
- New publication categories will be featured in addition to regular papers, including overview, position, open software/testbed tutorial papers, and reproducible papers in dynamic systems and controls.
- Upcoming Special Sections and Issues covering topics such as Brain networks, and Human-Robot Interaction will be announced soon.

See page 10 for details of Special Section on Machine Learning and Control

Honors and Awards

Prof. Marcia O'Malley, named Associate Dean for Research and Innovation and recipient of Presidential Mentoring Award at Rice University in 2021.

Marcie O'Malley was named Associate Dean for Research and Innovation for the George R. Brown School of Engineering at Rice University, effective May 1, 2021.

She received the Rice University Presidential Mentoring Award for 2021. She will be a keynote speaker at the upcoming 45th Mechanisms and Robotics Conference at the 2021 IDETC, and a plenary speaker at the 21st International Conference on Control, Automation and Systems (ICCAS 2021).

Marcia O'Malley received the B.S. degree in mechanical engineering from Purdue University in 1996, and the M.S. and Ph.D. degrees in mechanical engineering from Vanderbilt University in 1999 and 2001, respectively. She is currently Professor of Mechanical Engineering and of Computer Science at Rice University and directs the Mechatronics and Haptic Interfaces Lab. She is an Adjunct Associate Professor in the Departments of Physical Medicine and Rehabilitation at both Baylor College of Medicine and the University of Texas Medical School at Houston. Additionally, she is the Director of Rehabilitation Engineering at TIRR-Memorial Hermann Hospital, and is a co-founder of Houston Medical Robotics, Inc. Her research addresses issues that arise when humans physically interact with robotic systems, with a focus on training and rehabilitation in virtual environments. In 2008, she received the George R. Brown Award for Superior Teaching at Rice University. O'Malley is a 2004 ONR Young Investigator and the recipient of the NSF CAREER Award in 2005. She is a Fellow of the American Society of Mechanical Engineers.

Web: http://omalleym.web.rice.edu/

Prof. Rajesh Rajamani's research featured in IEEE Spectrum and on National Public Radio.

A "smart bicycle that protects itself" developed in Prof. Rajamani's laboratory at the University of Minnesota has received much publicity recently. It was featured in IEEE Spectrum and on National Public Radio. You can read more about the smart bicycle at:

https://spectrum.ieee.org/tech-talk/transportation/safety/smart-bike-protects-itself-against-collisions

Prof. Rajamani is the Benjamin Y.H. Liu / TSI Applied Technology Chair, Mechanical Engineering at the University of Minnesota, Minneapolis. His research focuses on the design of estimation algorithms, sensors and controllers for smart and autonomous systems.

Web: https://cse.umn.edu/me/rajesh-rajamani

Interview: Robotics—Origin, Myths, Current Trends, and Opportunities

- Prof. Clarence W. de Silva

This interview is based on the Distinguished Invited Talk given at the Cambridge Knowledge Circle, sponsored by the Cambridge Society of Sri Lanka in January 2021.

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https://iesl.lk/SLEN/51/Robotics%20-%20Origin,.php

Clarence W. de Silva, Professor of Mechanical Engineering at the University of British Columbia (UBC), Vancouver, Canada, has occupied several research chairs including NSEC-BC Packers Chair, Mobil Endowed Chair, and the Senior Canada Research Chair in Mechatronics and Industrial Automation. A Fellow of ASME, IEEE, Canadian Academy of Engineering, and the Royal Society of Canada, he has received many awards including the Paynter Outstanding Investigator Award and the Takahashi Education Award of ASME Dynamic Systems and Control Division; Killam Research Prize; and Outstanding Engineering Educator Award of IEEE Canada and has served as Editor/Associate Editor of 14 journals including ASME and IEEE transactions; and is the Editor-in-Chief of the International Journal Mechatronic Systems and Control. He entered the University of Ceylon from Ananda College, after winning the Dr. Erwin de Silva Gold Medal. He graduated from the University, obtaining First Class Honors and the Dr. C. H. Hewavitarana Prize in Engineering. After working several years as an Assistant Works Engineer, he went overseas. He obtained an MASc degree from University of Toronto, PhD degrees from Massachusetts Institute of Technology (MIT) and University of Cambridge, and the ScD degree, the so-called "Higher Doctorate," from University of Cambridge. He has attempted to pay back to his motherland through such activities as: providing scholarships to two dozen Sri Lankan students for post-graduate studies in Canada; developing curricula and course material in Mechatronics and conducting courses for educational institutions in Sri Lanka; endowing an award for the top student in Mechatronics; and developing computer facilities, roads, mentoring network, health clinics, and hospital cafeteria in a rural area. In this interview, we have picked his brain to explore the subject of Robotics.

Q: Professor, first let us know how you embarked upon on Robotics.

After completing my PhD at MIT, I was appointed as an Assistant Professor of Mechanical Engineering, at Carnegie Mellon University (CMU) in Pittsburgh, USA, in September 1978. My PhD research has been in the dynamics and control of automated guideway transit (AGT) systems. These vehicles are completely automated, and hence driverless. They run on elevated guideways and don't interfere with other traffic. So, it had been an attractive area of research at the time.

Robotics was emerging at the same time, yet not properly recognized. I wanted to enter that field as well, but it was clear to me that such research has to be a collaboration of mechanical and electrical engineers and computer scientists. So, I was somewhat hesitant. Fortunately, Raj Reddy, a professor of Computer Science at CMU recognized the importance of Robotics and also collaboration, and contacted some of us (who had appropriate research background) in the departments of mechanical and electrical engineering and computer science, and we were quite excited. To initiate research, we needed funds (for graduate students and equipment in particular). I suggested approaching Westinghouse because it was a leading and very rich company focusing on domestic and heavy equipment and I had done some work with a branch of Westinghouse in Pittsburgh on nuclear power plant equipment. Raj Reddy thought we should approach the Westinghouse office in Winston Salem, North Carolina, who controlled finances and were very powerful. We agreed, and decided to visit Winston Salem and make a presentation with a comprehensive proposal to establish a Robotics Institute at CMU.

Westinghouse gave us two small commuter planes (single-engine and twin-engine Cessna aircraft) for the trip. Raj asked three of us to take the small plane and leave first, and the remaining five including Raj would follow in the bigger plane. We landed in Winston Salem and waited for the other plane, but it didn't arrive. There were no cellphones those days. So, we had to find a land phone somewhere and make a call to CMU. That plane had lost an engine and had to return! So, the other group was waiting for a replacement from Westinghouse.

At the end everyone arrived, made an effective presentation to the Westinghouse executives, and the company committed to fund the Robotics Institute. This was the first such institute anywhere, and we grew steadfastly, became world-renowned, and even started granting CMU PhDs in Robotics. The rest is history!

Q: What is a robot?

Commonly, a robot is considered a machine that can perform work or actions normally performed by humans, automatically or by remote control—Teleoperation. The key feature of this definition is the presence of, 1. Mechanical Structure (Machine), 2. Sensors, 3. Actuators (or Effectors), and 4. Controller (or Computer), which is the brain or the decision maker of the robot. In this manner, a robot is able to facilitate "flexible automation," which is "programmable" automation. Essentially, a digital computer serves as the "brain" of the robot, and it has to be programmed to carry out its actions. As well, there have to be sensors to monitor the operation, and the

sensory data are processed by the computer to determine the suitable control actions.

Flexible automation should be distinguished from "hard automation" or "fixed automation." In fixed the fixed automation, what is fixed is the control hardware, which is not programmable. It can carry out a specific repetitive task very accurately and at high speed. But since it is not programmable, changing the operation to a different task is not easy, and can be very costly, with significant down time to change the hardware. However, fixed automation, typically, does not require sensors, and the controller can be very simple and straightforward.

A good example of fixed automation is a bottling operation. See: https://youtu.be/HIOINPLdWjk

Note that, we cannot change the type of bottle easily in this system.

Alternative, consider the example of welding robots in an automotive plant: https://youtu.be/oL7Xk5_s3QQ

Here, the vehicle model can be changed very easily and quickly, simply by changing the program. However, the operation itself is not fast albeit quite complex.

A robot that has a human-like body structure is called a "humanoid." An example is the Honda Asimo: https://asimo.honda.com/

However, a robot need not look like a human. An Unmanned Naval Vehicle (UNV) that we developed (see the picture) is indeed a robot. It is a programmable propelling platform with multiple sensors (to measure the pH value, dissolved oxygen, electrical conductivity, temperature, and the oxidation-reduction potential of water). It is able to autonomously navigate a water body and map out the quality of the water in a particular region, which can be used to provide warnings to the users, determine the source of pollution or contamination, and also take corrective actions.

Q: Who initiated Robotics?

The term "Robot" was introduced in the popular media, well before a physical robot became a reality. In 1920, Czech writer Karel Capek first introduced the term in his play "R.U.R." or "Rossum's Universal Robots." There, it was just a figment of his imagination. Again, in 1942, the Russian-born American science-fiction writer and Boston University Professor Isaac Asimov introduced the term in his fictions. Notably, Asimov was one of "Big Three" in science fiction. The other two were our own Arthur C. Clarke and Robert A. Heinlein. We know that many predictions of Clarke and Asimov have come true today. A device resembling a humanoid robot was designed and built by the ingenious Leonardo Da Vinci, in 1945. It could mechanically move arms, head and jaws, but was not a true robot, in today's definition. The first true robot arm, the Unimate, was designed by the American inventor George Devol in collaboration with Joseph Engelberger who is often called the "Father of Robotics." This robot was used in a General Motors (automotive) plant for their manufacturing operations in 1960. It had a primitive digital computer as its brain, and used motion sensors and also dc motors as the actuators. See: https://youtu.be/hxsWeVtb-JQ?t=22. Many different types of robots have been developed and put to operation since.

Q: I am sure, there were many misunderstandings in the general interpretation. Do we have to fear robots?

Indeed, there have been many myths, misnomers, and misunderstandings concerning robots. Some are:

1. Robots have capabilities that equate or exceed those of humans. This is not true. The intelligence of today's robots does not exceed even that of a dog!
2. Robots will steal our spouses, and fight wars and defeat us. This is very unrealistic, and will never happen!
3. Robots will create mass unemployment: People said this concerning the first Industrial Revolution as well. But at the end, the industrial revolution (and industrial automation) gave the workers more free time (including the five-day work week), moved them away from hazardous and difficult work, improved the general quality of life, and created higher-paying and more challenging employment (for our friends and relative, if not for us). Many more positive things can be said about robotization. The reasons for the misunderstandings are many. They include: fantasy, movies and popular/social media, unrealistic expectations by the robot enthusiasts, slow developments in the field, inadequate expertise and capabilities for the necessary developments, the lack of necessary technologies (mechanical, electronic, and computer science; powerful computers) to achieve the goals, weak collaboration in the beginning (mainly among the electrical and mechanical engineers, and computer scientists, but this culture was changed with the establishment of the Robotics Institute at CMU); and the lack of adequate "robotic intelligence" for various autonomous operations.

See my video interview: https://youtu.be/rMW3202QD5E

Q: So, have we achieved what we like to see in Robotics? Are there any shortcomings?

We have not yet achieved what the engineers and technologists reasonably expect in Robotics, not to mention the robot enthusiasts. The common capabilities of the existing robots include: Navigation with obstacle avoidance (SLAM—Simultaneous Localization and Mapping), visual and verbal communication with humans, operation of some appliances, grasping and carrying of objects (including conformable grasping and

tactile sensing), multi-robot cooperation, and haptic teleoperation (with force feedback).

Some obvious shortcomings of today's robots include: Poor human-like interaction (and poor interaction with humans), slow speed, poor dexterity and the sequential nature in grasping and handling of objects (e.g., the robotic hand slowly moves to the object and subsequently the fingers are closed around the object. Instead, the human observes the object to be grasped and simultaneously moves the hand and the body in coordination until the object is reached and the grasping is complete. A human can easily sense possible slipping of the object), possible safety problems for humans (due to the shortcomings of the current robotic mechanical components and control), sensory limitations (particularly related to smell and taste or chemical and biological sensing; transparency in teleoperation), limited mechanical capability (in dexterity, flexibility, adaptability, etc., unlike humans), and limited robotic intelligence. Concerning the safety in human-robot Interaction, robot-inflicted injuries include accidents involving: Sharp objects and tools, large forces, fast motions and quick changes of magnitude and direction, and malfunctions in the robotic equipment.

Q: What are some of the immediate needs in Robotics?

The autonomous operation (i.e., operating on its own, without outside help) of robots is essential. Some needs for this autonomy are: Greater robotic intelligence (better learning; operating in dynamic, partially structured, and partially known environments; use of enhanced characteristics of intelligence); Greater accuracy, speed, dexterity, etc.; Increased safety (better object handling, accident/obstacle avoidance, etc.); More human-friendly and human-like communication and operation; and the redesigning of household appliances for easy operation by robots (and humans).

Consider the required basic caregiver tasks (of humans), for example: Verbal and visual communication; Assistance for movement/mobility; Identifying, grasping, and handling of needed objects properly and safely; Safe and quick assistance in the mobility of the care-receiver, in the presence of obstacles (both static and dynamic such as furniture, appliances, other humans and pets); Monitoring of objects and the environment for carrying out the caregiver tasks (under normal and emergency situations); Operating household appliances; and Provision of assistive devices. Then, similar operational requirements from robotic caregivers include: Faster yet safe operation; Human-friendly and human-like interaction and communication; Autonomous assistance for 24-hr, routine and basic care (mobility, bathing, dressing, toileting, meal preparation, providing medicine, etc.); Effective monitoring and detection of emergency situations; and Adequate emergency assistance (possibly incorporating remote monitoring, teleoperation, etc.) until regular help arrives. In this context, some needs in haptic teleoperation (teleoperation with feedback from the slave robot to the human master) are: Improvements to autonomous robotics as in non-teleoperation situations; Improved transparency (better/faster tactile/visual/auditory feedback to the remote human operator, for realistic creation of remote presence); Stability under (and compensation for) time delays (which are common in teleoperation. See the video: https://youtu.be/sl5ckyY7Zao?t=9); Human-like manipulation; Improved design and control (for accuracy, speed, robustness, reliability, and safety); and 3-D virtual reality for the remote operator (for improved transparency).

Q: With such needs and shortcomings, I believe one must plan possible directions for advancing the state-of-the-art of Robotics. Can you suggest some?

We need to focus on several aspects, to improve the state-of-the-art. They include: Autonomous operation; Improved learning and intelligence (for autonomous operation); Self-awareness for robots (i.e., knowing the own capabilities of robot); Improved dexterity of handling (e.g., compliant grasping, parallel not sequential, and in coordination. Providing the adequate degrees of freedom for manipulation of the handled object); Improved robot-human interaction (in particular, working "with" a human rather than working "for" a human); Improved speed, stability, robustness, reliability, and safety; Improved sensing (particularly, chemical and biological sensing; transparency of remote operations; dynamic sensor networks; intelligent sensor fusion); and Significant improvement of the "mechanical" capabilities. Note particularly, the needs in software, mechanical capabilities, and instrumentation. Possible developments in Sri Lanka as well should focus on these, as appropriate. We will talk about this later.

In this context, the question can be posed whether to put our effort in developing universal robots having unlimited capabilities and functions, which will of course be very costly and complex. In other words should we focus on developing luxury and very expensive Cadillacs or use existing Marutis, cooperatively? It is not wise to put much effort in the development of complex and costly robots with numerous features and multi-function capabilities. As a scenario, consider the use of existing low-cost robots that have been developed for just one specific task (e.g., security, human assistance and guidance, street cleaning). If an emergency occurs (e.g., an explosion), can we call upon them to join, in cooperation (if available) to perhaps put together simple devices and help in the situation (e.g., evacuation of the injured)?

Q: You mentioned the need for improved robotic intelligence. Many people talk about artificial intelligence (AI), and say it can make robots challenging (and dangerous?) to humans. What is your opinion?

The importance of intelligence in Robotics is quite clear. Intelligence is essential for the autonomous operation of a robot. In fact, realization of expectations (including some fantasies?) of robotics depends on improved robotic intelligence and similarly improved mechanical capability. Today's robots don't have

even "primitive" intelligence. Without significantly improved intelligence, robots cannot achieve human-like capabilities; for example, emotions, common sense, and inventiveness are quite farfetched! Improved intelligence renders the robots to acquire some characteristics of human intelligence. However, it is simply "fear mongering" to say that the future robots will be a danger to the human kind because of their high level of intelligence.

Typically, robots improve their intelligence through learning, and the foundation of AI is indeed machine learning. Some claim that since a chess playing computer has defeated a human champion, it is possible that intelligent robots will defeat humans in many activities. Here we have to realize that the capabilities of a robot depend on their control program, which is developed by humans. It is true that due to learning, robot intelligence (the decision making ability related to the learned knowledge) improves. Unlike humans whose level of intelligence can depreciate for many reasons (physiology, lack of practice, new knowledge, new and complex environments, etc.), machine learning will always improve the robotic intelligence. This means, a chess playing robot will continuously improve its skills through learning (practice) and can thereby defeat a chess champion. However, we have to realize that such intelligence is provided to robots by humans, through the control programs. Furthermore, we should question whether a chess playing robot can also perform other tasks (e.g., caring for an elderly, carrying out medical surgery) as well. Very unlikely. Also, can a robot ever acquire such characteristics as common sense or emotions?

We should remember that humans develop robots and we program their controller (brain). We can set limitations, checks and balances, regulations, and guidelines, as we wish. We should collaborate with social scientists, and develop proper guidelines and regulations for the development and the safe and ethical use of robots. Since a proper ethical evaluation and certification are essential for any technology that is used by humans, this should be properly adhered for robots as well, and should be strictly applied in Sri Lanka too! In medical surgery, for example, a robot will facilitate the surgical procedures, but they should be performed under the supervision of a human surgeon, who must have the capability to abort the robotic procedure immediately, if necessary.

In fact, people who fear AI simply fear a black box! Do they know: What is in the AI black box? What methodologies are used in that black box? And, how are those methodologies implemented and operated? So, instead of simply fear mongering, they should explore the black box carefully and in detail (through experts who are knowledgeable in the subject) and only then indicate what methodologies in the AI black box might be dangerous, in their opinion. Then other experts will be able to respond intelligently and in an informative manner. Unfortunately, that is not happening now.

Q: Professor, this is somewhat reassuring. But for a lay person, can you explain what AI is?

Before exploring AI, let us examine intelligence itself. No precise definition exists for intelligence. It is the external characteristics and capabilities that we observe from actions that enable us to claim a person (or robot) to be intelligent. Essentially, the outward characteristics define intelligence. Let us examine what some of those characteristics are.

The characteristics of intelligence include: Sensory perception; Pattern recognition; Learning (i.e., knowledge acquisition, which is extremely important for intelligence); Inference (i.e., making decisions) from incomplete information; Inference from qualitative or approximate information (this is commonly used in "qualitative reasoning" as in fuzzy logic or fuzzy reasoning); Ability to deal with unfamiliar situations; Adaptability to new, yet related situations (through "expectational knowledge." For example, a human is able to expect the nature of an environment, like a classroom, even when encountering that environment for the first time); Inductive reasoning (people must have done this in high school mathematics, when proving a mathematical result "by induction"); Common sense; Display of emotions; Inventiveness; and Self-awareness (i.e., knowing their own capabilities).

AI uses formal techniques to acquire some characteristics of intelligence. In fact, appropriate models of AI are used for this purpose, based on one or more of the mentioned characteristics. Such approaches (or models) of AI include Machine Learning, which is a very popular approach of AI. The conventional models of AI include Knowledge-based Systems, Neural Networks—NN, Fuzzy Systems, Evolutionary Computing, and Swarm Intelligence. A knowledge-based system, typically, consists of a knowledge base (or a rule base), a data base, and an inference engine (the decision maker). The decisions are made as follows: Some data in the data base (including what is acquired recently through sensors) is matched with the (context of the) rules in the knowledge base, by the inference engine, and the inferences (or actions) are determined accordingly (i.e., rules are fired). Popular "Expert Systems" are based on this model. Of course, the knowledge base will be improved and enhanced continuously through "learning" and experience (so, machine learning is used here as well). Deep learning uses deep NN including Convolutional NN. They have a structure of multiple layers (convolution layers) incorporating the "dynamic" learning ability, and ending with a "Softmax" layer, which is the classification layer. First the NN is trained using "labeled data" (i.e., input data whose proper outcomes are known *a priori*). After the network is trained properly, unlabeled data (or new data) may be used for the actual decision making. Massive amounts of data, including sensed data (a mixture of labeled and unlabeled data) may be effectively used in a deep NN. Reinforcement learning relies on rewarding the correct decisions and penalizing the wrong decisions, to learn the proper decision strategies. AI agents are capable of providing explanations for

their decisions (similar to Expert Systems). In Edge AI, AI algorithms are processed locally on a hardware device. The algorithm uses data that are created on the device (e.g., data generated by the algorithm itself) in addition to other data (external data, including from sensors and through the system interface). Hence, Edge AI functions at the "edge of the system network." Fuzzy logic attempts to be similar to human decision making, by incorporating "fuzzy" or "qualitative" or "approximate" data, such as those that use qualifiers like fast, small, better, and close. Qualitative or fuzzy reasoning is used in the decision making (inference) process. Swarm Intelligence behaves like a swarm of animals or insects. They are distributed (no hierarchical) and interact with each other to learn and make decisions. The members in a swarm use very simple rules, yet leading to "intelligent" global behavior, even though an individual member is not quite intelligent, which will improve with time. Evolutionary computing relies on genetic algorithms or genetic computing to realize "optimized" behavior through learning. The basis of this methodology is the biological evolution (or survival of the fittest). Fuzzy logic, NN, and evolutionary computing belong to the area of "soft computing."

Q: Where are robots used today? What are the opportunities in this field?

The commercial applications of Intelligent Robotics (with AI) include: Autonomous agents such as self-driving vehicles (aerial, ground, and underwater), which are indeed mobile robots; Assistive devices (Active and adaptive prostheses, wearables, hand-held smart devices); Advisory Systems (or, expert systems, which are used in such areas as medical, legal, business, service, and social); Monitoring/Security Systems (they are applicable in such areas as machine fault detection, prediction and diagnosis; and for human health monitoring, in telemedicine, homecare, etc.; Video Analysis; Cyber security; Human-machine interaction (including natural language processing, facial expression detection, speech recognition, communication, and intelligent connectivity; Industrial application (including manufacturing and the assessment of production quality, cost, and efficiency); Consumer, Service, and Entertainment sectors (retail, domestic, social, etc.); Agriculture (growing, fertilizing, weed removal, and harvesting); Smart buildings (Heating Ventilation, and Air Conditioning—HVAC; smart metering, safety, smart appliances, automated lighting, and achieving energy efficiency); Education ("Intelligent" Learning Management System or LMS, collaboration among students and with teachers—this approach may be quite beneficial in the current epidemic situation of Covid-19); and Energy and Environment (Distribution, exploration, monitoring, planning, and utilization of energy). Some of these applications have been implemented today. Some will provide diverse future opportunities.

Q: Are our universities in Sri Lanka doing enough in Robotics, in particular?

Many universities in Sri Lanka are active in the area of Robotics (teaching, research and industrial collaboration). For example, your group at the Open University of Sri Lanka (OUSL) is doing excellent work in "Soft Robotics." Others including University of Moratuwa (UM) have undertaken very practical projects such as mine clearing robots. Even University of Uva Welassa has a good group in Mechatronics and Robotics. Certainly, they should collaborate, rather than working in isolation, particularly because Robotics is a field that can benefit greatly through multidisciplinary collaboration (see what I mentioned before, particularly under the Robotics Institute of CMU).

As you know, I have collaborated with OUSL, UM, and SLIIT. In particular, I have provided scholarships for their faculty members to carry out Master's, Doctoral, and Post-doctoral research in my laboratory at UBC. They collaborate with others in my laboratory and outside, in their research, and gain significant expertise before leaving my group. Fortunately, some of them have returned to Sri Lanka, and are carrying out good research and development.

Q: Professor, in conclusion, please indicate some opportunities that Robotics provide for our country?

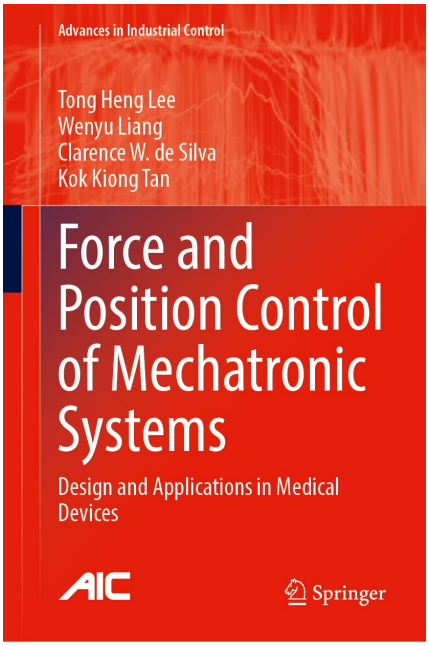
What I say here is equally applicable to other developing countries as well. Opportunities for us exist in all the areas that I mentioned before. However, we should not blindly decide on our activities, just for the sake of being involved in Robotics or AI. We must explore and determine what is in the "black box." Otherwise we can be dissuaded through fear mongering, as I mentioned before, or make wrong choices for robotic activities. We must first question whether Robotics is needed for a specific application (in Si Lanka). Then we must explore which robotic approaches are relevant for the considered task. Very importantly, we must examine what is in the existing Black Box, before implementing it.

I suggest that Sri Lankans should concentrate on "robot development" not their application for automation of local industries. We can market such robots to other countries. Since we have an excessive and smart labor force, using robots for such applications as agriculture and industrial automation is not generally suitable here. Nevertheless, we may consider the development of simple and low-cost robots for local use (e.g., for service and household applications). We must focus on the development of advanced software, in particular, to incorporate other forms of intelligence into robots and efficient software, and the use of advanced tools like Flexible Cloud, Real-time Internet of Things (IoT), and Edge AI. Software developments can be accomplished without much capital investment, as they do in India, for example, particularly because we have a highly educated and smart group of engineers, technicians, and computer scientists in Sri Lanka. Also, we should focus on advancing the "Mechanical Capabilities" of robots, which are essential as I had indicated before, but not necessarily for the local market. As well, we should consider the needs that result from a particular situation (e.g., Covid-19). Very importantly, we should develop our own guidelines and regulations for robotic ethics and safety, which

can be done by modifying the existing guidelines and regulations in other jurisdictions.

Interviewed by Nimali Medagedara
BSc Eng (Hons) (Peradeniya), MPhil (UK), MIE (SL), C.Eng., MIEEE
Senior Lecturer,
Department of Mechanical Engineering
The Open University of Sri Lanka.

New Book



Force and Position Control of Mechatronic Systems,
Tong Heng Lee, Wenyu Liang, Clarence W. de Silva, Kok Kiong Tan
Springer, 2021

Mechatronic systems have been increasingly used in many industrial and medical applications, where they are designed to work for various tasks in different environments. Significantly, many applications are required to carry out the contact operation and handle the interaction between the mechatronic systems and the environments (contacting objects) in order to complete the specific task successfully, such as grasping, polishing, assembly, robotic surgery, injection, etc. During the contact operation, the interaction force needs to be regulated carefully to avoid the undesirable effects and ensure the success of the performed task. As a consequence, force control is needed and designed delicately to meet specific requirements and achieve desired performance. To achieve an appropriate or desired interaction, force feedback control is an effective way to regulate contact behavior. In recent years, various force feedback schemes have been reported, which show good effectiveness of applying force controller in different applications. The explicit force controllers can achieve low force overshoot good force tracking performance, especially when the contact model is established accurately. However, it is noted that the motion/position of the actuation system is unconstrained or uncontrolled for pure force controllers (i.e., only the force is controlled directly). To deal with the applications where both force control and position control are required, force and position control is the major approach. This book offers a systematic coverage of theoretical and practical aspects of force and position control, which gives the readers an overview on the concepts, design, and implementation approaches of such control system. The book consists of nine chapters. The first chapter introduces the general concepts and technologies related to the force sensing, interaction modeling, and control strategy. In the following chapters, the novel ideas and innovations related to the force estimation and the force and position control (including direct force control, force-position control and impedance control) are reported in detail. In summary, this book gives an overview of the force and position control techniques; shows the readers several recent innovations on the design and implementation of the force control and the force and position control for mechatronics; and uses the practical applications as case studies where detailed experimental verifications and results are given. From the book, one may learn to design and implement new techniques of force control or force and position control for mechatronic systems, especially, medical devices. May the force be with you!

Announcements

The inaugural Modeling, Estimation and Control Conference (MECC 2021)

The inaugural Modeling, Estimation and Control Conference (MECC 2021), sponsored by the American Automatic Control Council (AACC) whose member societies include AIAA, AIChE, APS, ASCE, ASME, IEEE, ISA, SCS, and SIAM, and co-sponsored by the International Federation of Automatic Control (IFAC), will be held virtually from Sunday to Wednesday, October 24-27, 2021.

MECC 2021 aims to serve the scientific and engineering communities with interests in the modeling, estimation, and control of cross disciplinary mechanical systems to provide a platform for the dissemination and discussion of the state of the art in relevant research areas; and to create opportunities for networking with colleagues. The conference features conference awards, contributed sessions, invited sessions, workshops, special sessions, plenary talks, keynote speeches, student programs, as well as committee meetings, industry programs, and social functions

MECC 2021 conference proceedings will be published via IFAC-PapersOnLine, which is open access and indexed in EI, Scopus, Web of Science, and INSPEC.

Based on the inputs from the MECC 2021 community and COVID-induced concerns, Organizing Committee carefully evaluated the "pending in-person option" of MECC 2021 and has decided to hold MECC 2021 in a 100% online format. We look forward to virtually meeting you at MECC 2021 in October.

IEEE/RAS Technical Committee for Telerobotics

The IEEE/RAS Technical Committee for Telerobotics, is pleased to announce that several platforms are now operational to promote the results of your research and distribute the news of your activities. We encourage you to consider the following opportunities:

* Follow the TC on Twitter: https://lnkd.in/dip_-Fp

* Visit us: https://lnkd.in/d2zpsnv

* Join us on LinkedIn: https://lnkd.in/dYxF6ha

* Become a TC member: https://lnkd.in/dMWEyaH

* Submit your telerobotics-related news to the TC monthly newsletter: https://lnkd.in/dgkQSiW

The TC newsletter collects news and updates on all telerobotics-related research and activities and will disseminate them on a monthly basis.

* The TC can help promote your telerobotics-related research on Twitter/LinkedIn if you "mention" or "tag" the TC's social media handles when you post a permanent link to the full text of your publication (on arXiv.org, ResearchGate, IEEEXplore, your website, other repositories, etc.)

* TC webpage: https://lnkd.in/dRdTdkn

Chairs: Mahdi Tavakoli, Keehoon Kim S. Farokh Atashzar, Alireza Mohammadi

MECC 2021 Workshop : Safe Control and Learning under Uncertainty

This is a full-day workshop that aims to bring together researchers who work in the field of safe control and learning under uncertainties. We will discuss recent progress in the development of safe control methods (including control barrier functions, Hamilton Jacobian reachability analysis, safe set algorithms, potential field methods, sliding mode methods, etc.) and safe learning controllers that use these safe control methods as safety monitors or safety shields.

Topics for submission include (but are not limited to):

- Safety assurance under uncertainty
- Learning and synthesizing control barrier functions for unknown dynamic systems
- Uncertainty quantification for unknown systems
- Safety assurance during both exploitation and exploration
- Safe and efficient exploration during safe learning
- Applications of safety-critical learning and control

More information is available at our website: https://sites.google.com/view/safe-control

For more details and important dates, see page 12.

CFPs for Upcoming Focused Sections/Special Issues in Journals

IEEE Open Journal of Control Systems *– Special Section on Machine Learning and Control* (See page 10)

IEEE/ASME Transactions on Mechatronics (TMECH) *- The Third Edition of Focused Section on TMECH/AIM Emerging Topics* (See page 13)

The Dynamic Systems and Control Division Newsletter is published twice annually (summer & winter) to the division's email list. Please submit your items for publication by e-mail to the editorial office:

Editor: Tuhin Das, University of Central Florida, Tel: 407-823-5792, E-mail: Tuhin.Das@ucf.edu

Associate Editor: Huazhen Fang, University of Kansas, Tel: (785) 864-8126, E-mail: fang@ku.edu

Call for Papers:

IEEE Open Journal of Control Systems

Special Section on Machine Learning and Control

The *IEEE Open Journal of Control Systems* is a new publication of the IEEE Control Systems Society. The journal aims to publish high-quality papers on the theory, design, optimization, and applications of dynamic systems and control. The Editorial Board on the back of this brochure demonstrates the breadth of areas covered within the journal.

The journal's main mission is the promotion of open access to all control systems research and education publications, including software, and data. Some journal highlights include:

- *Special emphasis areas* are the interplay between data science and control, and the interdisciplinary connection of dynamic systems and controls with diverse applications in biological, social, cognitive, and cyber-physical systems.
- *New publication categories* will be featured in addition to regular papers, including overview, position, open software/testbed tutorial papers, and reproducible papers in dynamic systems and controls.
- *Upcoming Special Sections and Issues* covering topics such as Brain networks, and Human-Robot Interaction will be announced soon. Special sections such as the one below are not exclusive of other areas in control.

Article Processing Fees (APCs):

Standard flat rate fee of $1850
(No excess page charge)

Discounts:
IEEE Members 5%
IEEE CSS Members 20%

Special Offer: APCs waived for the first 20 accepted papers

Submission site:

opening in September at
`https://css.paperplaza.net/`

Becoming involved:

To become a reviewer or AE, go to `http://ieeecss.org/publication/open-journal-control-systems`, (CSS-OJCS) and/or contact the EiC

Special Section on the intersection of Machine Learning and Control

Unprecedented technological advances have fueled the creation of devices that can collect, generate, store, and transfer large amounts of data. This massive, data outpour is profoundly changing the way in which complex engineering problems are solved, calling for the conception of of new interdisciplinary tools at the intersection of machine learning, dynamic systems and control, and optimization. While the repurposing of control theories building on new Machine Learning methods can be highly successful, Dynamic Systems and Control can greatly contribute to analyze and devise novel adaptive, safety-critical controllers with performance guarantees. This special issue aims to contribute to this growing area of interest, and calls thus for papers in this topical area. The submission of papers in this area will open in September. For more detailed information, please visit:

`http://ieeecss.org/publication/open-journal-control-systems`

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Workshop Title: Safe Control and Learning under Uncertainty

We are now accepting submissions to the **Safe Control and Learning under Uncertainty** workshop, to be held virtually on Oct. 24, 2021 with the **Modeling, Estimation and Control Conference**.

This is a full-day workshop that aims to bring together researchers who work in the field of safe control and learning under uncertainties. We will discuss recent progress in the development of safe control methods (including control barrier functions, Hamilton Jacobian reachability analysis, safe set algorithms, potential field methods, sliding mode methods, etc.) and safe learning controllers that use these safe control methods as safety monitors or safety shields.

Topics for submission include (but are not limited to):

- Safety assurance under uncertainty
- Learning and synthesizing control barrier functions for unknown dynamic systems
- Uncertainty quantification for unknown systems
- Safety assurance during both exploitation and exploration
- Safe and efficient exploration during safe learning
- Applications of safety-critical learning and control

More information is available at our website: https://sites.google.com/view/safecontrol

*** Submissions ***
Our workshop accepts **extended abstracts** (2 pgs excluding references) and **short/position papers** (4 pgs excluding references) in IEEE two column format. Papers will undergo a single-blind peer review process, and accepted papers and posters will be hosted on our website. We are a non-archival workshop, meaning we also accept iterations on previous or ongoing work.

*** Important Dates ***
Sep. 15, 2021 first submission deadline
Sep. 25, 2021 acceptance notification
Oct. 10, 2021 final version submission deadline

Organizers
Changliu Liu, Carnegie Mellon University
Wenlong Zhang, Arizona State University
Jianyu Chen, Tsinghua University
Masayoshi Tomizuka, University of California, Berkeley

IEEE/ASME TRANSACTIONS ON MECHATRONICS

AIM 2021 DELFT

First Call for Papers

The Third Edition of Focused Section on TMECH/AIM Emerging Topics

Submissions are called for the Third Edition of Focused Section (FS) on TMECH/AIM Emerging Topics. This Focused Section is intended to expedite publication of novel and significant research results, technology and/or conceptual breakthrough of emerging topics within the scopes of TMECH (www.ieee-asme-mechatronics.org). It also provides the rapid access to the state-of-the-art of TMECH publications within the mechatronics community.

The submitted paper must not exceed 8 TMECH published manuscript pages, excluding photos and bios of authors, and will be subject to a peer review process in the standard of TMECH. All final accepted papers from submissions to the Focused Section will be published in August Issue of TMECH in 2022 and will be presented in the 2022 IEEE/ASME International Conference on AIM (AIM 2022, aim2022.org). The rejected papers from submissions will be transferred to the Program Committee of AIM 2022 for further review and consideration as contributed conference papers.

The review process for submissions to this Focused Section will be conducted in up to two rounds with one Major/Minor Revision allowed, and the final decision falls into one of the following two categories:

1. Accept for publication in Focused Section. In this case, the paper will be accepted by AIM 2022 concurrently for presentation only with full information of the paper to be included in the preprinted proceeding of AIM 2022. The final publication in TMECH, however, will be subject to the completion of presentation in AIM 2022 with paid full registration fee.
2. Reject for publication in Focused Section (after the first or second round). In this case, the paper, as well as all review comments, will be forwarded to the Program Committee of AIM 2022 for further consideration. A final Accept/Reject decision will then be made by the Committee as a contributed conference paper for AIM 2022.

Manuscript preparation
Papers must contain original contributions and be prepared in accordance with the journal standards. Instructions for authors are available online on the TMECH website.

Manuscript submission
Manuscripts should be submitted to TMECH online at: mc.manuscriptcentral.com/tmech-ieee, selecting the track 'TMECH/AIM Emerging Topics'. The cover letter should include the following statement: This paper is submitted to the Third Edition of Focused Section on TMECH/AIM Emerging Topics. The full information of the paper should be uploaded concurrently to AIM 2022 online at: ras.papercept.net/conferences/scripts/start.pl., noted with the given TMECH manuscript number in the designated area.

Submission/Review/Decision Timeline (tentative):

Opening Date of TMECH/AIM FS Submission Site (first submission):	November 1, 2021
Closing Date of TMECH/AIM FS Submission Site (first submission):	January 5, 2022
Full Information of TMECH/AIM FS Paper Submitted to AIM Site:	January 5, 2022
First Decision for TMECH/AIM FS Submission:	March 1, 2022
Revised TMECH/AIM FS Submission Due by:	March 26, 2022
Final Decision for TMECH/AIM FS Submission:	May 1, 2022
Final Version of TMECH/AIM FS Submission Due by:	May 15, 2022
Publication of Focused Section in TMECH:	August 2022

Contacts: For any questions related to this Call for Paper, please contact:
Xiang Chen, xchen@uwindsor.ca, Senior Editor of TMECH,
Toshiaki Tsuji, tsuji@ees.saitama-u.ac.jp, Program Chair of AIM 2022.

DSCD Financial Update

Rajesh Rajamani

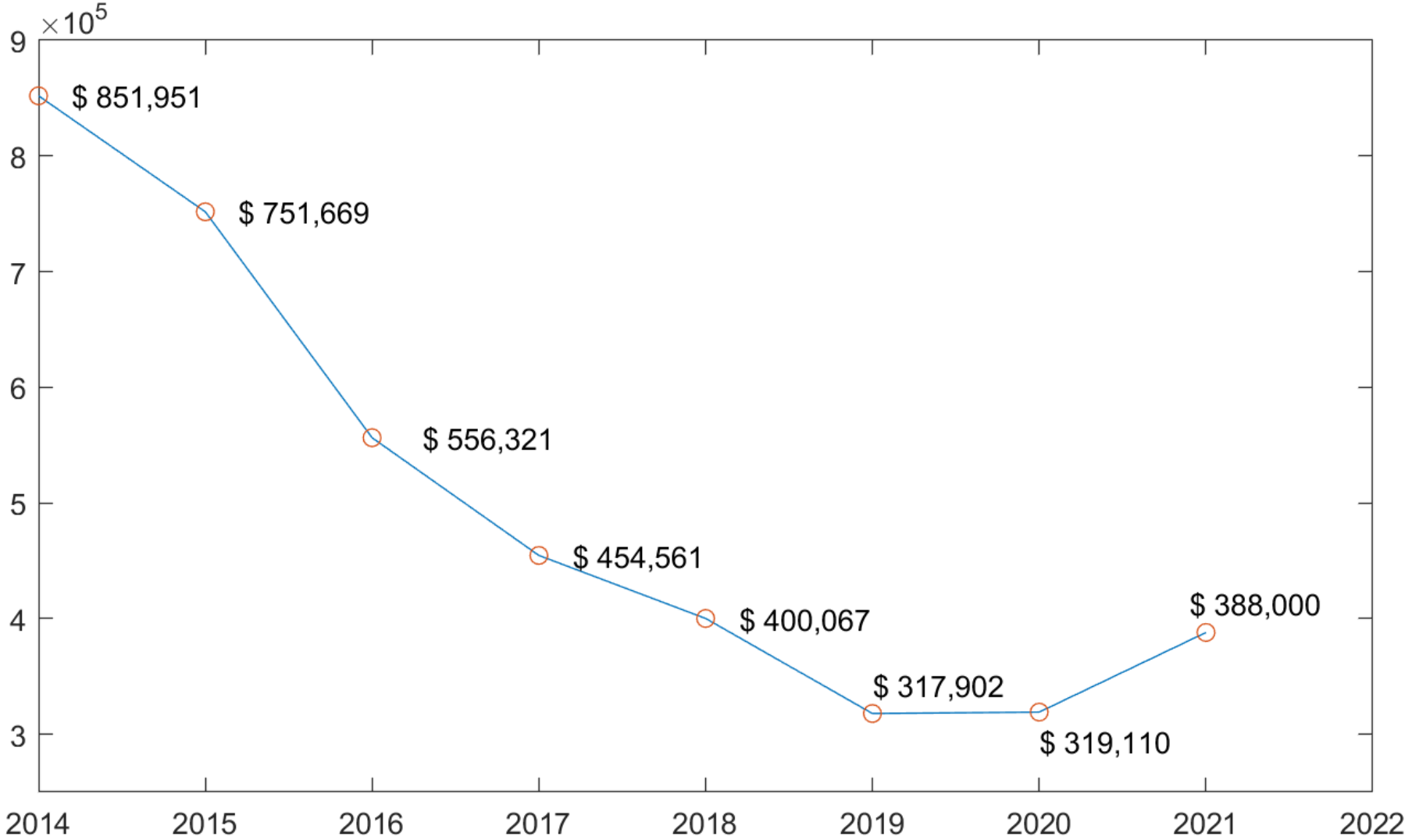
DSCD Treasurer

October 25, 2021

Division Meeting at the 2021 MECC

DSCD Segregated Account Summary

- History of account balance over recent years
  - 2014-2019: Significant spending and conference losses.
  - 2019-2021: The fiscal balance curve has started to turn around and slightly grow.



DSCD Segregated Account Overview

- The fiscal balance curve has started to turn around and slightly grow. Some reasons:
  - No more expenditures for the DSC Supplement in the ASME Mechanical Engineering Magazine.
    - Launch of separate ASME DSC Letters journal.
  - 2020 DSCC (virtual) was profitable
    - Comparison: 2019 loss was approx. ~ -$30k
  - Reduced annual expenditures due to conferences being virtual.
  - One-time recovery of old travel funds held in a different university account.

Current Year Revenue and Expenses

- Total conference revenue during the FY21 year exceeded $75k
  - The 2020 DSCC was profitable and returned approximately $4,690 during the FY21 year to the Division.

Revenues	Amount	**Expenses (so far)**	Amount
ISFA Conference Return	$ 5,130	Dues (AACC, etc)	$ 875
AIM Conference Return	$ 18,364	TC Awards	$ 4,150
ACC Conference Return	$ 48,196		
DSCC Conference Return	$ 4,690	2021 DSCC Overhead Charges to ASME (Missed DSCC Conf)	$ 12,957
Member Contributions	$ 2,437		
Total	**$ 78,817**		**$ 17,982**

- Budgeted expenses for the FY 21 year were $36,250, but only a fraction of the budget was spent.

Spending Plan for Fiscal Year 2022

Categories	Definition	FY 21	FY 22 (w/o TCs)	FY 22 (TCs)	Total
ASME Event Support	Registration, travel, lodging, etc	$ 5,000	$ 2,000		$ 2,000
Face-to-Face Meetings	Leadership meetings, planning meetings, etc	$ 6,950	$ 3,000	$ 2,950	$ 5,950
Honors & Awards	Division and TCs	$ 10,800	$ 4,000	$ 6,800	$ 10,800
New Initiatives	New products, conferences, etc	$ 0	$ 0	$ 2,450	$ 2,450
Newsletter and Communications Activities	Publications, publicity, etc.	$ 250	$ 250		$ 250
Promotional Funds	Event marketing	$ 250	$ 250		$ 250
Programs and Philanthropy	ASME Foundation, STEM competitions, etc	$ 0	$ 0		$ 0
Student and Early Career Activities	Collegiate council, student support, etc	$ 12,000	$ 12,000		$ 12,000
Volunteer/ Member Support	Non-ASME conference support	$ 1,000	$ 2,000		$ 2,000
Total		$ 36,250	$ 23,500	$ 12,200	**$ 35,700**

- Major categories of spending: Student travel support ($12,000), TC budgets ($12,200), cost of meetings at conferences, and conference-related event support ($2,000).

ASME Dynamic Systems and Control Division Technical Committees

Update @ MECC 2021

Marcia O'Malley

Technical Committee Chairs and Membership

- **Automotive and Transportation Systems:** Mahdi Shahbakti, 181 members (2020)
- **Biosystems and Health Care:** Nitin Sharma, 57 members (2020)
- **Energy Systems:** Scott Moura, 141 members (2020)
- **Mechatronics:** Douglas Bristow, 173 members (2020)
- **Robotics:** Davide Piovesan, 30 members (2020)
- **Vibrations:** Oumar Barry, 48 members (2020)

Technical Committee Activities
Invited Sessions

- **Automotive and Transportation Systems:** 3 (DSCC 2020), 4 (ACC 2021), 4 (MECC 2021)
- **Biosystems and Health Care:** 1 (DSCC 2020), 1 (MECC 2021)
- **Energy Systems:** 5 (ACC 2020), #TBD (MECC 2021)
- **Mechatronics:** No reported sessions
- **Robotics:** 1 (DSCC 2020), ACC 2021 workshop, 1 (MECC 2021)
- **Vibrations:** 1 (DSCC 2020), 1 (MECC 2021)

Technical Committee Activities
Special/Tutorial Sessions and Other Events

- **Automotive and Transportation Systems:** Automotive control Industry Session at MECC 2021
- **Biosystems and Health Care:** No reported sessions
- **Energy Systems:** ACC2021 Tutorial Session on “Innovation and Modern Challenges in Wind Farm Control”
- **Mechatronics:** No reported sessions
- **Robotics:** ACC 2021 workshop on Legged Robotics
- **Vibrations:** No reported sessions

Budget Request for FY 21-22

- Standard TC budget is $1500
- Two TCs requested additional funds for special events

Technical Committee	Awards	Refreshments/ Meetings Expenses	Special Events	Total
Vibrations	$ 1,000	$ 500	-	$ 1,500
Robotics	$ 1,000	$ 500		$ 1,500
Mechatronics	$ 1,000	$ 500		$ 1,500
Biosystems and Health Care	$ 1,300	$ 200		$ 1,500
Energy Systems	$ 1,250	$ 500	Student Career Advising Session: $500	$ 2,250
Automotive and Transportation Systems	$ 1,250	$ 250	Special Industry Session and Networking Event: $ 2,450	$ 3,950

TC Chairs Meetings

- Around MECC: Oct 19, 2021
  - NEC development fund proposal submitted by Automotive and Transportation Systems
  - Ways of engaging members in ongoing COVID situation
  - Thoughts on future conferences (DSCC, MECC)

Technical Committee:
Web, email alias, linked in group

- **Automotive and Transportation:**
  - https://community.asme.org/dynamic_systems_control/w/wiki/16127.automotivetransportation-systems-ats.aspx
  - https://www.linkedin.com/groups/4380983
- **Biosystems and Health Care:**
  - https://sites.google.com/site/asmebshc/
  - asmebshc@googlegroups.com
- **Energy Systems:**
  - https://community.asme.org/dynamic_systems_control/w/wiki/16128.energy-systems.aspx
  - https://www.linkedin.com/groups/4687097
- **Mechatronics:**
  - https://community.asme.org/dynamic_systems_control/w/wiki/16130.mechatronics.aspx
- **Robotics:**
  - https://community.asme.org/dynamic_systems_control/w/wiki/16131.robotics.aspx
- **Vibrations:**
  - https://sites.google.com/site/vibrationdscd/home
  - vibration-dscd-asme-group@googlegroups.com

ASME Update

Prepared for the
Dynamic Systems and Control Division
for their
October 25, 2021,
Executive Committee and General Division Meetings

BARBARA ZLATNIK, CAE

SENIOR MANAGER, TEC OPERATIONS

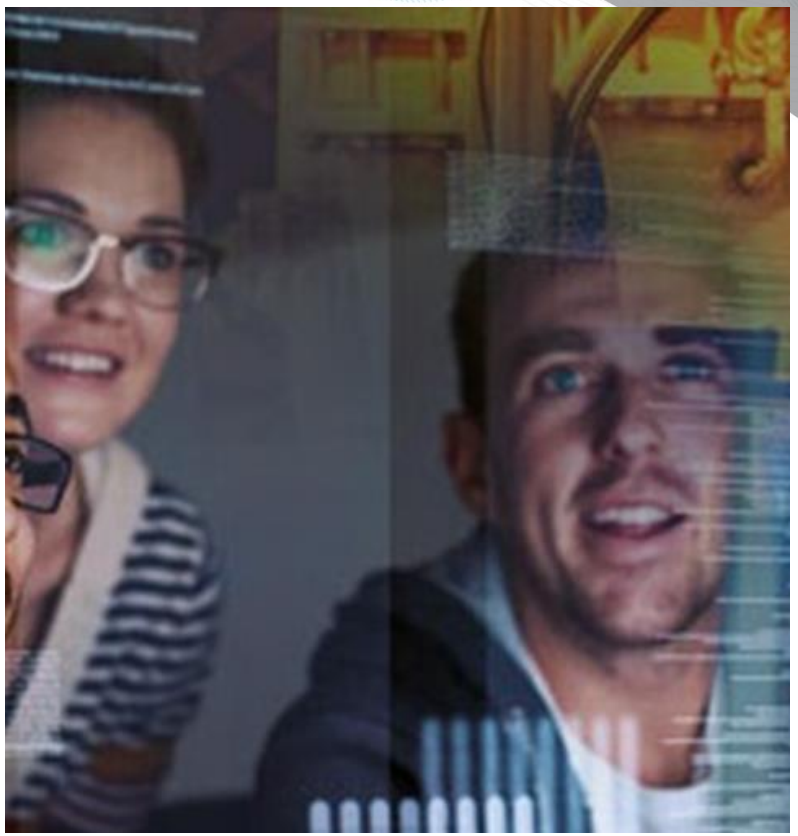
ZLATNIKB@ASME.ORG

Staff Support: Barbara Zlatnik

- Serve as primary staff support for several divisions, including DSCD
- Ensure volunteer leadership have the tools and resources they need
- Support these groups administratively so volunteers focus on what they do best.
- Assist groups on a strategic level
  - Long-term planning
  - Succession planning
  - Budgeting
  - Conferences – Overall administration and future planning
- Consultant and cheerleader for divisions

Technical & Engineering Communities Sector

The Technical and Engineering Communities (TEC) Sector oversees technical divisions and research committees to engage the extraordinary talents of our members' expertise for the advancement of engineering. ASME membership represents a uniquely powerful resource for planning, developing and delivering technical content for conference and events. Through these efforts, members grow and develop personally and professionally.



TEC Sector Senior Vice President:
George Papadopoulos

Staff Lead:
Tim Graves, ASME Managing Director

TEC Sector

» Divisions have direct-line reporting to the TEC Sector Council

» Monthly Assembly of Division meetings provide an opportunity for the Division to receive updates and information as well as the ability to bring issues and ideas to the highest levels of the Society.

- **Assembly meetings foster collaboration among divisions as well as with the TEC Sector leadership**

Technology Groups

Robotics
TGL: Gloria Wiens

Intelligent Manufacturing
TGL: Stephan Biller

Energy Sources and Processing
TGL: Vicki Risinger

Clean Energy
TGL: Frank Michell

Space – Exploration and Habitat
TGL: Mina Pelegri

Gas Turbine
TGL: Mark Zelesky

Digitalization
TGL: Kieran Kavanagh

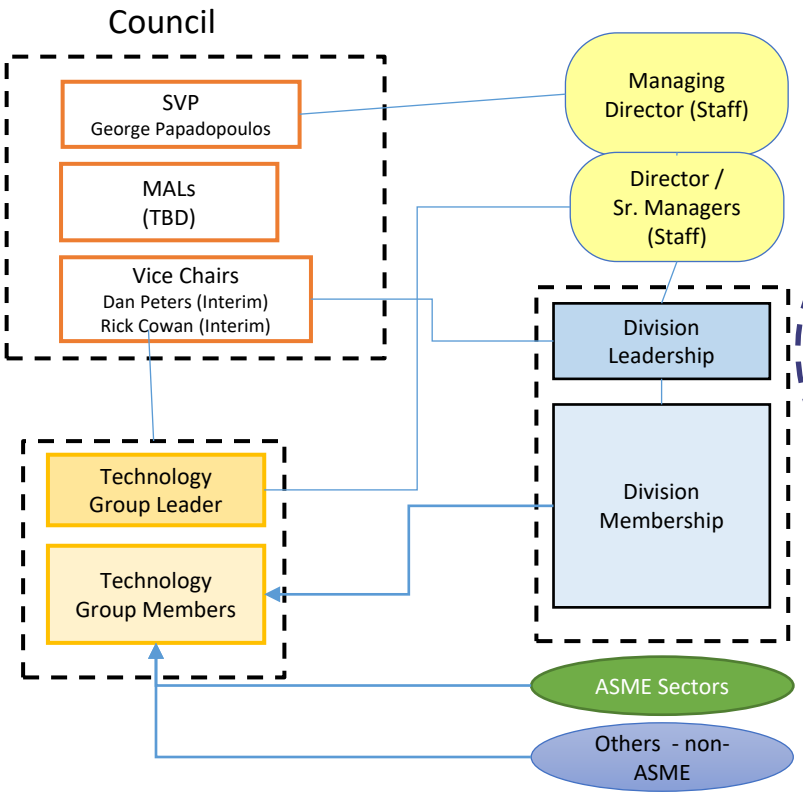
NanoEngineering
TGL: Ganesh Balasubramanian

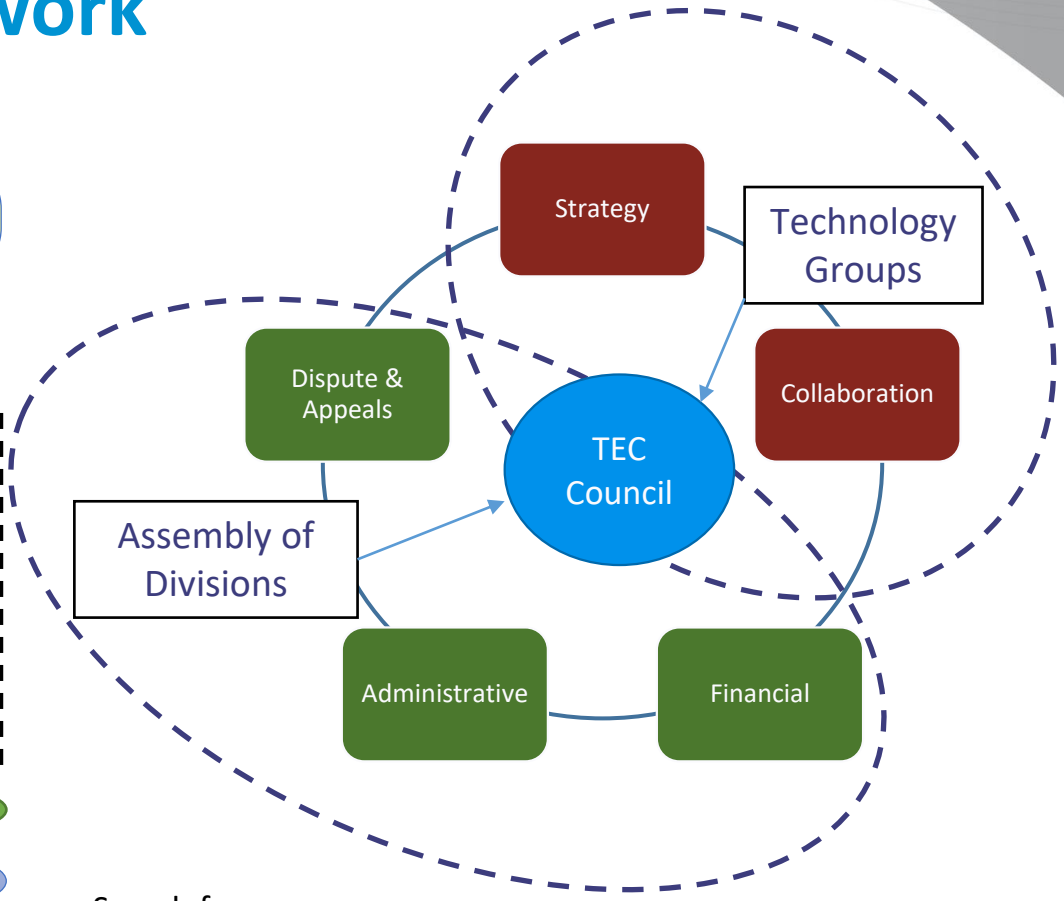
The TEC Sector formed Technology Groups under the TEC Council to:

- Provide opportunities for engaging a network of high-level subject matter experts to form a think tank or solve a grand challenge
- Foster collaboration with Divisions, other Technology Groups, and ASME Sectors
- Identify white space that ASME can quickly enter into, develop and create a new product or service in a particular technology area of interest

For more information, review the Technology Group Plan:
https://community.asme.org/technical_events_and_content_sector/m/mediagallery1/12204/download.aspx

TEC Sector Framework





Search for a Group or Volunteer http://vld.asme.org

TEC Sector: TEC Development Fund

TEC Funding for new initiatives:

- Increasing member engagement
- Learning and Development
- Student/Early Career
- Diversity, Equity and Inclusion

Divisions and their Technical Committees can apply for TEC Funds! For more information, contact Barbara: zlatnikb@asme.org

Examples of recently funded activities:

- Mechanisms and Robotics Student Competition
- Fluid Visualization Competition
- ASME/EEC Waste to Energy Research and Technology Biennial Conference
- Internal combustion engine webinar series
- ADAPTING TO CLIMATE CHANGE IN THE OCEANS
- Advanced Clean Energy Summit
- Opportunities in Space Power & Propulsion – A Workshop to Explore New Strategic Directions & Novel Ways to Attract the Next Generation of Engineers

TEC Talks Webinar Series

https://www.asme.org/membership/tec-talks

For more information, contact Barbara: zlatnikb@asme.org

ASME Webinar Series – hosted by and highlights a different division each month

- Hosted by ASME; publicized to all members. It's free!
- Highlights a different division each month
- Divisions provide content, topic and speakers
- Opportunity to introduce the Division to a wide audience
  - Registration has been between 200 and 600 people!

Dedicated Service Award

Now accepting nominations – November 1 deadline

- Honors unusual dedicated voluntary service to the Society marked by outstanding performance, demonstrated effective leadership, prolonged and committed service, devotion, enthusiasm and faithfulness.

- Presented to selected individuals who have served the Society for at least ten years in one or more of the following areas: Standards and Certification; Public Affairs & Outreach; Technical Events and Content; Student & Early Career Development; Board of Governors; ASME Foundation; and The ASME Auxiliary, Inc.

TEC Sector can submit up to 11 individuals!

https://www.asme.org/about-asme/honors-awards/service-awards/dedicated-service-award

IMECE Registration is open

International Mechanical Engineering Congress & Exposition
Virtual Conference, Online
November 1 – 5, 2021

» Jam-packed technical program
  - Registration required

» Special Events and Committee Meetings schedule will be available soon
  - These are free to attend!
  - Terrific awards lectures being given across several divisions

Learn more here: https://event.asme.org/IMECE

ASME STORE

- Your one-stop shop for ASME branded merchandise. Check out our collections including student section, professional section, engineering division, and ASME Heritage merchandise.

- The ASME Store is the go-to place to get your latest ASME promotional items such as apparel, headwear, drinkware, and other promotional items.

https://asmestore.merchorders.com/

Report on ACC 2021 and ACC 2022

Compiled by Satadru Dey (DSCD Rep. for the American Control Conference)

Statistics for ACC 2021

There was a 65% acceptance rate for ACC submissions. Papers submitted though ASME had an acceptance rate of 77%. ASME also organized/co-organized 9 of the 28 invited sessions. Additional statistics are below.

- Total number of paper submissions: 1226
- Total number of accepted papers: 798
    - Acceptance rate: 65%
- Total number submitted through ASME: 77
- Total number of accepted ASME papers: 59
    - Acceptance rate: 77%
- Total number of Invited sessions: 28[1]
- Total number of Invited sessions organized/co-organized by ASME: 9
- Total number of Tutorial sessions: 3[1]
- Total number of Tutorial sessions organized/co-organized by ASME: 0
- Total number of Special sessions: 10
- Total number of Special sessions organized/co-organized by ASME: 0

Statistics for ACC 2022

** These numbers are not final. They reflect the status on the morning of Oct 12, 2021.

- Total number of paper submissions: 554 Conference + 225 LCSS/ACC
- Total number submitted through ASME: 47, (not sure how many submitted to LCSS)
- Total number of submitted invited session proposals: 42
    - ASME Energy Systems Technical Committee (in collaboration with other Technical Committees) proposed 10 invited sessions which include 57 papers.
- Total number of submitted workshop proposals: 11

[1] The number of invited and tutorial sessions refer to the accepted session proposals, not the submitted ones.

AIM2021 (http://aim2021.org/**) Virtue conference**

Submissions: 258 papers + 21 posters + 28 TMech paper presentation only.

Acceptance rates: TMech FS: 29/86 (= 34%)
Overall (AIM and FS): 165/258 (= 64%).
Posters: 9/21 (= 43%)

Workshops: 6 workshops, 30 speakers, > 300 participants.

Program: 35 regular + 2 invited sessions; 4 keynotes

Finance (prelim.): Income: 74k$ (= 7k$ Sponsors + 67k$ Registrations)
Expense: 63k$
Surplus: ~11k$ (17% of expenses)

AIM2022 (https://www.aim2022.org) 25th Anniversary!
Sapporo, Japan. July 11th – 15th, 2022

Important dates:

TMECH/AIM FS (Emerging Topics):

First submission	November 1, 2021 – January 5, 2022
First decision	March 1, 2022
Revised submission	March 26, 2022
Final decision	May 2, 2022
Final version submission	May 15, 2022
Publication	August 2022

AIM conference:

Special/Invited Session proposals	February 10, 2022
Tutorial/Workshop proposals	February 10, 2022
Contributed/Invited papers	February 25, 2022
Notification of paper status:	May 2, 2022
Final paper submission	May 16, 2022

Attachments:

TMECH/AIM FS call for papers

AIM conference call for papers

AIM2022 Interim report

Mihoko Niitsuma (Chuo Univ., Japan)
Kuniaki Kawabata (Japan Atomic Energy Agency, Japan)
Santosh Devasia (University of Washington, USA)

Oct. 11, 2021

IEEE
IEEE Robotics & Automation Society
IEEE Industrial Electronics Society
IES
ASME SETTING THE STANDARD

Overview of AIM2022

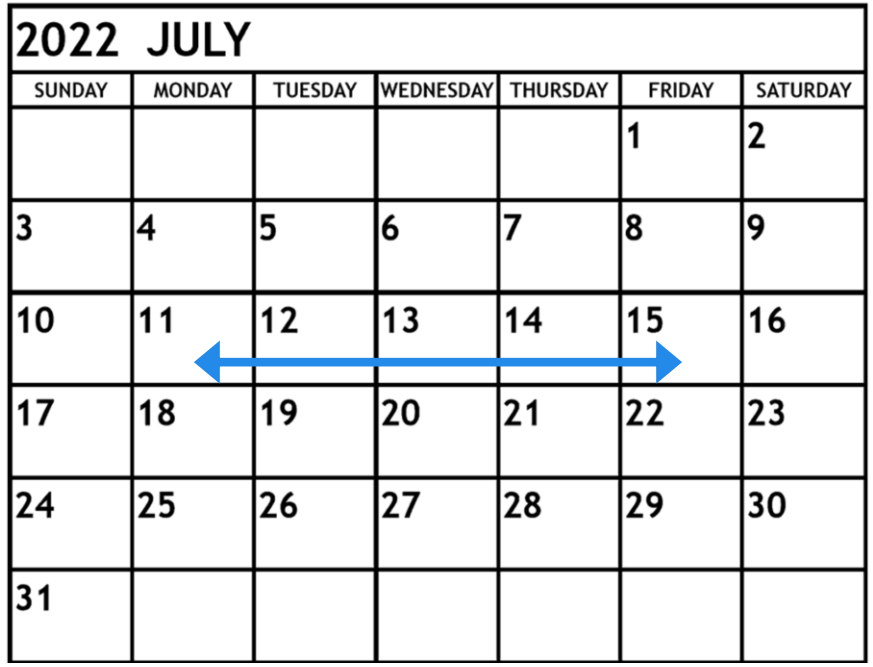
- Conference motto

Advanced Intelligent Mechatronics for Social Good

in the New Normal Era

- Date: July 11th to 15, 2022
- Place: Sapporo, Japan
- https://www.aim2022.org

25th Anniversary!



Location

City of Sapporo in Hokkaido

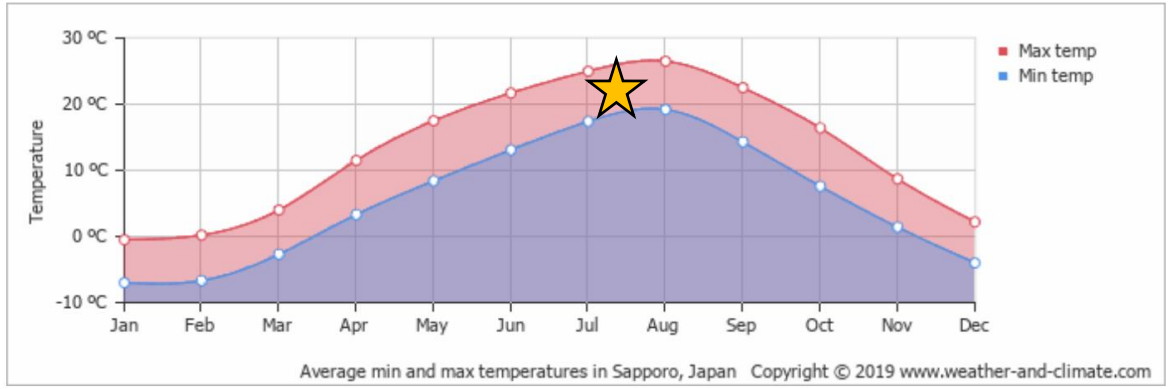
- ✓ Largest city in Hokkaido, northernmost of the four main islands of Japan
- ✓ Rich in nature and rich in food!

Climate in Sapporo (Hokkaido), Japan

See the monthly weather averages in graphs below.

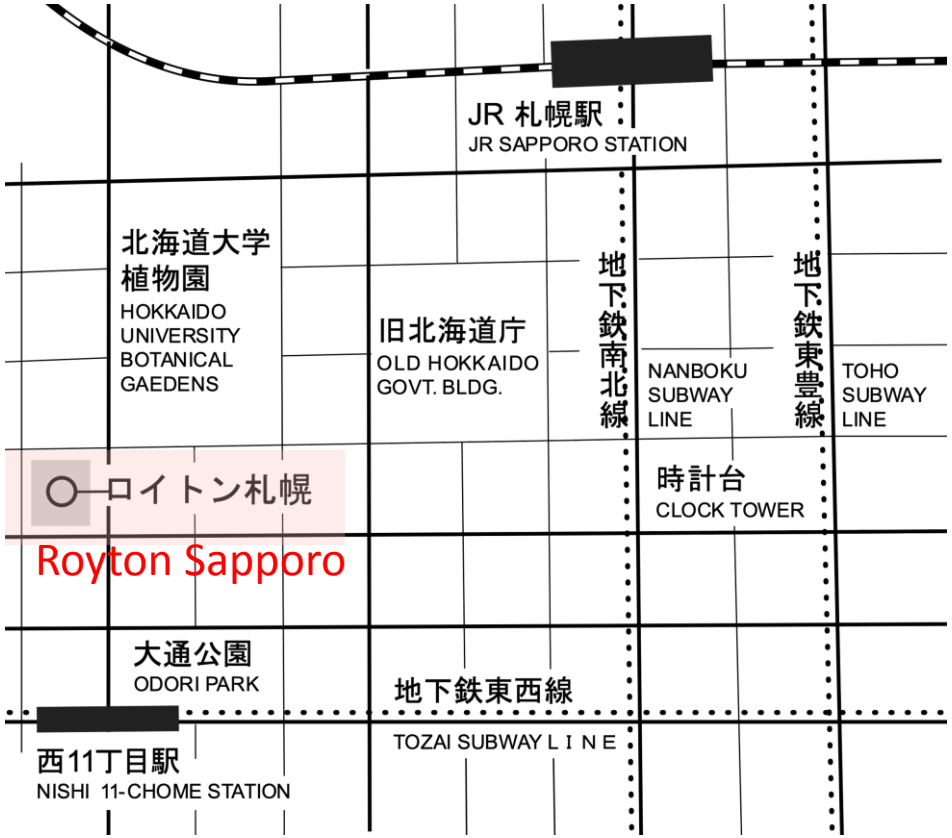
Average minimum and maximum temperature over the year

The monthly mean minimum and maximum daily temperature. Show in Fahrenheit



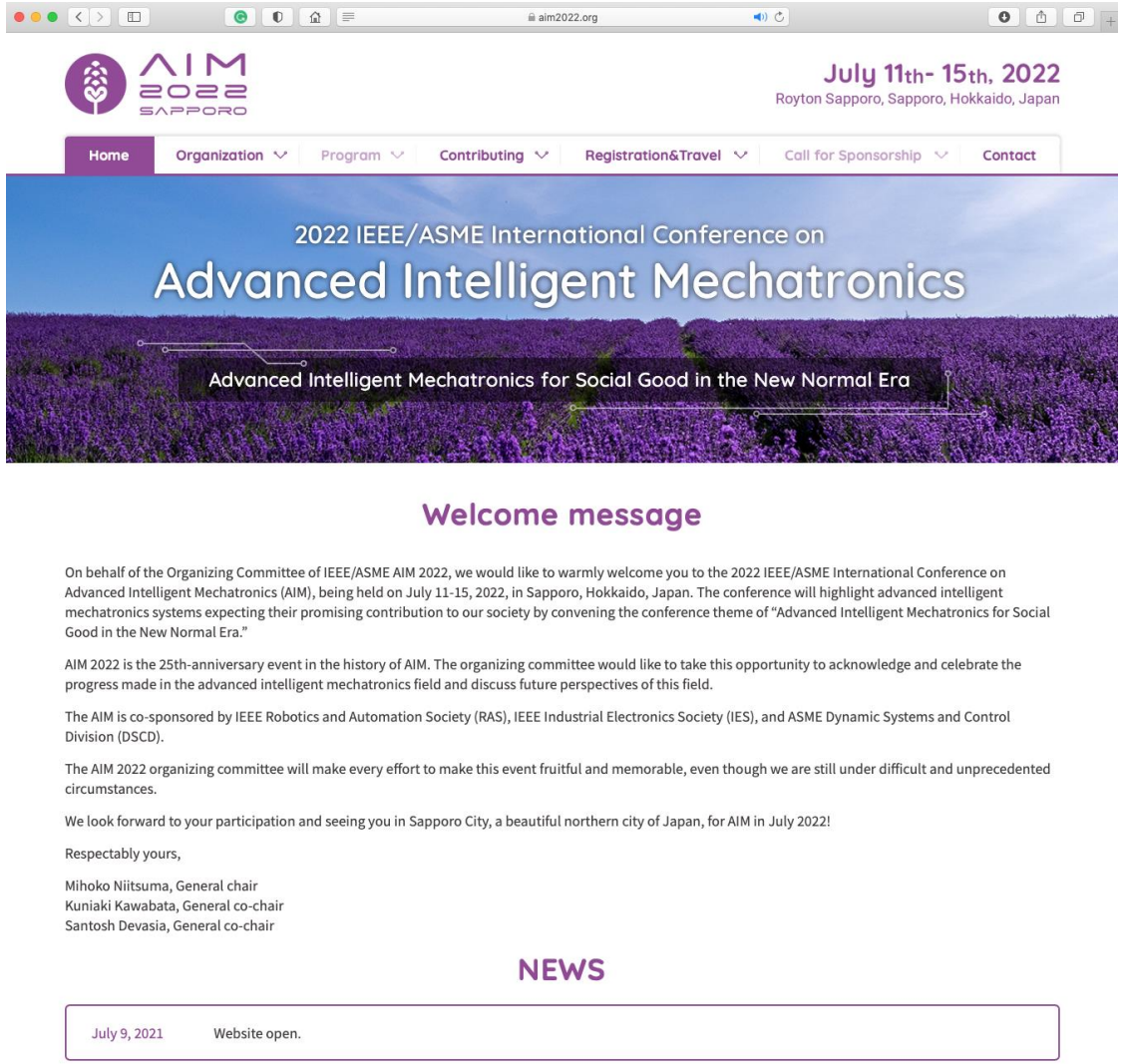
Conference venue

❖ Royton Sapporo (Hotel)



Website

The conference website is available at **https://www.aim2022.org**



Budget

REVENUE:	Unit	Amount per	Total amount
In Advance- Members	80,000 JPY	110	8,800,000 JPY
In Advance- Nonmembers	90,000 JPY	70	6,300,000 JPY
In Advance- Student Member	45,000 JPY	25	1,125,000 JPY
In Advance- Student Nonmembers	50,000 JPY	20	1,000,000 JPY
At Conference- Members (At Onsite-)	90,000 JPY (95,000JPY)	25 5	2,725,000 JPY
At Conf- Nonmembers (At Onsite-)	100,000 JPY (105,000 JPY)	15 5	2,025,000 JPY
At Conf- Student members (At Onsite-)	55,000 JPY (60,000 JPY)	10 0	550,000 JPY
At Conf- Student Nonmembers (At Onsite-)	55,000 JPY (60,000 JPY)	0 0	0 JPY
Others			13,985,000 JPY
		Total	36,615,000 JPY

EXPENSE: Item	Amount
Registration & Promotion expense	2,500,000 JPY
Paper publication expense (paper plaza, program contents preparation etc.)	1,200,000 JPY
Special speaker fee including 25th anniversary events	1,200,000 JPY
Conference Local Arrangement	7,500,000 JPY
Food and Beverage	7,200,000 JPY
Conference Administration	9,194,216 JPY
Audit Fee	600,000 JPY
Committee	1,107,870 JPY
Total	30,502,086 JPY

Surplus: 6,112,914 JPY (20% of Expense)

The interim budget sheet has been submitted to IEEE RAS, IES and ASME.

Tentative technical program

- 5 days program
  - ✓1 day for pre-conference workshop & tutorials
  - ✓3 days for technical sessions
    - 4 – 5 parallel sessions
    - Poster sessions
  - ✓3 plenary talks
  - ✓25th anniversary events
  - ✓1 day for technical trip

	July 11	July 12	July 13	July 14	July 15
AM 1	Workshops & Tutorials	Plenary	Plenary	Plenary	Technical tour
AM 2		Technical session	Technical session	Technical session	
PM 1		Technical session	Technical session	Technical session	
PM 2		Technical session	25th Anniversary event	Technical session	
	Welcome reception		Bunquet		

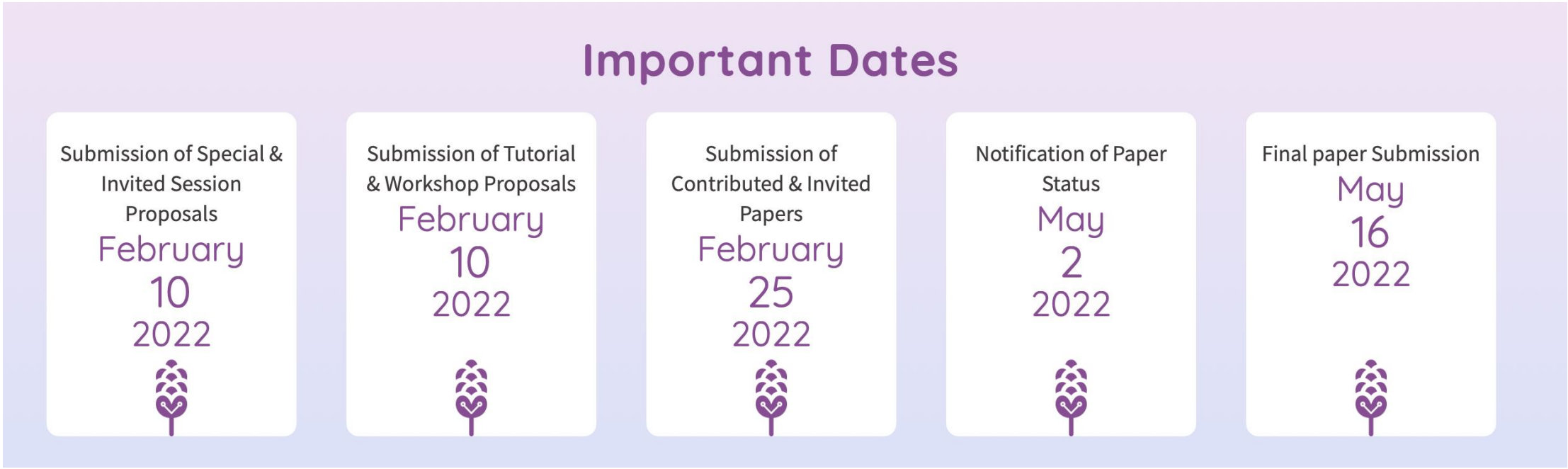
TMECH/AIM Focused Section Papers

- Submissions to the Third Edition of the Focused Section on TMECH/AIM Emerging Topics are done through the TMECH site.

- Accepted TMECH/AIM Focused Section papers will be presented at AIM 2022 and published in the Third Edition of TMECH/AIM Focused Section in the August Issue of TMECH in 2022.

- Call for papers of TMEC-AIM is open on the website.

Important Dates



Organization

- **General chair**: Mihoko Niitsuma (Chuo Univ., Japan)
  - **co-chairs**: Kuniaki Kawabata (Japan Atomic Energy Agency, Japan),
    Santosh Devasia (University of Washington, USA), General chair of AIM2023
- **Program chair**: Toshiaki Tsuji (Saitama Univ. , Japan)
  - **Co-chairs**: Ya-jun Pan (Dalhousie Univ., Canada), Roberto Oboe (Univ. of Padova, Italy)
- **25th Anniversary events chair**: Hiroshi Fujimoto (Univ. of Tokyo, Japan)
- **Invited Session co-chairs**: Mitsuhiro Kamezaki (Waseda Univ., Japan), Marina Indri (Politecnico di Torino, Italy),
  Jinhua She(Tokyo Univ. of Technology, Japan) , Silu Chen (NIMTE, China)
- **Workshop & Tutorial co-chairs**: Noriaki Ando (AIST, Japan), Sehoon Oh (DGIST, Korea),
  Kenn Oldham (Univ. of Michigan, USA), Jiajie Guo (Huazhong University of Science and Technology, China)
- **Conference Editorial Board chair**: Jun Ueda (Georgia Tech., USA)
- **Exhibits & Sponsorship Chair**: Yasuharu Kunii (Chuo Univ., Japan)
- **Finance chair**: Sousuke Nakamura (Hosei Univ., Japan)
- **Publication chair**: Tomoyuki Shimono (Yokohama National Univ., Japan)
- **Publicity chair**: Naoki Motoi (Kobe Univ., Japan)
- **Local arrangement chair**: Takayuki Tanaka (Hokkaido Univ., Japan)

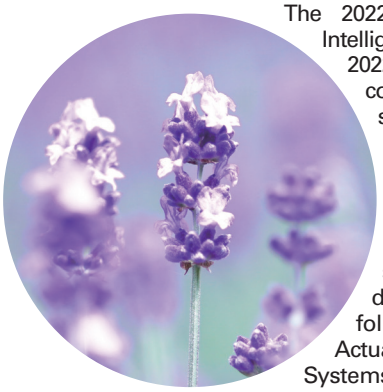

AIM
2022
SAPPORO
July 11th- 15th, 2022
Royton Sapporo, Sapporo,
Hokkaido, Japan
See you in Sapporo!
Let's celebrate the 25th anniversary
of AIM together!
The conference website is available at https://www.aim2022.org

2022 IEEE/ASME International Conference on Advanced Intelligent Mechatronics

July 11th- 15th, 2022 | Royton Sapporo, Sapporo, Hokkaido, Japan

Contact Us
AIM2022 Secretariat
c/o JTB Communication Design, Inc.
Email: aim2022@jtbcom.co.jp

Call for Papers



The 2022 IEEE/ASME International Conference on Advanced Intelligent Mechatronics (AIM 2022) will be held on July 11 -15, 2022 in Royton Sapporo, Sapporo, Japan. As a flagship conference focusing on mechatronics and intelligent systems, the AIM 2022 will bring together an international community of experts to discuss the state-of-the-art, new research results, perspectives of future developments, and innovative applications relevant to mechatronics, robotics, automation, industrial electronics, and related areas.

The sponsors and organizers of AIM 2022 invite a submission of high quality mechatronics research papers describing original work, including but not limited to the following topics:

Actuators, Automotive Systems, Bioengineering, Data Storage Systems, Electronic Packaging, Fault Diagnosis, Human-Machine interfaces, Human-Robot Interaction/Collaboration, Human Factors in Mechatronics Systems, Industry Applications, Information Technology, Intelligent Systems, Machine Vision, Manufacturing, Micro-Electro-Mechanical Systems, Micro/Nano Technology, Modeling and Design, System Identification and Adaptive Control, Motion Control, Vibration and Noise Control, Neural and Fuzzy Control, Opto-Electronic Systems, Optomechatronics, Prototyping, Real-Time and Hardware-in-the-Loop Simulation, Robotics, Sensors, System Integration, Transportation Systems, Smart Materials and Structures, Energy Harvesting, and other frontier fields.

All contributed and invited papers, tutorial and workshop proposals, and invited and special session proposals must be uploaded through the submission website (www.aim2022.org) according to the deadlines below.

Contributed & Invited Papers:

All papers go through a rigorous review process. Accepted papers will be presented by their authors at the conference. All accepted peer-reviewed manuscripts will be published in the conference proceedings, and will be submitted for inclusion in IEEEXplore, subject to formatting and copyright requirements.

Tutorials & Workshops:

Proposals are invited for half-day or full-day tutorials and workshops.

Workshops explore the frontiers of recent or emerging topics in mechatronics, while tutorials provide a foundation for future self-study in important area of mechatronics. Tutorial and workshop proposals must include: (1) a statement of objectives, (2) a description of the intended audience, and (3) a list of speakers with an outline of their planned presentations. Unless specifically requested, individual tutorial and workshop presentations are not peer reviewed, and do not appear in the proceedings.

Invited & Special Sessions:

Proposals are invited for invited and special sessions. Invited sessions consist of 4 to 6 thematically related invited papers. Invited session proposals consist of a brief statement of purpose and extended abstracts of the included invited papers. Invited papers are submitted and reviewed following the same process as contributed papers, and are included in the proceedings.

TMECH/AIM Focused Section Papers

Submissions to the Third Edition of the Focused Section on TMECH/AIM Emerging Topics are done through the TMECH site. Accepted TMECH/AIM Focused Section papers will be presented at AIM 2022 and published in the Third Edition of TMECH/AIM Focused Section in the August Issue of TMECH in 2022. The publication in the dedicated Issue of TMECH, however, will be subject to the presentation of the paper at AIM 2022 with paid registration fee. Papers rejected for publication in TMECH will still be considered by the Program Committee of AIM 2022, which makes a final acceptance/rejection decision for AIM 2022.

Important Dates

Submission of Special & Invited Session Proposals:	February 10, 2022
Submission of Tutorial & Workshop Proposals:	February 10, 2022
Submission of Contributed & Invited Papers:	February 25, 2022
Notification of Paper Status:	May 2, 2022
Final paper Submission:	May 16, 2022

IEEE/ASME TRANSACTIONS ON MECHATRONICS

Call for Papers

The Third Edition of Focused Section on TMECH/AIM Emerging Topics

Submissions are called for the Third Edition of Focused Section (FS) on TMECH/AIM Emerging Topics. This Focused Section is intended to expedite publication of novel and significant research results, technology and/or conceptual breakthrough of emerging topics within the scopes of TMECH (www.ieee-asme-mechatronics.org). It also provides the rapid access to the state-of-the-art of TMECH publications within the mechatronics community.

The submitted paper must not exceed 8 TMECH published manuscript pages, excluding photos and bios of authors, and will be subject to a peer review process in the standard of TMECH. All final accepted papers from submissions to the Focused Section will be published in August Issue of TMECH in 2022 and will be presented in the 2022 IEEE/ASME International Conference on AIM (AIM 2021, aim2022.org). The rejected papers from submissions will be transferred to the Program Committee of AIM 2022 for further review and consideration as contributed conference papers.

The review process for submissions to this Focused Section will be conducted in up to two rounds with one Major/Minor Revision allowed, and the final decision falls into one of the following two categories:

1. Accept for publication in Focused Section. In this case, the paper will be accepted by AIM 2022 concurrently for presentation only with full information of the paper to be included in the preprinted proceeding of AIM 2022. The final publication in TMECH, however, will be subject to the completion of presentation in AIM 2022 with paid full registration fee.
2. Reject for publication in Focused Section (after the first or second round). In this case, the paper, as well as all review comments, will be forwarded to the Program Committee of AIM 2022 for further consideration. A final Accept/Reject decision will then be made by the Committee as a contributed conference paper for AIM 2022.

Manuscript preparation
Papers must contain original contributions and be prepared in accordance with the journal standards. Instructions for authors are available online on the TMECH website.

Manuscript submission
Manuscripts should be submitted to TMECH online at: mc.manuscriptcentral.com/tmech-ieee, selecting the track 'TMECH/AIM Emerging Topics'. The cover letter should include the following statement: This paper is submitted to the Third Edition of Focused Section on TMECH/AIM Emerging Topics. The full information of the paper should be uploaded concurrently to AIM 2022 online at: ras.papercept.net/conferences/scripts/start.pl., noted with the given TMECH manuscript number in the designated area.

Submission/Review/Decision Timeline:

Opening Date of TMECH/AIM FS Submission Site (first submission):	November 1, 2021
Closing Date of TMECH/AIM FS Submission Site (first submission):	January 5, 2022
Full Information of TMECH/AIM FS Paper Submitted to AIM Site:	January 5, 2022
First Decision for TMECH/AIM FS Submission:	March 1, 2022
Revised TMECH/AIM FS Submission Due by:	March 26, 2022
Final Decision for TMECH/AIM FS Submission:	May 2, 2022
Final Version of TMECH/AIM FS Submission Due by:	May 15, 2022
Publication of Focused Section in TMECH:	August 2022

Contacts: For any questions related to this Call for Paper, please contact:
Xiang Chen, xchen@uwindsor.ca, Senior Editor of TMECH,
Toshiaki Tsuji, tsuji@ees.saitama-u.ac.jp, Program Chair of AIM 2022.

Editorial Board

Chris Manzie, University of Melbourne, Australia, manziec@unimelb.edu.au
Areas: automotive control systems, mechatronics, autonomous systems, energy systems

Kenn Oldham, University of Michigan, USA, oldham@umich.edu
Areas: modelling and design, motion control, actuators and sensors, vibration and noise control, micro devices and opto-electronic systems, robotics

Dawei Shi, Beijing Institute of Technology, China, daweishi@bit.edu.cn
Areas: modeling and design, intelligent control, motion control, robotics, actuators and sensors, medical devices

Tomoyuki Shimono, Yokohama National University, Japan, shimono-tomoyuki-hc@ynu.ac.jp
Areas: actuators and sensors, motion control, robotics

Mahdi Tavakoli, **University of Alberta, Canada**, **mahdi.tavakoli@ualberta.ca**
Areas: robotics, modeling and design, actuator and sensor, rehabilitation robotics and human-robot interaction.

Jun Ueda, Georgia Institute of Technology, USA, jun.ueda@me.gatech.edu
Areas: manipulation, motion control, actuation, tactile sensing, kinematics, dynamics, haptics

Yan Wan, University of Texas at Arlington, USA, yan.wan@uta.edu
Areas: sensors and actuator networks, transportation systems, cyber physical systems, system identification, distributed and cloud robotics, localization, mapping and planning, mobility and locomutation, unmanned autonomous systems, AI and machine

Dirk Wollherr, Technical University of Munich, Germany, dw@tum.de
Areas: autonomous assistance systems, human-robot interaction and collaboration, robot motion and manipulation in dynamic environments, psychosocial aspects of robotics

Jingang Yi, Rutgers University, USA, jgyi@rutgers.edu
Areas: autonomous robotic systems, mechatronics, dynamic systems and controls, automation science and engineering, with applications to biomedical, transportation, and civil infrastructure systems

Haoyong Yu, National University of Singapore, Singapore, **bieyhy@nus.edu.sg**
Areas: compliant actuators, force control, rehabilitation robots, human-robot interaction

George G. Zhu, Michigan State University, USA, zhug@egr.msu.edu
Areas: automotive control, motion control, energy systems, control of mechatronic systems.

ASME Dynamic Systems and Control Division Podcast Series

Update at DSCD General Meeting, Oct. 25

Yao Ma, Selina Pan, Bryan Maldonado Puente, and Hao Su

ASME DSCD Podcast Series

- **Purpose:** to facilitate better communication and build closer community by featuring our community members (researchers, student leaders, journal editors, etc.) through a casual, conversation setting
- https://www.youtube.com/channel/UCKZDGbU2OsXtBvX4d7iwYTA/videos
- Monthly release via **ASME DSCD** Youtube channel, disseminated via DSCD website
- Total views: 1207, subscriber counts: 60

8 Guests since Feb 2021

- 02/2021: Prof. Anna Stefanopoulou
- 03/2021: Prof. Marcia O’Malley
- 04/2021: Prof. Masayoshi Tomizuka
- 05/2021: Prof. Venkat Krovi
- 06/2021: Prof. Chris Vermillion
- 07/2021: Prof. Stephanie Stockar
- 08/2021: Prof. Scott Moura
- 09/2021: Prof. Carrie Hall

Future Guests (tentative)

- Prof. Aaron Johnson, CMU
- Prof. Neera Jain, Purdue
- Dr. Jamie Lian, ORNL
- Dr. Katherine Strausser, Ekso Bionics
- **Please subscribe to our channel!**
  - **ASME DSCD**

Podcast Team

- Hosts
  - Prof. Yao Ma, TTU
  - Dr. Selina Pan
  - Dr. Bryan Maldonado Puente, ORNL
  - Prof. Hao Su, NCSU
- Youtube Dissemination
  - Prof. Kam Leang
- Advisors
  - Prof. Xiaobo Tan
  - Prof. Jingang Yi







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2021 (inaugural) Modeling, Estimation and Control Conference
MECC 2021

October 24 – 27 (Sunday – Wednesday) 2021

Online

https://mecc2021.a2c2.org






MECC 2021 Overview

- **MECC 2021 aims** to serve the scientific and engineering communities with interests in the modeling, estimation, and control of cross-disciplinary mechanical systems, to provide a platform for the dissemination and discussion of the state of the art in relevant research areas, and to create opportunities for networking with colleagues.
- **MECC 2021 is sponsored** by the American Automatic Control Council (AACC) and **co-sponsored** by the International Federation of Automatic Control (IFAC).
- MECC 2021 conference proceedings will be **published** via IFAC-PapersOnLine, which is open access and indexed in EI, Scopus, Web of Science, and INSPEC.

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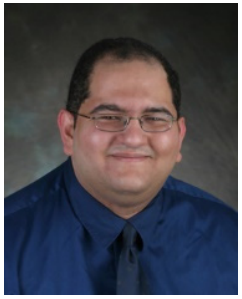

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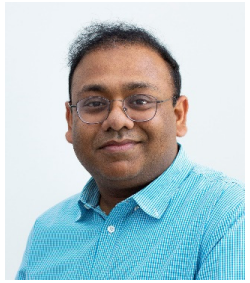

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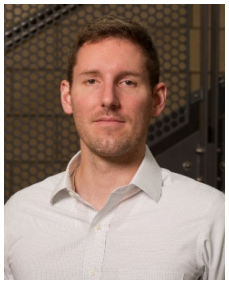

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Xiangrui Zeng
Worcester Polytechnic Institute
Wenlong Zhang
Arizona State University
Junfeng Zhao
General Motors
Lei Zuo
Virginia Tech

MECC 2021 Registrations

- Advanced registration rate (July 8 – Sept. 10)
  - Full member: $200; Non-member: $250; Student/Retiree: $100.
- Onsite registration rate (Sept. 11 – onwards)
  - Full member: $250; Non-member: $350; Student/Retiree: $150.
- MECC 2021 registration numbers, as of Oct. 20
  - Total registrants: 529
  - Main conference registrants: 211
  - Workshop registrants: 318

MECC 2021 Plenary Speakers

- **Domitilla Del Vecchio**, Massachusetts Institute of Technology
- **Tsu-Chin (T-C.) Tsao**, University of California, Los Angeles
- **Rajesh Rajamani**, University of Minnesota, Twin Cities

MECC 2021 Semi-Plenary Speakers

- **Danny Abramovitch**, Agilent Technologies
- **Nicole Abaid**, Virginia Tech
- **Iman Shames**, Australian National University
- **Yue Wang**, Clemson University

About MECC 2021 Programs

- MECC 2021 received 161 contributed and invited paper submissions from 25 countries
- 147 papers were accepted for publication after a peer-review process
  - 8 invited sessions containing 44 papers and
  - 18 regular sessions containing 103 papers
- Three MECC 2021 Best Paper Awards: modeling, estimation, and control
- Three MECC 2021 Best Student Paper Awards: gold, silver, and bronze

MECC 2021 Programs: Special Sessions & Tutorial Sessions

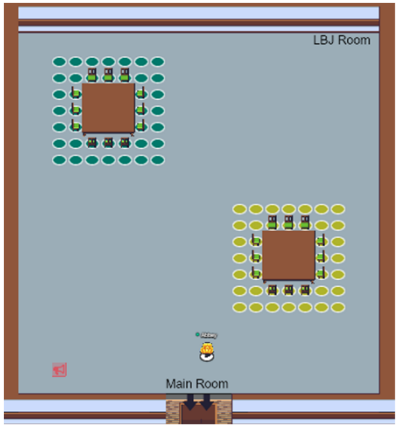
- Special Session 1: Industry-Led Research Roadmap Panel on Control Engineering in the Age of AI
- Special Session 2: The Impact of Inclusivity on Innovation
- Special Session 3: An Overview of Modeling, Estimation, and Control Funding Opportunities at NSF
- Special Session 4: Underrepresented Stories in Controls & Robotics Industry

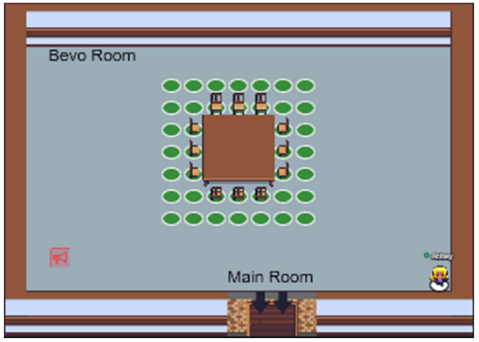
- Tutorial Session 1: Modeling, Estimation, and Control of COVID-19
- Tutorial Session 2: Engaging Your Students with Interactive Exercises, Virtual Labs and Low-Cost Hardware Experiments Using MATLAB and Simulink

MECC 2021 Programs: Pre-Conference Workshops

- Workshop 1: Safe Control and Learning under Uncertainty
  - Free for students
- Workshop 2: Advanced Big Data Analytics for Industrial Control Performance Assessment
- Workshop 3: Practical Methods for Real World Control Systems
- Workshop 4: Publishing Your Research 101 – Skills for Graduate Students
  - Free for students

MECC 2021 Social Networking Sessions in Gather.town





MECC 2021

2021 Modeling, Estimation and Control Conference

October 24-27, 2021. Online and UT Austin, USA

Thanks to AACC and IFAC for sponsoring MECC 2021!

Thanks to many volunteers supporting MECC 2021!

We hope you enjoy the inaugural MECC 2021!

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SANTA BARBARA • SANTA CRUZ

Professor Roberto Horowitz
Department of Mechanical Engineering
University of California
Berkeley, CA 94720-1742

Phone: (510) 642-4675
Cell: (510) 734-3027
Email: horowitz@berkeley.edu
www.me.berkeley.edu/people/faculty/roberto-horowitz

October 15th 2021

To: Professor Kam Leang, Secretary ASME DSCD
From: Professor Roberto Horowitz, Chair ASME DSCD Honors & Awards Committee
Re: Committee Report

The Honors & Awards (H&A) Committee is currently integrated by:

Roberto Horowitz, Chair, University of California, Berkeley
Kim Stelson, Vice Chair, University of Minnesota
George Chiu, Purdue University
Neville J. Hogan, MIT
Huei Peng, University of Michigan
Tsu-Chin Tsao, UCLA
Rama Yedavalli, Ohio State University

Executive Summary

During odd years, the DSCD H&A Committee is tasked with

1) Recommending the Rufus Oldenburger Medalist to ASME Honors Committee.
2) Selecting the recipient of the Yasundo Takahashi Education Award.
3) Selecting the recipient of the Young Investigator Award (YIA).
4) Selecting the recipient of the Kalman Best Paper Award (BPA) from nominations selected by the Editor of the Journal of Dynamic Systems, Measurements and Control.
5) Preparing and hosting the DSCD Awards Ceremony and Oldenburger Lecture

The committee performed all these tasks. This year a number of review process alterations had to be implemented because of an unusual amount of existence of conflict of interests (COI) among the H&A committee members and some of the nominations, and a large number of nominations submitted for the Kalman BPA. I recommend that the ExCom committee, together with the H&A awards chair and the editor of the ASME JDMC, examines and possibly revises the overall Kalman BPA award selection process. Details are described in the full report.

Awards will be presented at the **2021 DSCD Awards Ceremony and Oldenburger Lecture**, which will be conducted on-line via zoom on October 28th, 03:00 PM – 04:30 PM Central Time. All DSCD members are cordially invited to attend. To do so, please register at:
(https://asme.zoom.us/meeting/register/tJYodOCqrz4tGNL-OjOviYLxWZh-8NxgClGA).

Award Winners:

1) Rufus Oldenburger Medalist: **Professor Shankar Sastry,** University of California, Berkeley.

2) DSCD Yasundo Takahashi Education Award: **Professor Tarunraj Singh,** University at Buffalo.

3) DSCD Young Investigator Award: **Professor Scott Moura,** University of California, Berkeley.

4) Kalman Best Paper Award: **Zhanhong Jiang[1], Venkatesh Chind[1], Adam Kohl[1], Atul Kelkar[2] and Soumik Sarkar[1],** [1] Iowa State University, [2] Clemson University

5) Nyquist Lecturer: **Professor Dawn Tilbury,** University of Michigan, Ann Arbor.

Full Report:

1) 2021 Rufus Oldenburger Medal

The H&A Committee reviewed six nominations for the 2021 Rufus Oldenburger Medal and recommended **Professor Shankar Sastry** from the Departments of EECS, Mechanical Engineering and of the University of California, Berkeley for the award. ASME approved the committee's recommendation and notified Professor Sastry, who gladly accepted the award. Professor Sastry will be delivering the Oldenburger Lecture entitled ***Digital Transformation of Societal Scale Systems*** at the Awards ceremony.

2) Yasundo Takahashi Education Award

The H&A Committee reviewed two nominations submitted by the DSCD membership and selected **Professor Tarunraj Singh** from the Department of Mechanical & Aerospace Engineering at the University at Buffalo as the recipient of the award. Professor Singh was notified of his award and will be attending the ceremony.

3) DSCD Young Investigator Award

The H&A Committee received seven nominations from the DSCD membership. Because of the existence of Conflict of Interest (COI) between some of the nominees and H&A committee members: Chair Horowitz, Vice-Chair Stelson and members Drs. Chiu and Peng, a temporary YIA evaluation committee, chaired by Dr. Yedavalli, was constituted by Executive Committee (ExCom) Chair Berg to evaluate the nominations and select the award winner. The temporary YIA evaluation committee was formed by H&A members Drs. Hogan, Tsao and Yedavalli, and by Drs. Robert Landers. Ranjan Mukherjee, Anna Stephanopoulos, and Jingang Yi, all current or former members of the ExCom.

The temporary YIA evaluation committee selected **Professor Scott Moura** of the Department of Civil and Environmental Engineering at the University of California, Berkeley as the recipient of the award. Professor Moura was notified of his award and will be attending the ceremony.

4) Kalman Best Paper Award

The H&A Committee received twenty nominations from Journal of Dynamic Systems, Measurements and Control Editor Dr. Ranjan Mukherjee. PDF files of the paper nominees were e-mail to H&A Chair Horowitz, without any further supporting material. H&A committee members: Chair Horowitz, Vice-Chair Stelson and Peng, had a COI with some of the nominees. In addition, most members of the H&A committee believed that it was too onerous for a single person to read 20 papers and objectively select the best paper from such a large group in one single review sweep. After a series of consultations among H&A committee members and discussions with ExCom Chair Berg and editor Mukherjee, a two-phase evaluation process was devised to select the Kalman BPA winner, as describe subsequently.

First, the H&A committee was expanded by Excom Chair Berg with 5 additional temporary members: Drs. Santosh Devasia, Robert Landers, Ranjan Mukherjee, Xiaobo Tan, and Jingang Yi, all of them are either past or present ExCom members. Dr. Rama Yedavalli was asked to chair this committee, during the first phase of the review process. The resulting 12-member temporary Kalman BPA committee was subdivided into 4 sub-groups, each

composed of 3 reviewers. During phase 1 of the review process, each sub-group reviewed 5 papers and selected the best paper from their assigned collection of papers. The sub-groups' memberships and paper review assignments were performed so that no person reviewed or voted on a paper that they had a potential conflict of interest (COI) with. Four paper finalists emerged from the first phase of the review process. In phase 2 of the review process, the Kalman PBA review committee was re-constituted from among all of the 12 reviewers in phase 1 that did not have a COI with the selected four paper finalists and were able to continue to serve. The re-constituted 10-member committee included H&A members: Horowitz (Chair), Chiu, Hogan, Peng, Tsao and Yedavalli, and additional members Devasia, Landers, Tan and Yi.

The 2021 Rudolf Kalman Best Paper Award winners are:

Zhanhong Jiang[1], Venkatesh Chind[1], Adam Kohl[1], Atul Kelkar[2] and Soumik Sarkar[1]

[1] Department of Mechanical Engineering, Iowa State University
[2] Department of Mechanical Engineering, Clemson University

For their paper

"**Supervisory Control and Distributed Optimization of Building Energy Systems,**" published in the *ASME Journal of Dynamic Systems Measurements and Control*, October 2020, vol. 142 / 101008-1.

The authors were notified of their award and plan to attend the awards ceremony.

Acknowledgments and Recommendations for future Kalman BPA selection processes

I wish to express my sincerest appreciation, on behalf of the members of the H&A and the ExCom committees, to Drs. Santosh Devasia, Robert Landers. Ranjan Mukherjee, Anna Stephanopoulos, Xiaobo Tan and Jingang Yi, for their valuable service in volunteering as temporary members in several review committees.

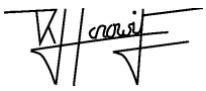
I recommend that the ExCom committee, together with the H&A awards chair and the editor of the ASME JDMC, examines and possibly revises the overall Kalman BPA award selection process. Either the process implemented this year should be standardized and fully documented, or the ASME JDSMC Editor and associate editors should implement a robust selection process at the journal level that yields a manageable number of paper finalists for the H&A committee to examine.

According to ASME DSCD guidelines,

> *The Editor of the Journal of Dynamic, Systems, Measurement and Control solicits nominations from the Associate Editors of the Journal. The Editor down selects from these nominations and submits a final set of nominations to the H&A Committee. The Committee determines the winner.*

However, the so-called "down selection" process motioned above is not well defined. I do not believe that it should be left to the Editor to perform it without assistance, particularly when a large number of nominations are submitted by the associated editors, and the associate editors cannot be readily recruited to constitute a committee that can help the Editor select a manageable "final set of nominations" for the H&A committee to consider.

Sincerely,



Roberto Horowitz
Department of Mechanical Engineering
James Fife Endowed Chair

Nyquist Lecture

When: Oct 26, 2021 01:00-02:00 PM Central Time

Register in advance for the Nyquist Lecture:

(https://asme.zoom.us/meeting/register/tJ0lcu6hpjgiGtUDnUbQhUZ8ns_lzUtZeQqv)

Prof. Dawn Tilbury
Departments of Mechanical Engineering and Electrical Engineering & Computer Science
University of Michigan

"***Cyber-physical manufacturing systems: Leveraging data for improved quality and resiliency***".

ABSTRACT: Cyber-physical systems, in which computation and networking technologies interact with physical systems, have made great strides into manufacturing systems. By increasing the amount of automation, at multiple levels within a factory and across the enterprise, cyber-physical manufacturing systems enable higher productivity and higher quality, as well as lower costs. Real-time data from the factory floor populates "digital twins", resulting in resilient systems that can respond and adapt to disturbances and other environmental changes.

52nd DSCD Awards Ceremony and Oldenburger Lecture

When: Oct 28, 2021 03:00 PM – 04:30 PM Central Time.
Register in advance for the Awards Ceremony and Oldenburger Lecture
(https://asme.zoom.us/meeting/register/tJYodOCqrz4tGNL-OjOviYLxWZh-8NxgClGA)

2021 Rufus T. Oldenburger Lecture

Shankar Sastry
Thomas Siebel Professor of Computer Science
Dept. of EECS, Mechanical Engineering and Bioengineering
University of California Berkeley

"Digital Transformation of Societal Scale Systems"

ABSTRACT: Opportunities abound for the development of new technologies and business models to address some of the most pressing problems of society. Most notably, the integration of IoT, Data Analytics and Machine Learning and Cloud Computing into societal scale infrastructures, such as energy, transportation, communications, and financial systems. Of course, the issues of transforming societal systems is accompanied by issues of economic models for transformation, privacy, (cyber) security and fairness considerations. Indeed, the area of "mechanism design" for societal scale systems is a key feature in transitioning the newest technologies and providing new services. Mechanism Design has traditionally been in the domain of economics; however, the rich interplay of cognitive science, machine learning, and privacy and cybersecurity makes for the creation of a new and rich discipline, which we are calling Digital Transformation. In this talk, I will present an intellectual framework for designing Digital Transformation of Societal Systems, combining elements of learning and adaptive control, game theory, cybersecurity and utility-based privacy embodied in a new Institute the C3.ai Digital Transformation Institute led by Berkeley and UIUC with partners at CMU, Chicago, Royal Institute of Technology, Stockholm MIT, and Princeton.

DSCC Suspension & Replacement

Jordan M. Berg

Chair, DSCD Executive Committee

October 25, 2021

Brief Recap

- Historically two annual conferences with *broad* DSCD involvement†
  - Spring/Summer: ACC (A2C2)
  - Fall/Winter prior to 2008: IMECE (ASME)
  - Fall/Winter since 2008: DSCC (ASME)

  † *Division also sponsors specialty conferences, AIM, ISFA, etc*
- Prior to 2014, DSCC run by DSCD volunteers
- Since 2014, DSCC run by ASME Staff
- DSCC attendance, paper submission, finances in steady decline
- High dissatisfaction/turnover from authors, editors, reviewers
- 2020 DSCD Fall General Meeting Straw Poll: PaperPlaza is minimal requirement for DSCC
- DSCC ’21 canceled due to concerns over conference management software

The Future of DSCC

- Concern: DSCD members are active across multiple professional societies, and have many attractive options for service, networking, dissemination.
- Concern: DSCC is no longer accomplishing its role as a nucleus for community building and leadership development in the DSC Division.
- Opportunity: Disruptions due to the Covid-19 pandemic are an opportunity to reimagine and reinvent DSCC.
- Passed by the ExComm on August 17, 2021:

  A motion is made to suspend Dynamic Systems and Control Conferences (DSCCs) and to work with the ASME TEC Council and ASME TEC leadership to identify alternative venues for DSC Division Fall/Winter events. The motion will be reviewed periodically.

Why Do We Need to Meet?

- Essential!
  - Student activities (presenting, networking, job-hunting, competitions)
  - Technical interactions (Q&A, informal discussions, demonstrations)
  - Mid-size meetings (e.g., TCs)
  - Honors & Awards (we value these achievements enough to be there)
  - Social events (virtual has value, but in-person adds dimensions)
- Essential?
  - Very small meetings (virtual is very effective for ~ 5 participants)
  - Plenary lectures (recording these works great)
  - 20-minute paper talks (recording these works great)
  - Published proceedings (we need this, but there are a lot of other options)
- New software platforms may change this landscape

Reimagining the Fall/Winter Meeting

- Virtual/in-person/hybrid meeting with no papers or proceedings;
- Hold activities in conjunction with existing ASME conference, such as IMECE or IDETC;
- Hold activities in conjunction with ASME-affiliated disciplinary conference, such as ACC, AIM, or MECC;
- Distribute in-person/virtual asynchronous and synchronous events throughout the calendar (coordinate podcasts, lectures, honors & awards, panels, chat rooms, …);
- Other?

Please share the modes of real and virtual interaction that have worked for you!

https://forms.gle/4GnCxzYt84LGkmHW6

IEEE/ASME TRANSACTIONS ON

Mechatronics

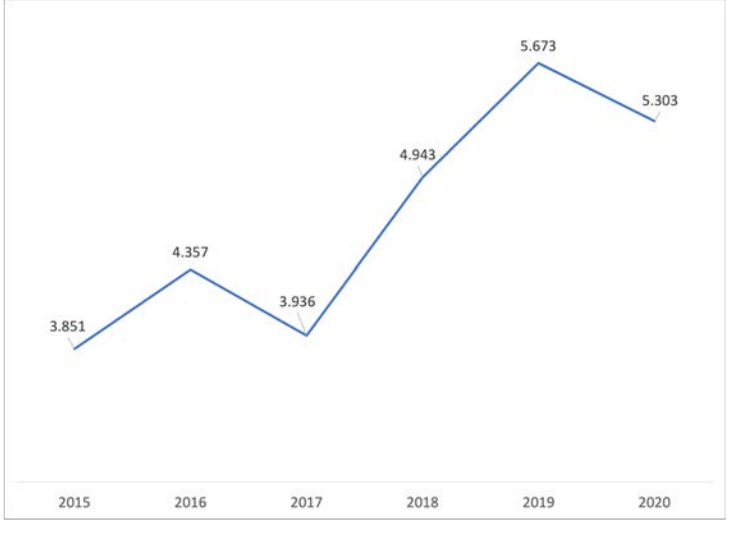
Editor-in-Chief Report – TE Meeting

I-Ming Chen
MICHEN@ieee.org

Executive Summary:

- 2020 original submissions: 1403 (up from 1054 in 2019)
- 2021 estimated original submissions excluding AIM FS: 1,605 (730 non-AIM submissions on 15 June)*
- Original submissions to TMECH/AIM in 2021: 86
- 2020 Impact Factor: 5.303
  (2019: 5.673; 2018: 4.943)

*Based on being 166 days into a 365-day year.



Agenda

- Work Plan for 2021/2022
- Overview of TMECH Statistics
- TE Performance Review
- FS on TMECH-AIM Emerging Topics editorial board and review
- Management of Reviewers
  - TMECH junior reviewer program update and deployment
  - General reviewer selection guidelines and training
- TMECH Review Workflow
- Manuscript Submission Matters
  - Guidelines on review/survey/tutorial papers
  - Focused Section Proposals
- AOB

Work Plan for 2021/2020

Tasks completed in 2021

- Second Batch of TMECH Junior Reviewers vetted and appointed
- Best TJRP reviewers chosen and awards mailed
- Successful PRAC review (February 2021)
  - Next review: February 2027

Tasks to be done in 2021/2022

- Continued recruitment of TJRP members, TEs, and SEs
- Improvement of paper review quality in general (long term effort!)
  - TJRP
  - Reviewer training resources
  - TE & SE report requirements
- Deal with Backlog

PRAC Review Feb 2021

REVIEW COMMITTEE REMARKS REGARDING THIS PUBLICATION

TMECH appears to be doing very well. The EiC was well aware of the contents of the PSPB Ops Manual that governs the administration of IEEE periodicals, and was able to satisfactorily answer most of the questions that came up during the PRAC review. The review went well and was collegial.

REVIEW COMMITTEE RECOMMENDATIONS FOR THIS PUBLICATION

No major concerns were brought out during the review. PRAC has no specific recommendations for this publication. They are on the right track and should continue.

Best Paper Award

IEEE/ASME TRANSACTIONS ON MECHATRONICS

Best Paper Award

is presented to

Eduardo Moya-Lasheras and Carlos Sagues

for the paper entitled

Run-to-Run Control With Bayesian Optimization for Soft Landing of Short-Stroke Reluctance Actuators

IEEE/ASME Transactions on Mechatronics, vol. 25, no. 6, pp. 2645-2656, December 2020

For the innovative approach to realizing soft landing control of short-stroke reluctance actuators

H. Fujimoto

Hiroshi Fujimoto
Chair of Management Committee

June 2, 2021

I-Ming Chen
Editor-in-Chief

2021 Management Committee

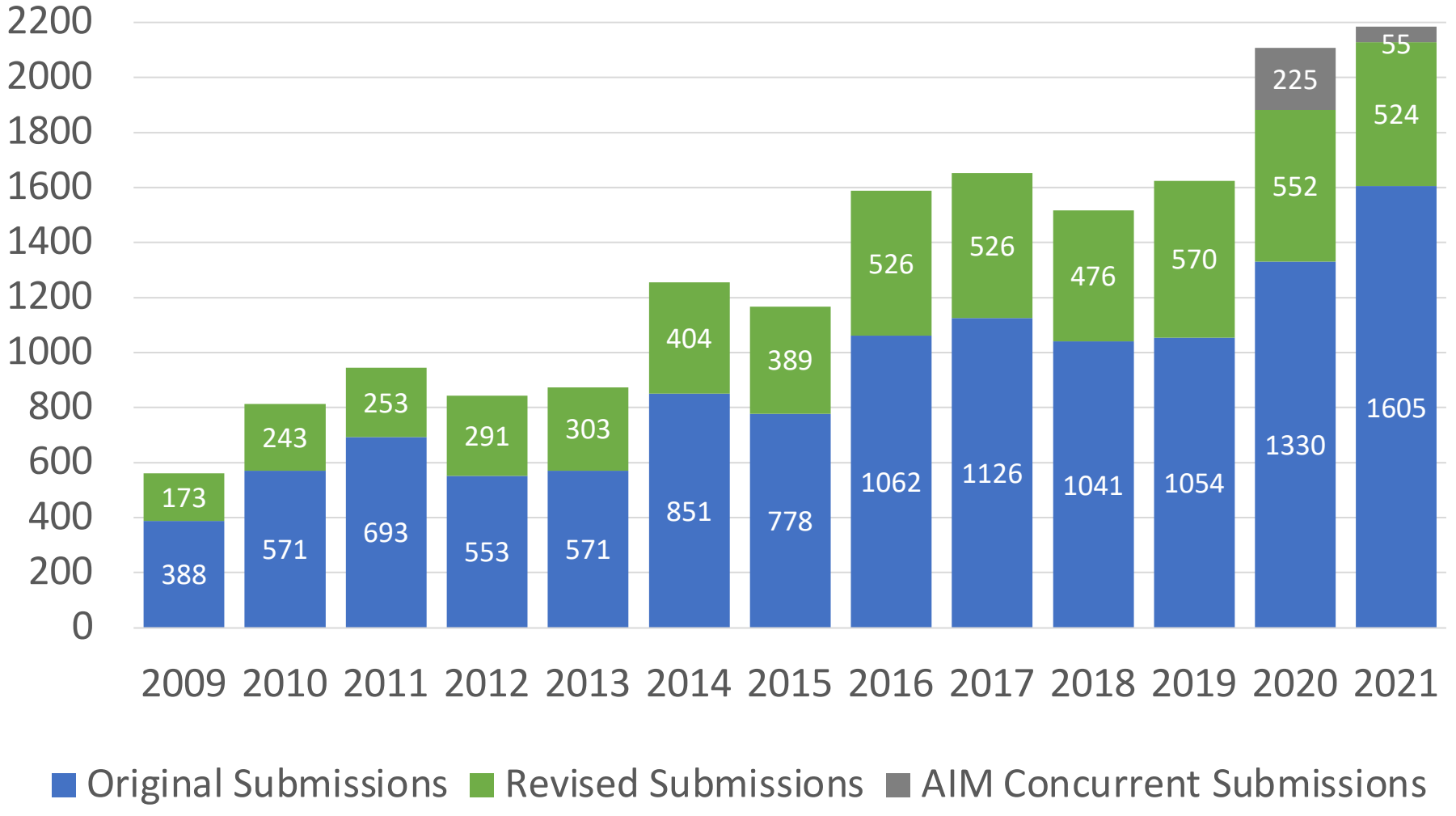
	2019	2020	2021
Chair	Aaron Dollar (RAS)	Xiaobo Tan (DSCD)	Hiroshi Fujimoto (IES)
Treasurer	Xiaobo Tan (DSCD)	Hiroshi Fujimoto (IES)	Aaron Dollar (RAS)
Secretary	Hiroshi Fujimoto (IES)	Kyujin Cho (RAS)	Jun Ueda (ASME)
Members	Kyujin Cho (RAS)	Aaron Dollar (RAS)	Xiaobo Tan (ASME)
	Jun Ueda (DSCD)	Jun Ueda (DSCD)	Michael Ruderman (IES)
	Roberto Oboe (IES)	Michael Ruderman (IES)	Kyujin Cho (RAS)

Officers of the Management Committee rotate among the sponsoring societies.

2021 Editorial Staff

- Editor-in-Chief: I-Ming Chen, Nanyang Tech. University
- Editorial Office: Kara McArthur, JWM Consulting
- Senior Editors: 12 (net 0 change from 2020)
- Technical Editors: 72 (total change of -7 since the 2020 report)

Submission Status



- 2021 total submissions represents an estimate of 2184 submissions by the end of the year. An increase in submissions over 2020, despite a marked decrease in AIM FS submissions

At-a-Glance Update

As of June 15, 2021

Submission Statistics	YTD	MTD	Prior 12 Months	Monthly Avg. Prior 12 Months
Focused Section on Mechatronics in Road Mobility S	10	1	43	3.6
Focused Section Short Paper	2	0	3	0.2
Letter	3	0	6	0.5
Focused Section	41	2	118	9.8
Short paper	8	2	21	1.8
TMECH/AIM Focused Section Papers	6	0	89	7.4
Regular paper	669	72	1395	116.2

Journal Statistics	MTD	Prior 12 Months
Avg. days from submission to first decision	1.9	53.0
Avg. Reviewer turnaround time (days) - **Original**	2.8	26.1
Avg. Reviewer turnaround time (days) - **Resubmission**	2.2	24.8
Avg. Reviewer turnaround time (days) - **Revision**	2.3	21.4
Avg. Time to Assign Reviewer (days) - **Original**	3.2	8.2
Avg. Time to Assign Reviewer (days) - **Resubmission**	0.0	0.2
Avg. Time to Assign Reviewer (days) - **Revision**	0.0	0.3
Avg. days from submission to final decision	1.9	67.0

Other Statistics	
Accept Ratio (prior 12 months)	386 : 1410 (27.4%)
Total Pending Manuscripts	358

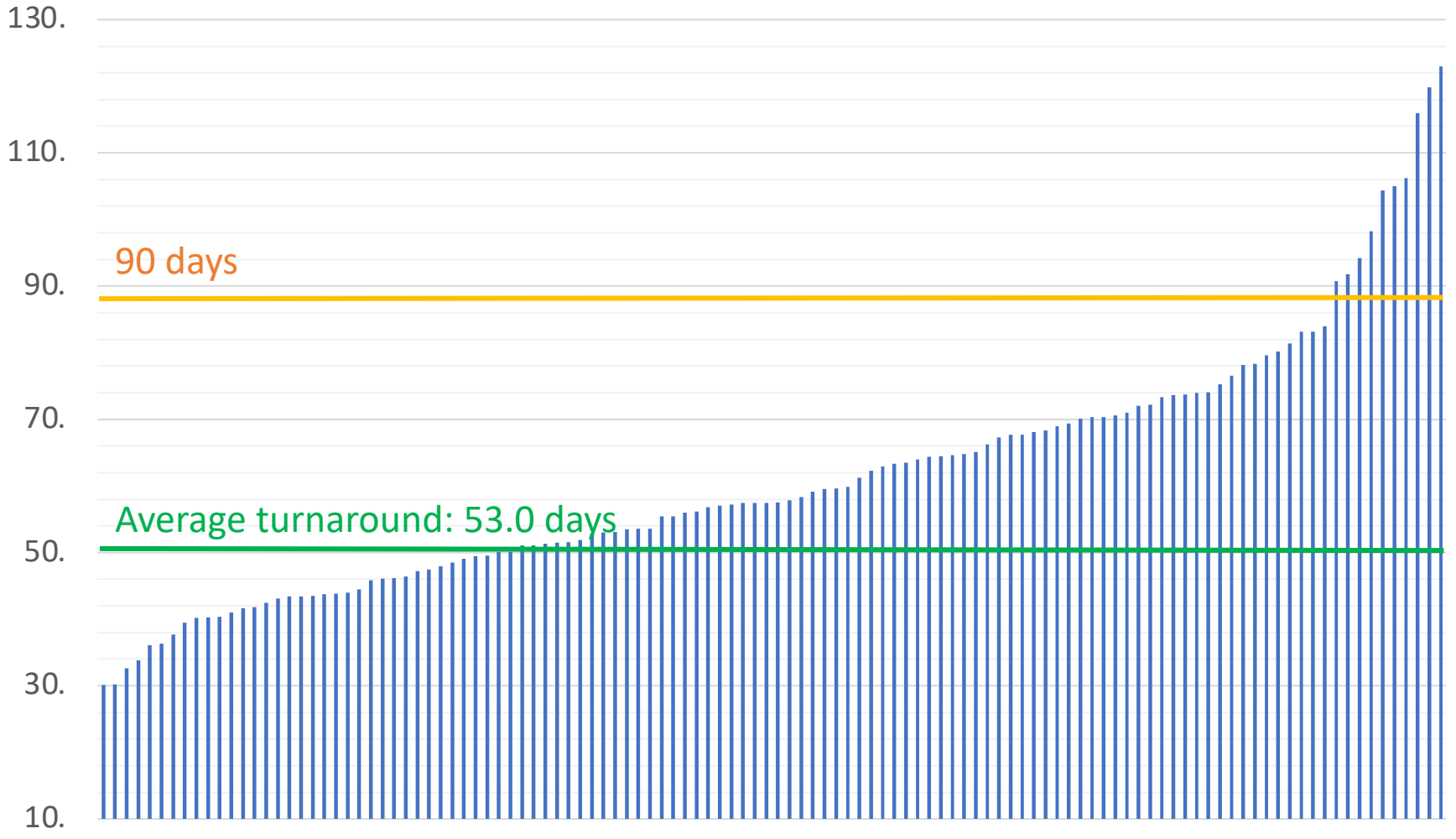
Summary of Changes in At-a-Glance From Last EiC Report

- Regular paper submissions are up from 1031 to 1403
- Task timespans are down across the board:
  - Avg. days from submission to first decision is down from 68.8 to 53.0
  - Avg. days from submission to final decision is down from 79.7 to 67.0*
  - Time to assign reviewer is down an average of 5.2 days between the three manuscript categories (original, revision, and resubmission) and is now less than one day for the latter two.
- Accept ratio is holding fairly steady: down from 28.5% to 27.4%

*Days to first decision and days to final decision are close as final decision includes immediate rejects.

Technical Editor Turnaround in the Last 12 Months (Days to Recommendation)

(including guest editors)



- Average turnaround is down from the previous year.
- 10 editors had a turnaround longer than 90 days, the same as last year.

Publication Status

2021 (Vol 26) – page budget 3600 pages (1198 pages used, plus 506 earmarked for the June issue)

- **February issue** – 589 pages, 53 articles
  - Regular papers – 53 articles
- **April issue** – 594 pages, 56 articles
  - Focused Section – 13 articles
  - Regular papers – 43 articles

- **June issue –** 506 pages, 47 articles
  - Focused Section – 15 articles
  - Regular papers – 32 articles

Publication Status

Page budget for TMECH over the years

Year	'07	'08	'09	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21
Pages	752	750	794	1028	1224	1232	1832	2000	3292	3000	3000	3000	3000	3000	3600
Issues	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6

- Page budget for 2022 & publication strategy : To be confirmed
- Backlog (As of June 15, 2021)
  - 265 articles not assigned to issues (2771 pages)

2020 Journal Impact Factor

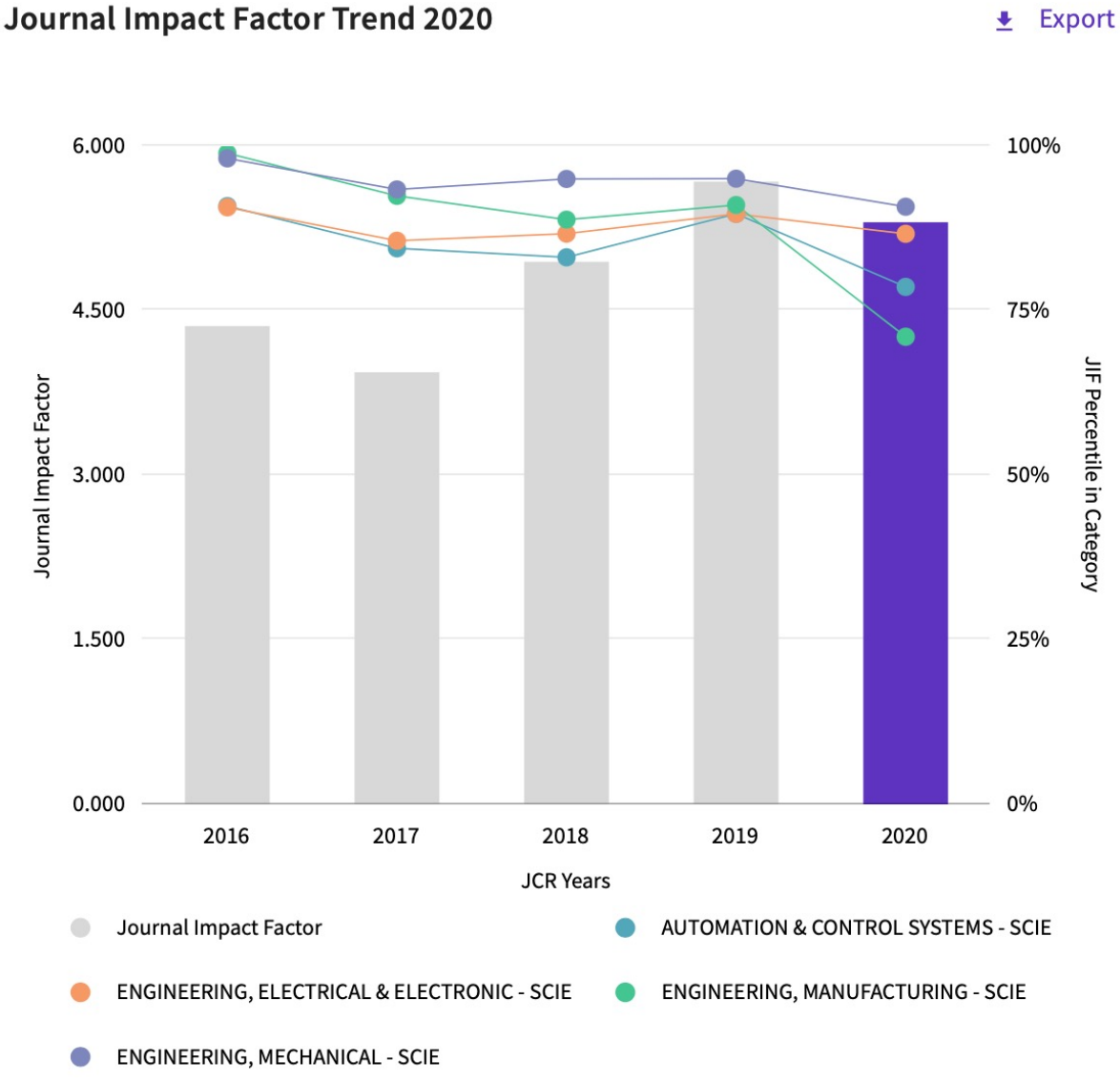
5.303

View calculation

4.675

View calculation

Calculation



Journal Impact Factor™ is calculated using the following metrics:

$$\frac{\text{Citations in 2020 to items published in 2018 (1,778) + 2019 (1,144)}}{\text{Number of citable items in 2018 (280) + 2019 (271)}} = \frac{2{,}922}{551} = 5.303$$

Journal Impact Factor™ is calculated using the following metrics:

$$\frac{\text{Citations in 2019 to items published in 2017 (1,871) + 2018 (1,215)}}{\text{Number of citable items in 2017 (264) + 2018 (280)}} = \frac{3{,}086}{544} = 5.673$$

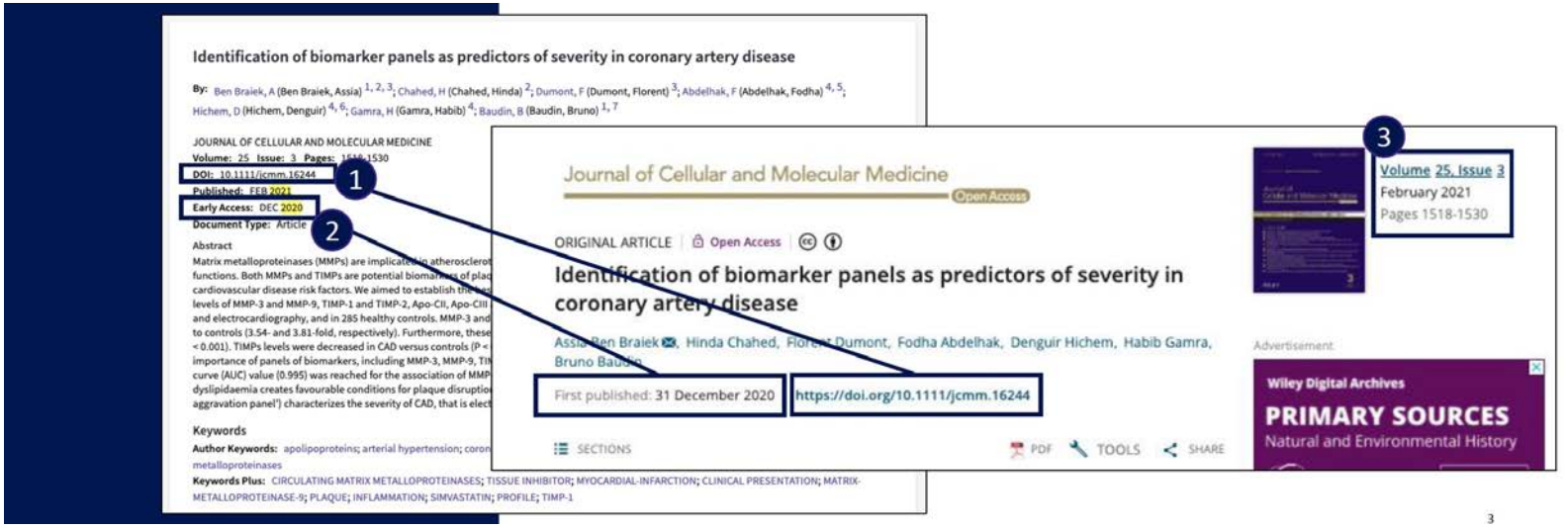
Journal Impact Factor™ is calculated using the following metrics:

$$\frac{\text{Citations in 2018 to items published in 2016 (1,396) + 2017 (1,308)}}{\text{Number of citable items in 2016 (283) + 2017 (264)}} = \frac{2{,}704}{547} = 4.943$$

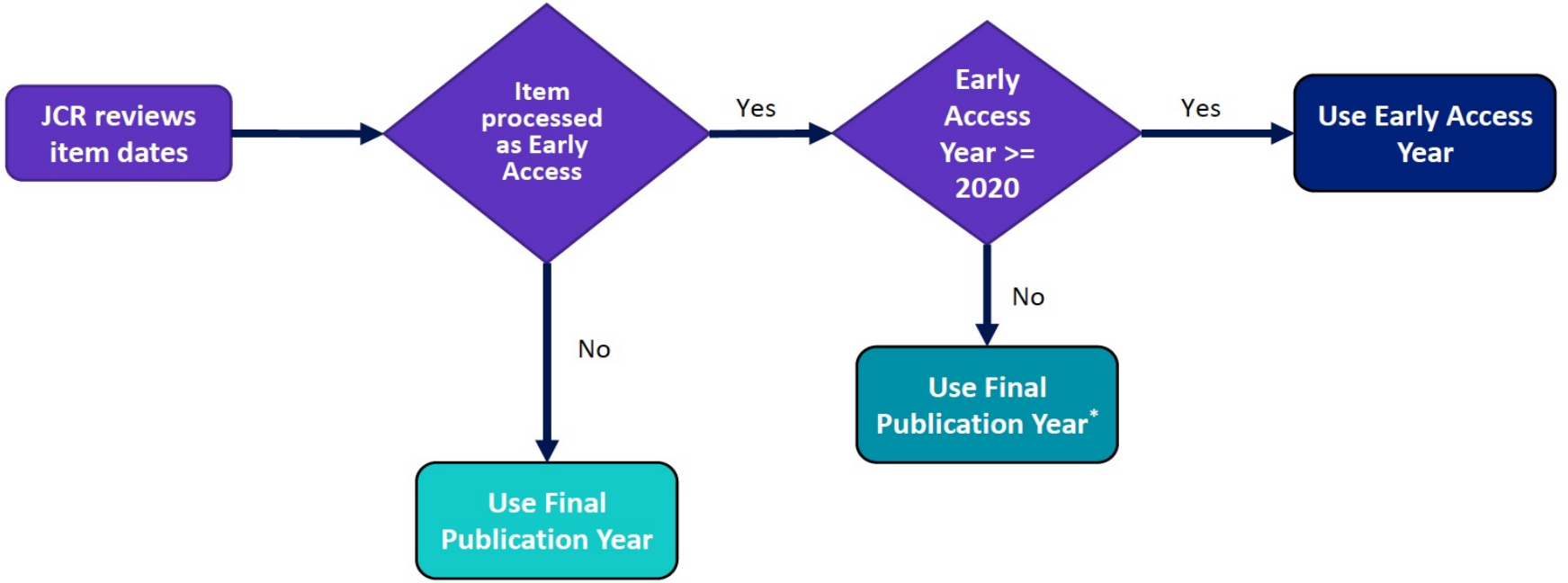
Change of JIF Computation

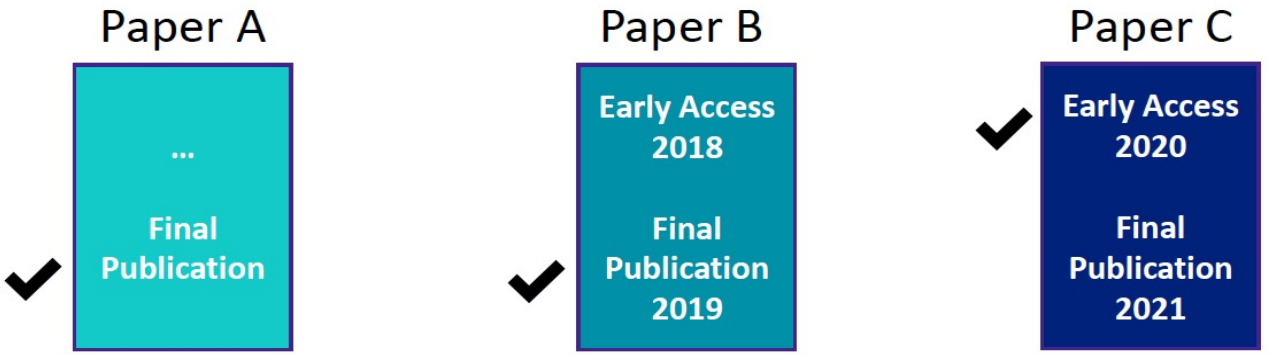
Most indexed Early Access items have an early access date and a final publication date in the same calendar year. The new JCR policy will not change how these items are counted.

For indexed Early Access items where the early access date is in a different calendar year than the final publication date, we will use only the early access data. This will only affect items indexed with an early access date of 2020 or later.



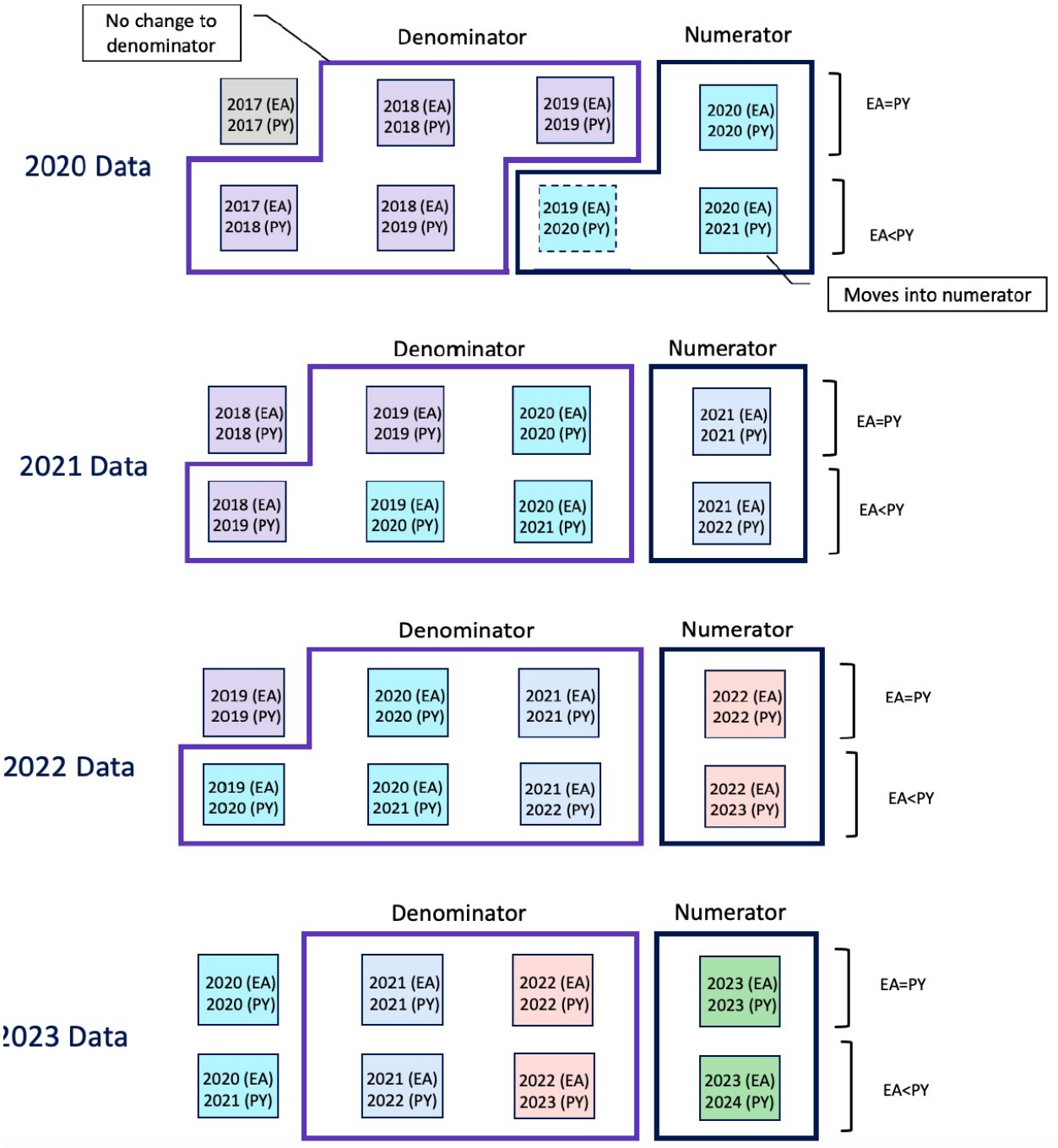
Determining JCR Year





* 2019 and earlier Early Access items with no final publication year are excluded

Example


No change to denominator
Denominator
Numerator
2020 Data
2017 (EA) 2017 (PY)
2018 (EA) 2018 (PY)
2019 (EA) 2019 (PY)
2020 (EA) 2020 (PY)
EA=PY
2017 (EA) 2018 (PY)
2018 (EA) 2019 (PY)
2019 (EA) 2020 (PY)
2020 (EA) 2021 (PY)
EA<PY
Moves into numerator
Denominator
Numerator
2021 Data
2018 (EA) 2018 (PY)
2019 (EA) 2019 (PY)
2020 (EA) 2020 (PY)
2021 (EA) 2021 (PY)
EA=PY
2018 (EA) 2019 (PY)
2019 (EA) 2020 (PY)
2020 (EA) 2021 (PY)
2021 (EA) 2022 (PY)
EA<PY
Denominator
Numerator
2022 Data
2019 (EA) 2019 (PY)
2020 (EA) 2020 (PY)
2021 (EA) 2021 (PY)
2022 (EA) 2022 (PY)
EA=PY
2019 (EA) 2020 (PY)
2020 (EA) 2021 (PY)
2021 (EA) 2022 (PY)
2022 (EA) 2023 (PY)
EA<PY
Denominator
Numerator
2023 Data
2020 (EA) 2020 (PY)
2021 (EA) 2021 (PY)
2022 (EA) 2022 (PY)
2023 (EA) 2023 (PY)
EA=PY
2020 (EA) 2021 (PY)
2021 (EA) 2022 (PY)
2022 (EA) 2023 (PY)
2023 (EA) 2024 (PY)
EA<PY

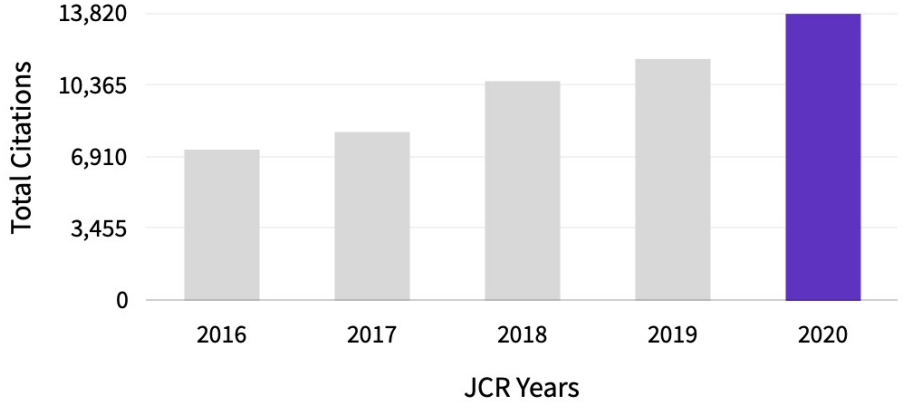
Citation Performance

Total Citations

Export

13,820

The total number of times that a journal has been cited by all journals included in the database in the JCR year. Citations to journals listed in JCR are compiled annually from the JCR years combined database, regardless of which JCR edition lists the journal.

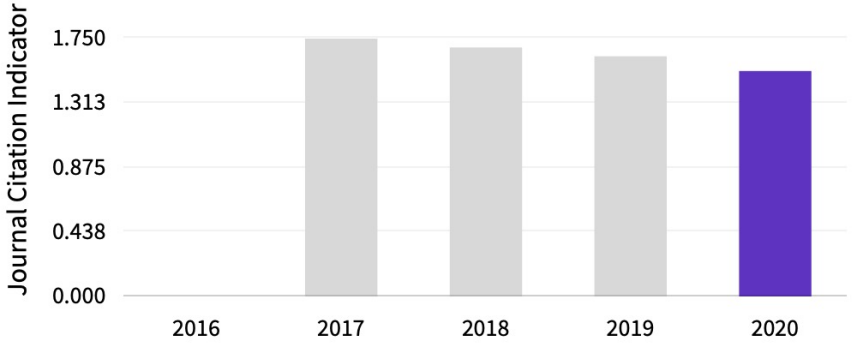


Journal Citation Indicator (JCI)

Export

1.53

The Journal Citation Indicator (JCI) is the average Category Normalized Citation Impact (CNCI) of citable items (articles & reviews) published by a journal over a recent three year period. The average JCI in a category is 1. Journals with a JCI of 1.5 have 50% more citation impact than the average in that category. It may be used alongside other metrics to help you evaluate journals. Learn more



Impact Factor and Rankings

Clarivate has released 2020 data on 30 June 2021

	2016	2017	2018	2019	2020
Impact Factor	4.357	3.936	4.943	5.673	5.303
Rank in Engineering, Manufacturing	1/44	4/46	6/49	5/50	15/50
Rank in Automation and Control Systems	6/60	10/61	11/62	7/63	14/63
Rank in Engineering, Mechanical	3/130	9/128	7/129	7/130	13/135
Rank in Engineering, Electrical & Electronics	25/262	38/260	36/266	28/266	37/273

Mechanical Engineering

Journal name	ISSN	eISSN	Category	2020 JIF
PROGRESS IN ENERGY AND COMBUSTION SCIENCE	0360-1285	1873-216X	ENGINEERING, MECHANICAL - SCIE	29.394
Advances in Applied Mechanics	0065-2156	N/A	ENGINEERING, MECHANICAL - SCIE	9.000
Engineering Applications of Computational Fluid Mechanics	1994-2060	1997-003X	ENGINEERING, MECHANICAL - SCIE	8.391
ENGINEERING WITH COMPUTERS	0177-0667	1435-5663	ENGINEERING, MECHANICAL - SCIE	7.963
INTERNATIONAL JOURNAL OF MACHINE TOOLS & MANUFACTURE	0890-6955	1879-2170	ENGINEERING, MECHANICAL - SCIE	7.880
INTERNATIONAL JOURNAL OF PLASTICITY	0749-6419	1879-2154	ENGINEERING, MECHANICAL - SCIE	7.081
MECHANICAL SYSTEMS AND SIGNAL PROCESSING	0888-3270	1096-1216	ENGINEERING, MECHANICAL - SCIE	6.823
Friction	2223-7690	2223-7704	ENGINEERING, MECHANICAL - SCIE	6.167
International Journal of Precision Engineering and Manufacturing-Green Technology	2288-6206	2198-0810	ENGINEERING, MECHANICAL - SCIE	5.671
INTERNATIONAL JOURNAL OF HEAT AND MASS TRANSFER	0017-9310	1879-2189	ENGINEERING, MECHANICAL - SCIE	5.584
JOURNAL OF SANDWICH STRUCTURES & MATERIALS	1099-6362	1530-7972	ENGINEERING, MECHANICAL - SCIE	5.497
INTERNATIONAL JOURNAL OF MECHANICAL SCIENCES	0020-7403	1879-2162	ENGINEERING, MECHANICAL - SCIE	5.329
IEEE-ASME TRANSACTIONS ON MECHATRONICS	1083-4435	1941-014X	ENGINEERING, MECHANICAL - SCIE	5.303
APPLIED THERMAL ENGINEERING	1359-4311	N/A	ENGINEERING, MECHANICAL - SCIE	5.295

Manufacturing Engineering

Journal name	ISSN	eISSN	Category	2020 JIF
Additive Manufacturing	2214-8604	2214-7810	ENGINEERING, MANUFACTURING - SCIE	10.998
JOURNAL OF MANUFACTURING SYSTEMS	0278-6125	1878-6642	ENGINEERING, MANUFACTURING - SCIE	8.633
INTERNATIONAL JOURNAL OF PRODUCTION RESEARCH	0020-7543	1366-588X	ENGINEERING, MANUFACTURING - SCIE	8.568
Virtual and Physical Prototyping	1745-2759	1745-2767	ENGINEERING, MANUFACTURING - SCIE	8.092
INTERNATIONAL JOURNAL OF PRODUCTION ECONOMICS	0925-5273	1873-7579	ENGINEERING, MANUFACTURING - SCIE	7.885
INTERNATIONAL JOURNAL OF MACHINE TOOLS & MANUFACTURE	0890-6955	1879-2170	ENGINEERING, MANUFACTURING - SCIE	7.880
COMPOSITES PART A-APPLIED SCIENCE AND MANUFACTURING	1359-835X	1878-5840	ENGINEERING, MANUFACTURING - SCIE	7.664
Journal of Manufacturing Technology Management	1741-038X	1758-7786	ENGINEERING, MANUFACTURING - SCIE	7.547
PRODUCTION PLANNING & CONTROL	0953-7287	1366-5871	ENGINEERING, MANUFACTURING - SCIE	7.044
JOURNAL OF INTELLIGENT MANUFACTURING	0956-5515	1572-8145	ENGINEERING, MANUFACTURING - SCIE	6.485
International Journal of Precision Engineering and Manufacturing-Green Technology	2288-6206	2198-0810	ENGINEERING, MANUFACTURING - SCIE	5.671
ROBOTICS AND COMPUTER-INTEGRATED MANUFACTURING	0736-5845	1879-2537	ENGINEERING, MANUFACTURING - SCIE	5.666
JOURNAL OF MATERIALS PROCESSING TECHNOLOGY	0924-0136	1873-4774	ENGINEERING, MANUFACTURING - SCIE	5.551
3D Printing and Additive Manufacturing	2329-7662	2329-7670	ENGINEERING, MANUFACTURING - SCIE	5.449
IEEE-ASME TRANSACTIONS ON MECHATRONICS	1083-4435	1941-014X	ENGINEERING, MANUFACTURING - SCIE	5.303
Journal of Manufacturing Processes	1526-6125	2212-4616	ENGINEERING, MANUFACTURING - SCIE	5.010

Automation & Control Systems

Journal name	ISSN	eISSN	Category	2020 JIF
IEEE Transactions on Systems Man Cybernetics-Systems	2168-2216	2168-2232	AUTOMATION & CONTROL SYSTEMS - SCIE	13.451
IEEE Transactions on Cybernetics	2168-2267	2168-2275	AUTOMATION & CONTROL SYSTEMS - SCIE	11.448
IEEE CONTROL SYSTEMS MAGAZINE	1066-033X	1941-000X	AUTOMATION & CONTROL SYSTEMS - SCIE	11.119
IEEE Transactions on Industrial Informatics	1551-3203	1941-0050	AUTOMATION & CONTROL SYSTEMS - SCIE	10.215
IEEE TRANSACTIONS ON INDUSTRIAL ELECTRONICS	0278-0046	1557-9948	AUTOMATION & CONTROL SYSTEMS - SCIE	8.236
ENGINEERING APPLICATIONS OF ARTIFICIAL INTELLIGENCE	0952-1976	1873-6769	AUTOMATION & CONTROL SYSTEMS - SCIE	6.212
IEEE-CAA Journal of Automatica Sinica	2329-9266	2329-9274	AUTOMATION & CONTROL SYSTEMS - SCIE	6.171
Nonlinear Analysis-Hybrid Systems	1751-570X	1878-7460	AUTOMATION & CONTROL SYSTEMS - SCIE	6.163
ANNUAL REVIEWS IN CONTROL	1367-5788	1872-9088	AUTOMATION & CONTROL SYSTEMS - SCIE	6.091
AUTOMATICA	0005-1098	1873-2836	AUTOMATION & CONTROL SYSTEMS - SCIE	5.944
IEEE TRANSACTIONS ON AUTOMATIC CONTROL	0018-9286	1558-2523	AUTOMATION & CONTROL SYSTEMS - SCIE	5.792
IEEE TRANSACTIONS ON CONTROL SYSTEMS TECHNOLOGY	1063-6536	1558-0865	AUTOMATION & CONTROL SYSTEMS - SCIE	5.485
ISA TRANSACTIONS	0019-0578	1879-2022	AUTOMATION & CONTROL SYSTEMS - SCIE	5.468
IEEE-ASME TRANSACTIONS ON MECHATRONICS	1083-4435	1941-014X	AUTOMATION & CONTROL SYSTEMS - SCIE	5.303

ANNUAL REVIEWS IN CONTROL

Electrical Engineering

Journal name	ISSN	eISSN	Category	2020 JIF
IEEE TRANSACTIONS ON POWER SYSTEMS	0885-8950	1558-0679	ENGINEERING, ELECTRICAL & ELECTRONIC - SCIE	6.663
IEEE Industrial Electronics Magazine	1932-4529	1941-0115	ENGINEERING, ELECTRICAL & ELECTRONIC - SCIE	6.625
IEEE TRANSACTIONS ON INTELLIGENT TRANSPORTATION SYSTEMS	1524-9050	1558-0016	ENGINEERING, ELECTRICAL & ELECTRONIC - SCIE	6.492
IEEE TRANSACTIONS ON SOFTWARE ENGINEERING	0098-5589	1939-3520	ENGINEERING, ELECTRICAL & ELECTRONIC - SCIE	6.226
ENGINEERING APPLICATIONS OF ARTIFICIAL INTELLIGENCE	0952-1976	1873-6769	ENGINEERING, ELECTRICAL & ELECTRONIC - SCIE	6.212
IEEE TRANSACTIONS ON POWER ELECTRONICS	0885-8993	1941-0107	ENGINEERING, ELECTRICAL & ELECTRONIC - SCIE	6.153
IEEE TRANSACTIONS ON VEHICULAR TECHNOLOGY	0018-9545	1939-9359	ENGINEERING, ELECTRICAL & ELECTRONIC - SCIE	5.978
AUTOMATICA	0005-1098	1873-2836	ENGINEERING, ELECTRICAL & ELECTRONIC - SCIE	5.944
IEEE TRANSACTIONS ON AUTOMATIC CONTROL	0018-9286	1558-2523	ENGINEERING, ELECTRICAL & ELECTRONIC - SCIE	5.792
IEEE TRANSACTIONS ON GEOSCIENCE AND REMOTE SENSING	0196-2892	1558-0644	ENGINEERING, ELECTRICAL & ELECTRONIC - SCIE	5.600
IEEE TRANSACTIONS ON CONTROL SYSTEMS TECHNOLOGY	1063-6536	1558-0865	ENGINEERING, ELECTRICAL & ELECTRONIC - SCIE	5.485
IEEE-ASME TRANSACTIONS ON MECHATRONICS	1083-4435	1941-014X	ENGINEERING, ELECTRICAL & ELECTRONIC - SCIE	5.303
IEEE Transactions on Transportation Electrification	2332-7782	2332-7782	ENGINEERING, ELECTRICAL & ELECTRONIC - SCIE	5.123
IEEE TRANSACTIONS ON COMMUNICATIONS	0090-6778	1558-0857	ENGINEERING, ELECTRICAL & ELECTRONIC - SCIE	5.083

Contributions (Papers submitted) Analysis

Contributions by country/region

1	CHINA MAINLAND	388
2	USA	175
3	Canada	86
-	South Korea	86
5	Japan	58
6	England	53
7	Australia	45
8	Singapore	40
9	France	28
10	GERMANY (FED REP GER)	27
-	Italv	27

Contributions by organization

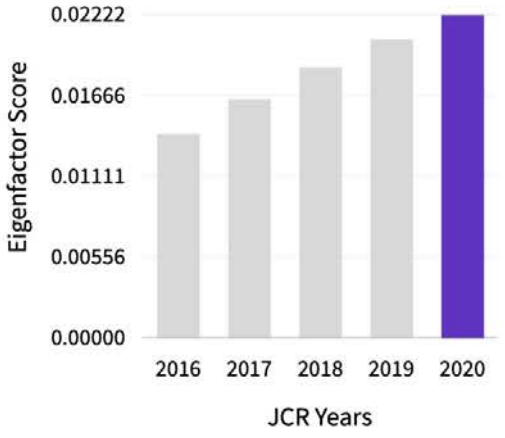
1	HARBIN INSTITUTE OF TECHNOLOGY	39
2	CHINESE ACADEMY OF SCIENCES	32
3	SHANGHAI JIAO TONG UNIVERSITY	31
4	BEIHANG UNIVERSITY	30
5	ZHEJIANG UNIVERSITY	27
6	NATIONAL UNIVERSITY OF SINGAPORE	26
7	HUAZHONG UNIVERSITY OF SCIENCE & TECHNOLOGY	25
8	BEIJING INSTITUTE OF TECHNOLOGY	19

Additional Metrics

Eigenfactor Score

0.02222

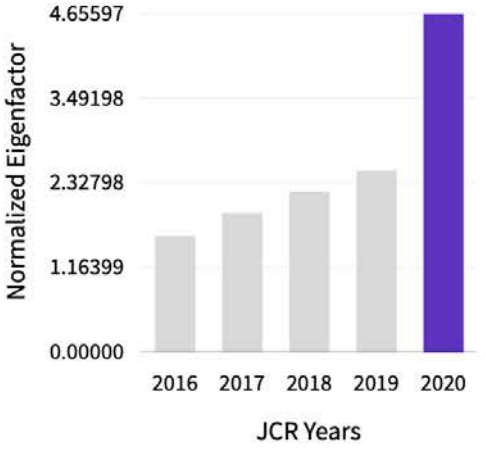
The Eigenfactor Score is a reflection of the density of the network of citations around the journal using 5 years of cited content as cited by the Current Year. It considers both the number of citations and the source of those citations, so that highly cited sources will influence the network more than less cited sources. The Eigenfactor calculation does not include journal self-citations. Learn more



Normalized Eigenfactor

4.65597

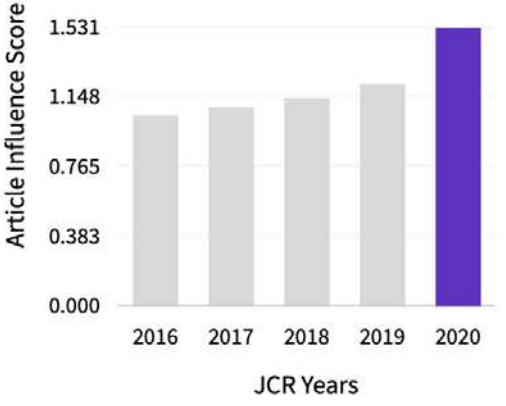
The Normalized Eigenfactor Score is the Eigenfactor score normalized, by rescaling the total number of journals in the JCR each year, so that the average journal has a score of 1. Journals can then be compared and influence measured by their score relative to 1. Learn more



Article influence score

1.531

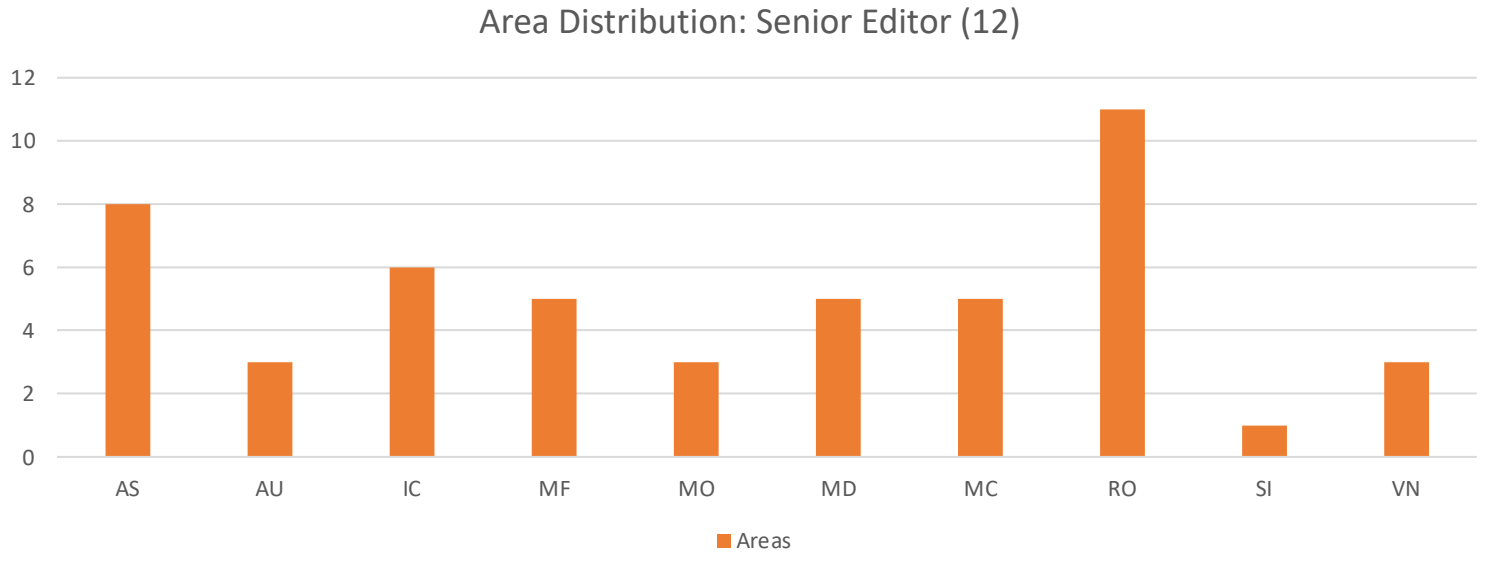
The Article Influence Score normalizes the Eigenfactor Score according to the cumulative size of the cited journal across the prior five years. The mean Article Influence Score for each article is 1.00. A score greater than 1.00 indicates that each article in the journal has above-average influence. Learn more

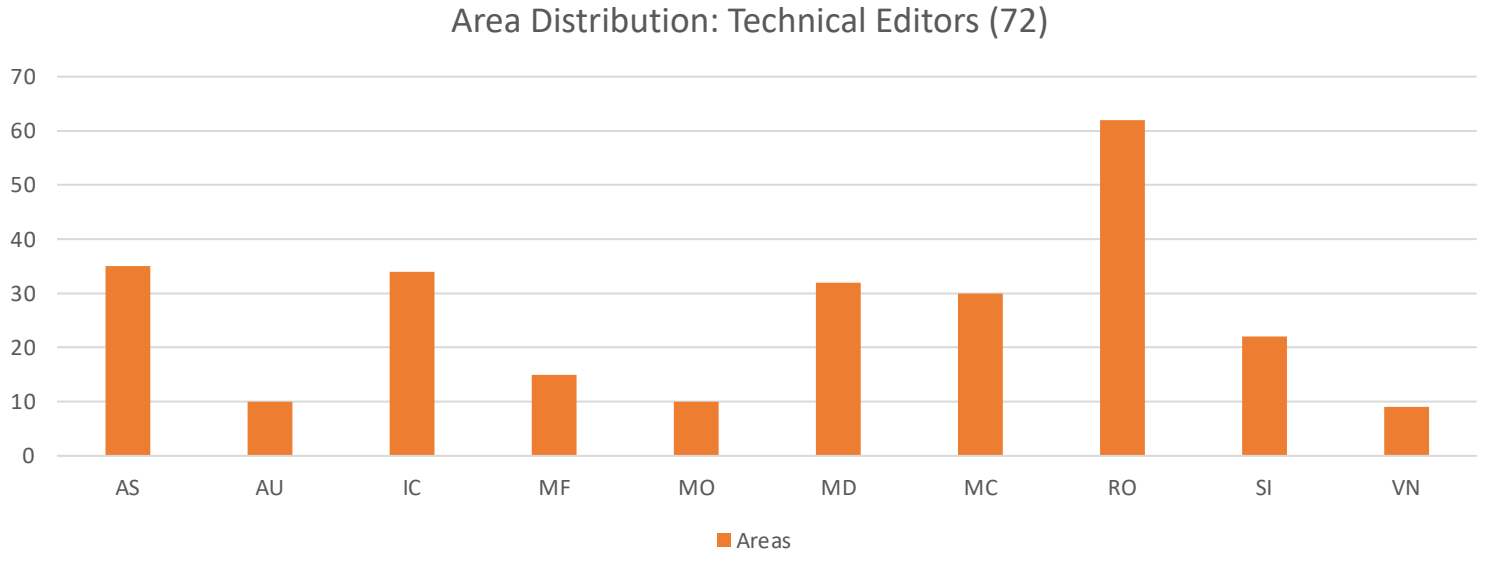


Status of Technical Editors

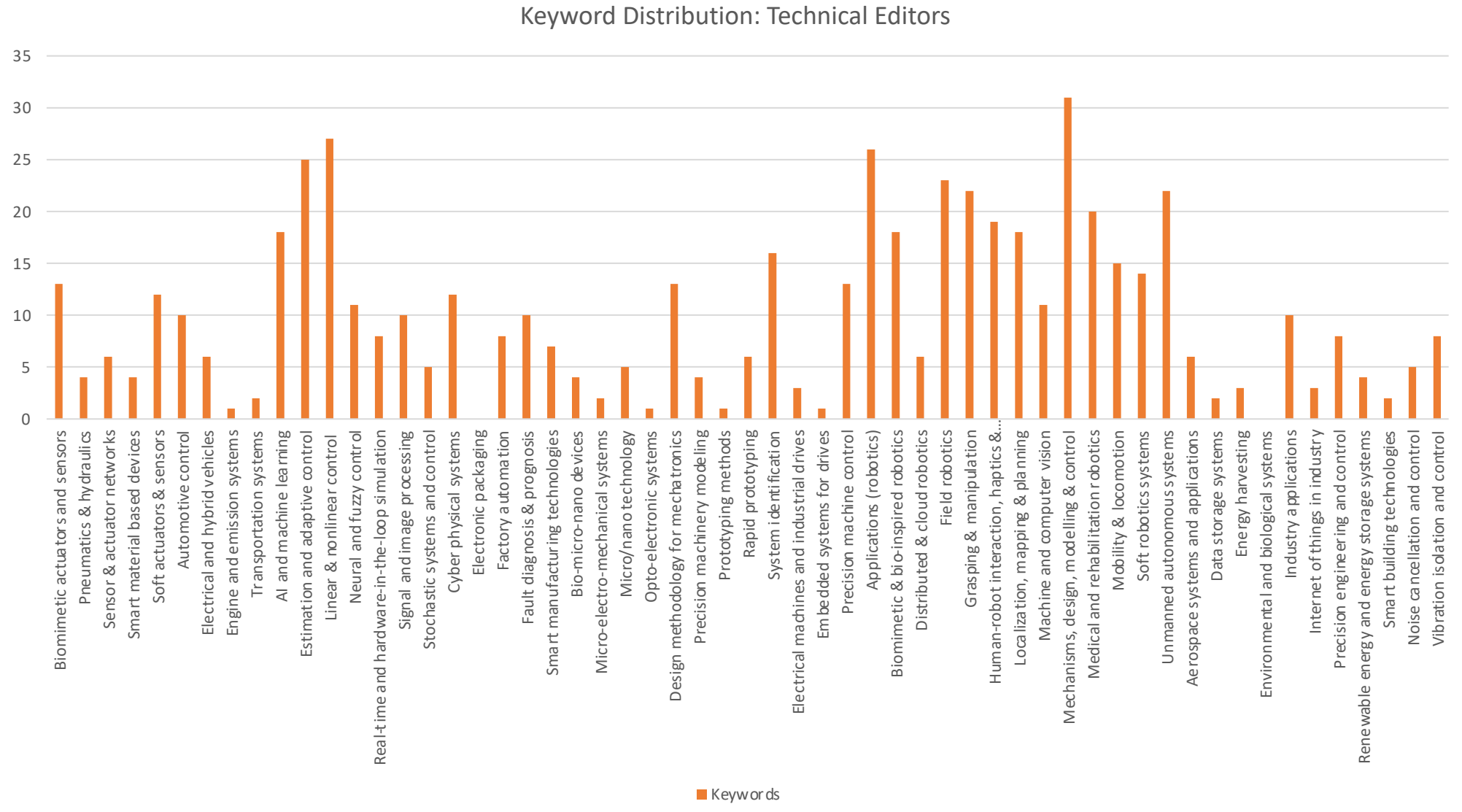
- Current status: recruitment, retirement, renewal
- Performance evaluation
  - Under observation
  - Term extension
- Recruitment of new TEs
  - TMECH areas
  - Secondary keywords
- Statistics – 15 June 2021
  - Total: 72
  - Retired before 31 August 2021: 8

TMECH Area Distribution: SEs & TEs





Keyword Distribution: TEs



Summary on 2nd Ed. of Focused Section on TMECH/AIM Emerging Topics

- Total of Submissions: 86
- Accepted Papers: 29
- Rejected Papers: 57
- Published Title in TMECH:

The 2nd Edition of Focused Section on TMECH/AIM Emerging Topics

All accepted papers are presented in AIM 2021.

The 2nd Edition of Focused Section on TMECH/AIM Emerging Topics

Editorial Board:

Lead Guest Editors

Xiang Chen, Canada (TMECH Senior Editor in Charge)
Bram Vanderborght, Belgium (AIM 2021 Program Co-Chair)

Guest Editors (2-year term from 2021 to 2022)

Raffaella Carloni, Netherlands
Xinkai Chen, Japan
Zhen Chen, China
Jongeun Choi, South Korea
Garrett Clayton, USA
Cédric Clévy, France (TE)
Markus Grebenstein, Germany (TE)
Mathieu Grossard, France
Kazuaki Ito, Japan (TE)
Soo Jeon, Canada (TE)
Chao-Chieh Lan, Taiwan (TE)
Huaping Liu, China
Hugh H. Liu, Canada
Chris Manzie, Australia
Kenn Oldham, USA
Dawei Shi (TE)
Tomoyuki Shimono, Japan (TE)
Mahdi Tavakoli, Canada (TE)
Jun Ueda, USA
Yan Wan, USA
Dirk Wollherr, Germany
Jingang Yi, USA
Haoyong Yu, Singapore
George G. Zhu, USA

Timeline of Focus Section Papers

- *Publicity of FS Call for Paper: 4~5 months before* ***Submission Deadline (SD)***
- First review decision: SD + 90
- Revision due after first decision: SD + 90 + 45 *[This is set and shown in the S1M system as revision deadline is 45 days from decision is made]*
- Final decision: SD + 90 + 45 + 60 *[Assuming the guest editors can complete review in 60 days.]*
- Final manuscript due: SD + 90 + 45 + 60 + 45 *[This 45-day is set in the S1M system as submission deadline.]*
- IEEE publication production: SD + 90 + 45 + 60 + 45 + (>30) *[Min 30 days after submission the manuscript can be in printed issue.]*
- Summary: A reasonable publication date is about 9 months (270 days) after submission deadline. 10-month period (300 days) is possible as a buffer.

	Proposed FS Timeline					
Sub deadline	1 May	1 July	1 Sep	1 Nov	1 Jan	1 Mar
First decision	1 Aug	1 Oct	1 Dec	1 Feb	1 April	1 June
Revision due	15 Sep	15 Nov	15 Jan	15 Mar	15 May	15 July
Final decision	15 Nov	15 Jan	15 Mar	15 May	15 July	15 Sep
Final manuscript	31 Dec	28 Feb	30 April	30 June	31 Aug	31 Oct
Publishing issue	February	April	June	August	October	December

Focused Sections

In review

- Mechatronics and Automation for Construction
  - Lead Guest Editor: Chien Chern Cheah (NTU, Singapore)
  - Publication: Oct 2021 issue
- Adaptive Learning and Control for Advanced Mechatronics Systems
  - Lead guest editor: Huijun Gao (Harbin Institute of Technology, China)
  - Publication: Feb 2022 issue

Call for Papers

- Mechatronics for The Era of Digital Agriculture
  - Lead guest editor: Erkan Kayacan (School of Mechanical & Mining Engineering, Australia)
  - Submission: 1 Sept 2021
  - Publication: June 2022 issue

Proposals

- Integrated design, planning, and scheduling for multi-sensor robots for agile and fast robots in cluttered environments (Tentative title)
  - Lead guest editor: Erdal Kayan (Tentative)
  - Submission: 1 Jan 2022
  - Publication: Oct 2022 issue

TMECH Junior Reviewer Program

The TMECH Junior Reviewers Program (TJRP) is intended to introduce young researchers in the mechatronics research community to the best practices in peer-reviewing of scientific publications under the guidance of Editorial Board members. This is also an effort to encourage junior researchers' early involvement in the professional activities of the mechatronics community for their future career planning. (Details referred to TMECH Editorial Guidelines)

- **TJRP Program Manager**
  - Prof. Erdal Kayacan (IES, RAS) [Email: erdal.kayacan@gmail.com]
  - Dept of Engineering, Aarhus University, Denmark

- **TJRP Co-Program Manager**
  - Prof. Shaohui Foong (RAS, ASME) [Email:foongshaohui@sutd.edu.sg]
  - Engineering Product Development Pillar, Singapore University of Technology & Design, Singapore

  - Prof. Ming Xin (ASME) [Email: xin@missouri.edu]
  - Dept of Mechanical & Aerospace Engineering, University of Missouri, USA

TJRP Program Update

What have happened so far?

- 25 reviewers recruited in 1st batch (1 May 2020)
- 17 reviewers recruited in 2nd batch (1 June 2021)

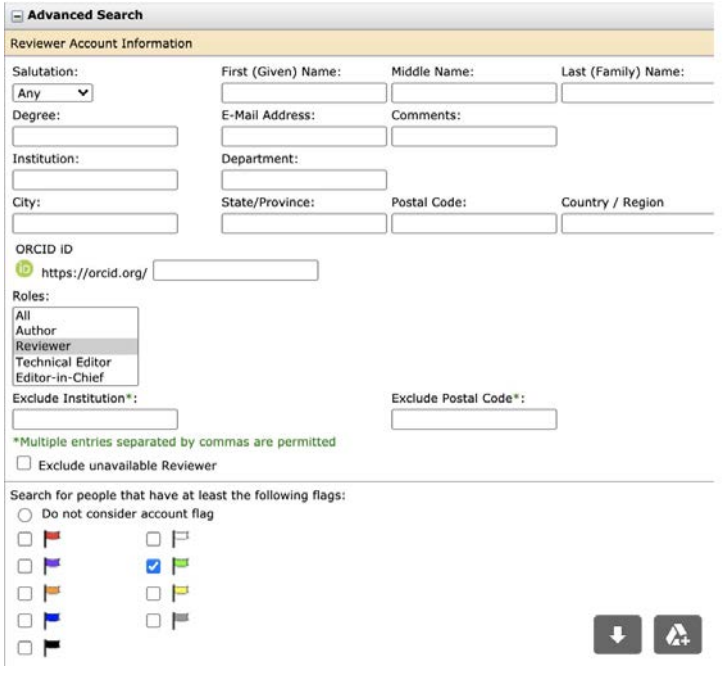
What is going well so far?

- There is interest
- We have sufficient junior reviewers
- Junior reviewers seem to be enthusiastic

What is challenging so far?

- Difficult to track the number of reviews per reviewer
- Difficult to get feedback for each review's quality

IEEE/ASME TRANSACTIONS ON MECHATRONICS



TJRP Programme mentor:

- Erdal Kayacan (erdal@ece.au.dk)
- Foong Shaohui (foongshaohui@sutd.edu.sg)
- Xin, Ming (xin@missouri.edu)

TJRP Program Update

TJRP Reviewer Statistics

Average reviewer turnaround time: 25.6 days

481 total reviews have been completed as of May 2021

66 TEs have participated

TJRP Program Update

First batch

Sarabakha	Andriy	Nanyang Technological University
XIAO	XIAO	National University of Singapore
Chen	Yue	University of Arkansas
Rose	Chad	Auburn University
Huang`	Yang	Guilin University of Electronic Technology
Li	Min	Minnesota State University, Mankato
Sun	Zhenglong	The Chinese University of Hong Kong, Shenzhen
Chen	Cheng-Wei	National Taiwan University
Lin	Chun-Yeon	Department of Mechanical Engineering, National Taiwan University
Lei	Li	B&R Industrial Automation @ ABB Group
Kayacan	Erkan	The University of Queensland
Lv	Chen	Nanyang Technological University
LONG	FEI	The Ohio State University
Ramani	Keval	University of Michigan, Ann Arbor
Yuan	Mingxing	Nankai University
Ning	Tan	Sun Yat-sen University
Erwin	Andrew	Jet Propulsion Laboratory
Lee	Yu-Hsiu	UCLA
CAO	LIN	Nanyang Technological University
Lin	Li-Gang (Charles)	National Central University
Wang	Fengchen	The MathWorks (starting in June)
Tripathi	Abhinav	CNH Industrial
Yang	Shiyi	University of Waterloo
Algethami	Abdullah	Taif University
Bajaj	Nikhil	University of Pittsburgh

Second batch

Huazhen	Fang	University of Kansas
Shen	Chao	University of Victoria
Mu	Bingxian	University of New Hampshire
Li	Xiaocong	Singapore Institute of Manufacturing Technology
Chih-Chiang	Chen	National Cheng Kung University
Hassan Zahraee	Ali	Isfahan University of Medical Sciences
Yue	Yufeng	Nanyang Technological University
Reis	Joel	University of Macau, Faculty of Science and Technology
Li	Changsheng	Beijing Institute of Technology
Gaofeng	Li	Italian Institute of Technology
Wang	Weitian	Montclair State University
Zheng	Xingwen	University of Groningen
Zhou	Lei	The University of Texas at Austin
Dong	Huixu	National University of Singapore
Gupta	Ujjaval	Singapore University of Technology and Design (SUTD)
Wu	Zhongyou	KLA Corporation
Yue	Xiaowei	Virginia Polytechnic Institute and State University

TJRP Program Update

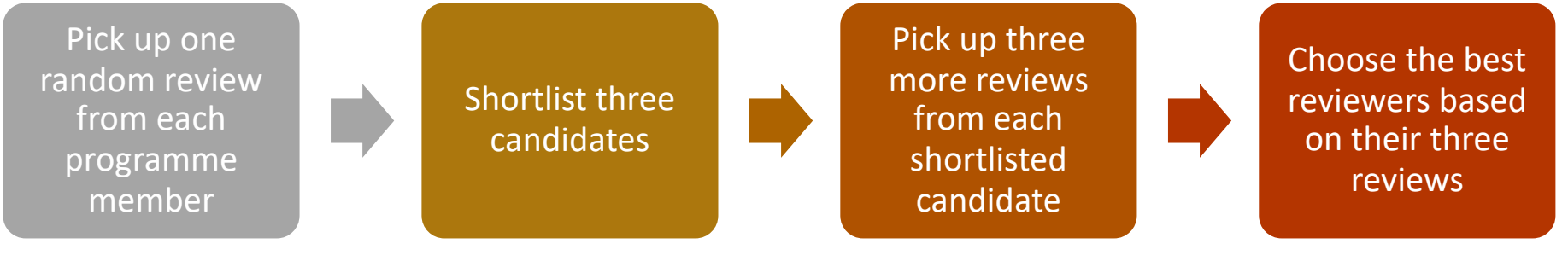
Winners of TJRP outstanding reviewer award 2021

Andriy Sarabakha – Technical University of Munich
Long Fei - The Ohio State University
Chen Yue - University of Arkansas

Evaluation criteria

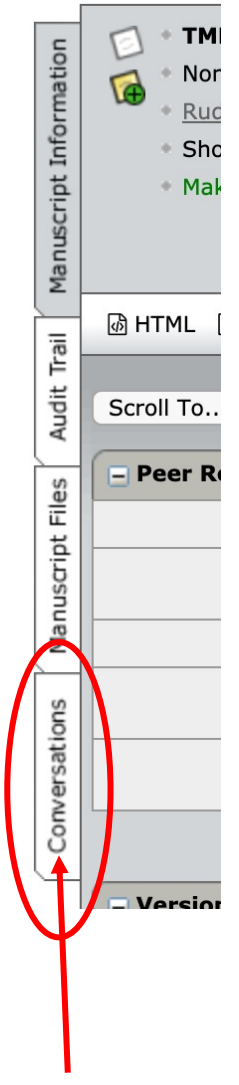
- To identify significant advances and discoveries in a particular field of study,
- To help identify essential gaps in the article,
- To point out the pros and cons of the article simultaneously,
- To make constructive comments to authors.

Evaluation process



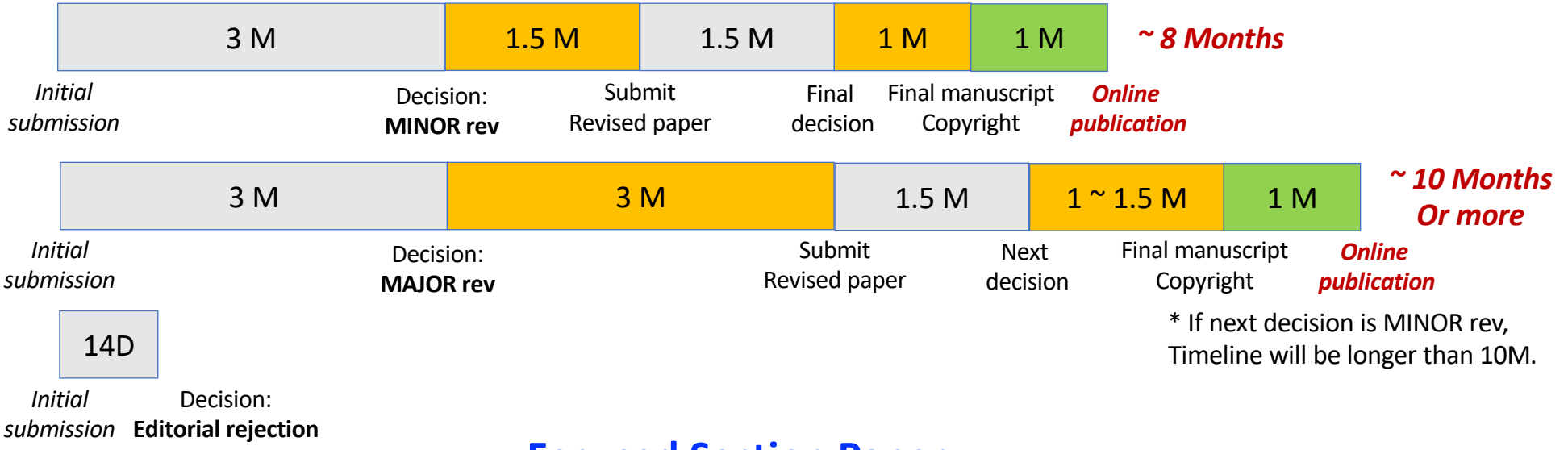
Reminders for All Editors

- TE “Comments to Author” Section requires **min 200 words** of constructive and precise comments for reviewed papers
- SE/TE “Comments to Author” Section requires **min 100 words** for “out-of-scope,” “reject w/o review” Rejection cases
- Use <conversation> tab in S1M to discuss “Out-of-scope”, “Reject w/O review”, and other outlier cases among EiC, SE, TE
- All “out-of-scope’, “reject w/o review” Rejection cases need to be completed **within 14 days** from assignment to final decision
- Final Decision email will be conveyed to the authors by EiC with signatures of both SE (decision maker) and EiC (endorsement). **TE remains anonymous.**
- Accepted papers have credited both SE and TE since Q2 of 2020. On the first page of Printed copy of the article, a sentence, “This paper is recommended by Senior editor XXX and Technical editor XXX.” appears at the lower left column.
- TMECH Junior Reviewer Program (TJRP) is going strong.

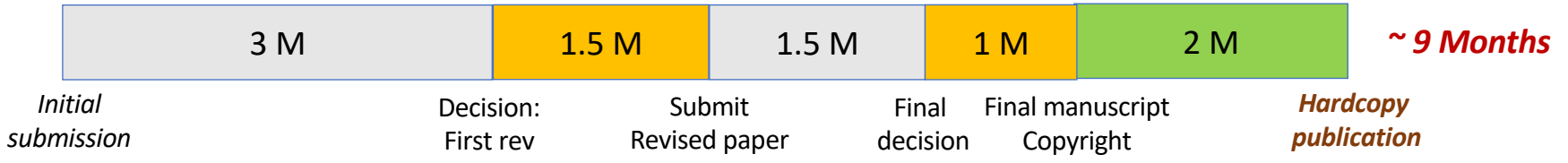


Typical Submission-to-Publication Timeline

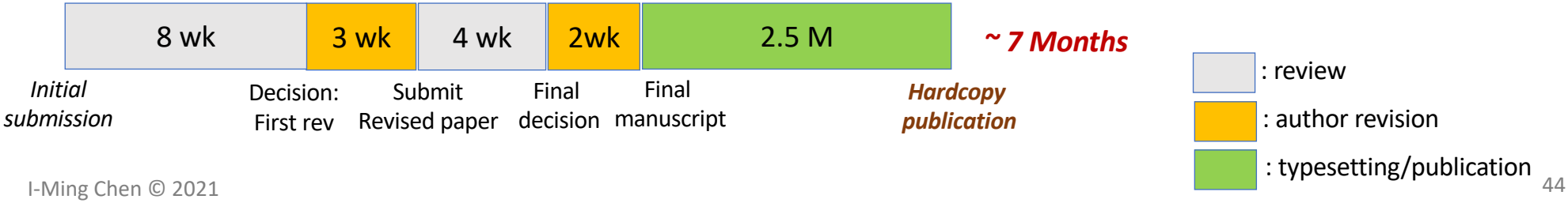
Regular Paper / Short Paper



Focused Section Paper



TMECH/AIM Emerging Topics Focused Section Paper



ASME LETTERS IN DYNAMIC SYSTEMS AND CONTROL

Peter Meckl

Technical Editor, Letters-DSC

Presentation at 2021 MECC, Oct. 25, 2021

Current Published Issues

Issue	Number of Full Papers	Number of Pages
Jan 2021	17	102
Apr 2021	12	81
July 2021	15	100
Oct 2021	14	95
2021 Totals	**58**	378
Jan 2022	10	64
Apr 2022*	4	27
***Stats as of 10/19/2021**		

Review Statistics

Year Submitted	Total Number of Papers Submitted	Total Number Papers Rejected	Rejected Paper %	Total Number of Papers Withdrawn	Total Number of Papers Accepted	Accepted Paper %
2019 (DSCC)	31	8	26%	0	23	74%
2019 (other)	10	4	40%	1	4	40%
2019 (Total)	41	12	29%	1	27	66%
2020 (DSCC)	28	6	21%	0	22	79%
2020 (other)	50	28	56%	4	18	36%
2020 (Total)	78	34	44%	4	40	51%
2021**	39	14	44%	5	13	41%

*** 7 2021 papers still in progress as of 10/19/2021**

Statistics for Time in Process

Year	No. of Papers	Assign to AE (days)	Time in Review (days)	AE Decision (days)	TE Decision (days)	TE Approval (days)	Submit to TE Decision (months)	Submit to TE Approval (months)	Submit to Publication (months)
2019	41	18	44	19	23	8	3.568	4.142	5.060
2020	78	26	56	9	8	9	3.187	5.224	8.769
2021*	39	13	64	4	12	3	2.404	4.897	4.729

***Stats as of 10/19/2021**

Editorial Board

Concerns

1. It's still taking longer to process papers than I'd like. I will keep working on this.
2. I need a way to make up for papers that would have come from the cancelled 2021 DSCC.
3. I still need to attract more unsolicited papers to the Letters. I've advertised the Letters in the DSCD newsletters but need to do more to encourage authors to submit to the Letters.
4. I could still use more diverse AEs, i.e., more women, more geographic diversity, and better coverage of technical areas.

Future Plans

1. Actively solicit papers for the Letters, especially review papers.
2. Work with AEs to identify authors in key emerging areas to submit papers.
3. Work with AEs to identify topics for special issues.
4. Work with AEs to identify more women, more international candidates, and more industry members for the Editorial Board.
5. Identify additional AE candidates to better cover emerging technical areas.

Journal of Autonomous Vehicles and Systems

A New ASME Transactions Journal

ASME Dynamic Systems and Control Division Executive Committee Meeting

October 25, 2021

ASME

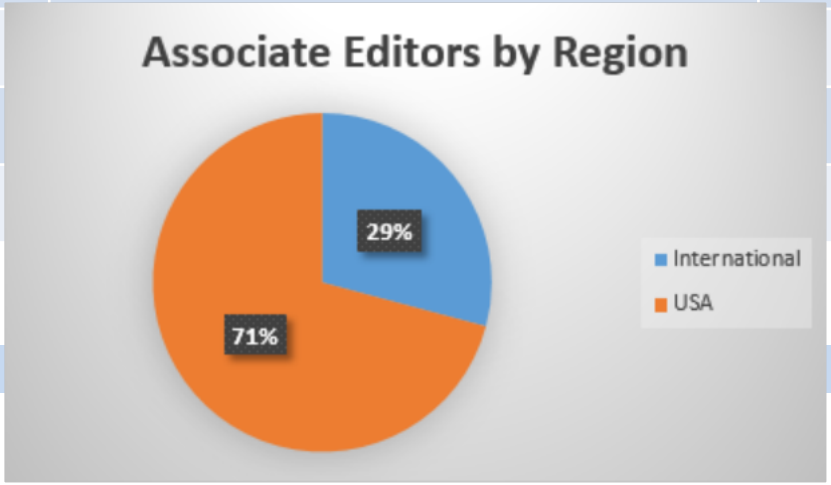
SETTING THE STANDARD

(24) Associate Editors by Area

	Ground	Air & Space	Water
1	Canova, Marcello	Azimov, Dilmurat	Jiang, Zhong-Ping (also Ground/Air & Space)
2	Carbone, Giuseppe	Chen, Wen-Hua (also Ground)	McCue-Weil, Leigh
3	Ceccarelli, Marco	Cowlagi, Raghvendra (also Ground)	
4	Duprey, Benjamin	Demkiv, Lyubomyr (also Ground)	
5	Gorsich, David J.	Hermann, Jeffrey	
6	Gray, Jeremy P.	Kumar, Manish	
7	Jayakumar, Paramsothy	Van der Auweraer, Herman (also Ground)	
8	Larochelle, Pierre	Wang, Yue (also Ground)	
9	Lu, Jianbo		
10	Pandey, Gaurav		
11	Richter, Lutz		
12	Sandu, Corina		
13	Wang, Junmin		
14	Wang, Hai		

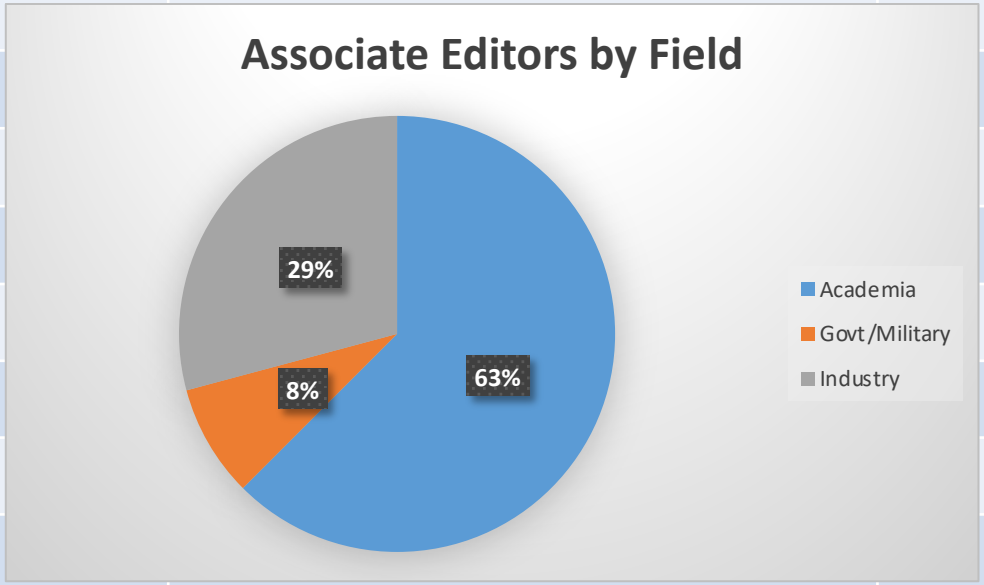
(24) Associate Editors by Region/Country

	US	US	International
1	Azimov, Dilmurat	Larochelle, Pierre	Carbone, Giuseppe (Italy)
2	Canova, Marcello	Lu, Jianbo	Ceccarelli, Marco (Italy)
3	Cowlagi, Raghvendra V	Pandey, Gaurav	Chen, Wen-Hua (UK)
4	Duprey, Benjamin	Sandu, Corina	Demkiv, Lyubomyr (Ukraine)
5	Gorsich, David J.	Wang, Junmin	Richter, Lutz (Germany)
6	Gray, Jeremy P.	Wang, Yue	Van der Auweraer, Herman (Belgium)
7	Hermann, Jeffrey	McCue-Weil, Leigh	Wang, Hai (Australia)
8	Jayakumar, Paramsothy		
9	Jiang, Zhong-Ping		
10	Kumar, Manish		



(24) Associate Editors by Field

	Academia	Government/Military	Industry
1	Azimov, Dilmurat	Gorsich, David J.	Demkiv, Lyubomyr
2	Canova, Marcello	Jayakumar, Paramsothy	Duprey, Benjamin
3	Carbone, Giuseppe		Gray, Jeremy P.
4	Ceccarelli, Marco		Lu, Jianbo
5	Chen, Wen-Hua		Pandey, Gaurav
6	Cowlagi, Raghvendra V		Richter, Lutz
7	Hermann, Jeffrey		Van der Auweraer, Herman
8	Jiang, Zhong-Ping		
9	Kumar, Manish		
10	Larochelle, Pierre		
11	McCue-Weil, Leigh		
12	Sandu, Corina		
13	Wang, Hai		
14	Wang, Junmin		
15	Wang, Yue		



Advisory Committee

- R. Scott Erwin, Ph.D.: Program Manager, Guidance, Navigation, and Control, and Principal Aerospace Engineer; Space Vehicles Directorate, Air Force Research Laboratory, Kirtland Air Force Base, NM

- Azim Eskandarian, D.Sc., ASME Fellow: Department Head and the Nicholas and Rebecca Des Champs Professor of Mechanical Engineering; Mechanical Engineering Department, Virginia Tech, VA

- David J. Gorsich, Ph.D.: Chief Scientist, U.S. Army Ground Vehicle Systems Center (GVSC), Warren, MI

- Madhu Raghavan, Ph.D.: Group Manager, Propulsion System Architecture; General Motors Research and Development, Warren, MI

Journal Metrics

- **Papers Submitted: 98**
  - Under Review: 16 (16.3%)
  - Accepted: 19 (19.4%) - increase from 17%
  - Rejected: 42 (42.9%) - increase from 38%
  - Removed: 10 (10.2%)
  - Withdrawn: 11 (11.2%)
- **Countries Represented: 17**
  - Algeria, Brazil, China, Croatia, Egypt, France, India, Israel, Italy, Japan, Lebanon, Morocco, Saudi Arabia, Taiwan, Tunisia, United Kingdom, United States
- **Time in Process**:
  - Average Time from Submission to Technical Editor Decision:
    - 2020: 3.590 months
    - 2021: 2.149 months
  - Average Time from Submission to Publication:
    - 2020: 8.78 months
    - 2021: 7.433 months

Presentations and Journal Promotion

- JAVS Technical Editor Presentation to the Executive Committee of the Dynamic Systems and Control Division and to the Division: 2020 and 2021

- 2021 ASME IDETC-CIE Conference – Journal Promotion
  - Elmquist, A., Serban, R., Negrut, D. “A Sensor Simulation Framework for Training and Testing Robots and Autonomous Vehicles.” *J. Auton. Veh. Sys.* April 2021, 1(2): 021001. https://doi.org/10.1115/1.4050080
  - Cvok, I., Hrgetić, M., Hoić, M., Deur, J., Hrovat, D., and Eric Tseng, H. "Analytical and Experimental Evaluation of Various Active Suspension Alternatives for Superior Ride Comfort and Utilization of Autonomous Vehicles." ASME. *J. Auton. Veh. Sys*. January 2021; 1(1): 011004. https://doi.org/10.1115/1.4048584
  - Larochelle, P., and Mao, X. "SphereWalker: A Hexapod Walking Machine." ASME. J. Auton. Veh. Sys. January 2021; 1(1): 011003. https://doi.org/10.1115/1.4048483
  - Schwalb, E. (April 1, 2021). "Analysis of Hazards for Autonomous Driving." ASME. *J. Auton. Veh. Sys*. April 2021; 1(2): 021003. https://doi.org/10.1115/1.4049922
  - Hoang, S., Marsh, L., Aliseda, A., Shen, I.Y. “Effects of High Fidelity Modeling of Multirotor Drones.” *J. Auton. Veh. Sys.* January 2021, 1(1): 011007. https://doi.org/10.1115/1.4050013

Advisory Committee Meeting, 6/14/2021; Associate Editor Meeting, 6/25/2021

General Agenda

- Overview of Duties
- Review of First Year
- Journal Metrics and Work Load
- Update of Journal Scope and Keywords
- List of Strategic Research Topics and Paper Submissions
- Journal Promotion
- Search for Reviewers and Associate Editors
- Targets for 2nd Year of Operation

Advisory Committee Meeting, 6/14/2021; Associate Editor Meeting, 6/25/2021

Plan of Action

- Update Journal Keywords - Done
- Update the JAVS flyer - Done
- Research conference sponsorship opportunities - in Progress
- Invite published authors to become reviewers - Done
- Continue to focus on growing the underwater autonomous vehicles section of authors, reviewers, and associate editors - in Progress
- Promote JAVS at conferences, meetings, and other events as well as among colleagues in academia, government, and industry - in Progress
- Scout and add qualified reviewers to the reviewer database - in Progress
- Propose, contribute to, and serve as guest editor for special issues - in Progress
  - ✓Special Issue initiated by Dr. David Gorsich, Chief Scientist, US Army GVSC

Advisory Committee Meeting, 6/14/2021; Associate Editor Meeting, 6/25/2021

Plan of Action

Targets for 2nd Year of Operation: 73 days from submission to final decision

Duration	**Task**
Within 5 days	Editor assigns the manuscript to an AE or rejects the manuscript.
Within 5 days	AE assigns the manuscript to reviewers.
Within 35 days	Reviews completed.
Within 3 days	AE submits recommendation.
Within 15 days	Authors are requested to submit revisions with a reasonable turnaround. Fifteen days is recommended.
Within 5 days	The AE handles the second revision.
Within 5 days	Final decision made by Editor.

THANK YOU

Vladimir Vantsevich
vantsevi@uab.edu

Call for Nominations

ASME DSCD Open Positions

DSCD Executive Committee Junior Member

Tenure: Voting members serve for 5 years; enter as Junior Member and then become Senior Member, Vice Chair, Chair and Past Chair, respectively, in successive years
Non-voting members serve for 3 years

Election/Appointment: One new member is elected each year following the procedures outlined in Article V of ASME-DSCD ByLaws

Appointment: July 1, 2022 to June 30, 2027

The junior incoming member is responsible for reporting on the Technical Committee activities at the Division meetings and is responsible for soliciting TC chairs to nominate at least two tenured members from their respective TCs to serve as Associate Editors for the journals managed by the DSCD. The senior incoming member is responsible for reviewing and updating, if necessary, the DSCD Operating Guide annually. Other specific duties of the two incoming members are left to the direction of the chair; it may be effective for one member to focus on the same topic for two years in a row rather than rotating through different jobs. Specific tasks for the two incoming members may include, but are not limited to:

- Review, oversight, and updating of the Strategic Plan
- Implementing (or coordinating the implementation of) some part(s) of the strategic plan
- Membership and marketing activities, including young engineers, student affairs, and/or the DSCD website

Some of these tasks are mandatory, and if not performed by the incoming members of the ExComm, will need to be handled by the Chair and/or Vice-Chair or delegated to an Ad-Hoc Committee(s).

DSCD Conference Program Representative (Alternate Member)

Number of Members: 2 (Representative and an Alternate)

Tenure: 2-year appointment

Tenure: The Representative serves for 1 year. The Alternate then becomes the Representative and a new Alternate is appointed.

Election/Appointment: Chair of the ExComm shall appoint division representatives based on nominations produced by the Nominating Committee prior to January 1 of each year with the advice and consent of the ExComm.

Responsibilities The responsibilities of DSCD conference representative mainly include compiling and presenting conference reports (for both ACC and DSCC), and making arrangements for DSCD meetings (ACC only). Details in reports, including numbers of submissions, etc., can be obtained by contacting the conference program chair and invited/tutorial/special session chairs. Reaching out to chairs of the individual TCs is also advised.

Appointment: December 1 to November 30

Student Travel Grant Coordinator (Alternate):

Tenure: Appointed by ExComm for a variable term (typically 2-3 years)

Appointment: July 1 to June 30

Student travel funds have been allocated DSCD-sponsored events to be administered by the student travel grant coordinator. These funds are dispersed to the students by the Student Travel Grant Coordinator. Students with accepted papers apply for the grant; for ACC, reimbursement is coordinated with the ACC Student Affairs Chair.

ASME JDSMC Status Report

October 15, 2021

Technical Editor – Ranjan Mukherjee

Journal Secretary – Marlan Buddingh

Status Report:

1. Faster Review Cycle/Faster Publication Timeline

Time taken for papers to get accepted for publication continues to improve:

Year	Number of Papers	Time to Acceptance	Time to Publication
2018	554	10.24 mo	14.19 mo
2019	550	9.07 mo	12.90 mo
2020	505	6.73 mo*	11.15 mo*

* For 2020 papers, 10 (2%) papers still under review.

2. Number of Submissions to JDSMC has declined:

Number of submissions in 2021 is 329 as of October 15. At this rate, the number of submissions for 2021 is anticipated to be in the range of 400, which will be a 20% decline from 2020 submissions.

Please consider submitting papers to JDSMC – majority of the submissions to JDSMC come from non-ASME members (based on an extensive survey of 2019 data).

Status Report (continued):

3. Special Issues:

Special Issue on “Optimal Energy Management and Control in Connected and Automated Vehicles” – appearing in January 2022.

Guest Eds: Marcello Canova, Mahdi Shahbahkti, Borhan Hoseinali, Scott Hotz

Soliciting new proposals for Special Issues from TCs and Division members.

4. Seeking Associate Editor Nominations:

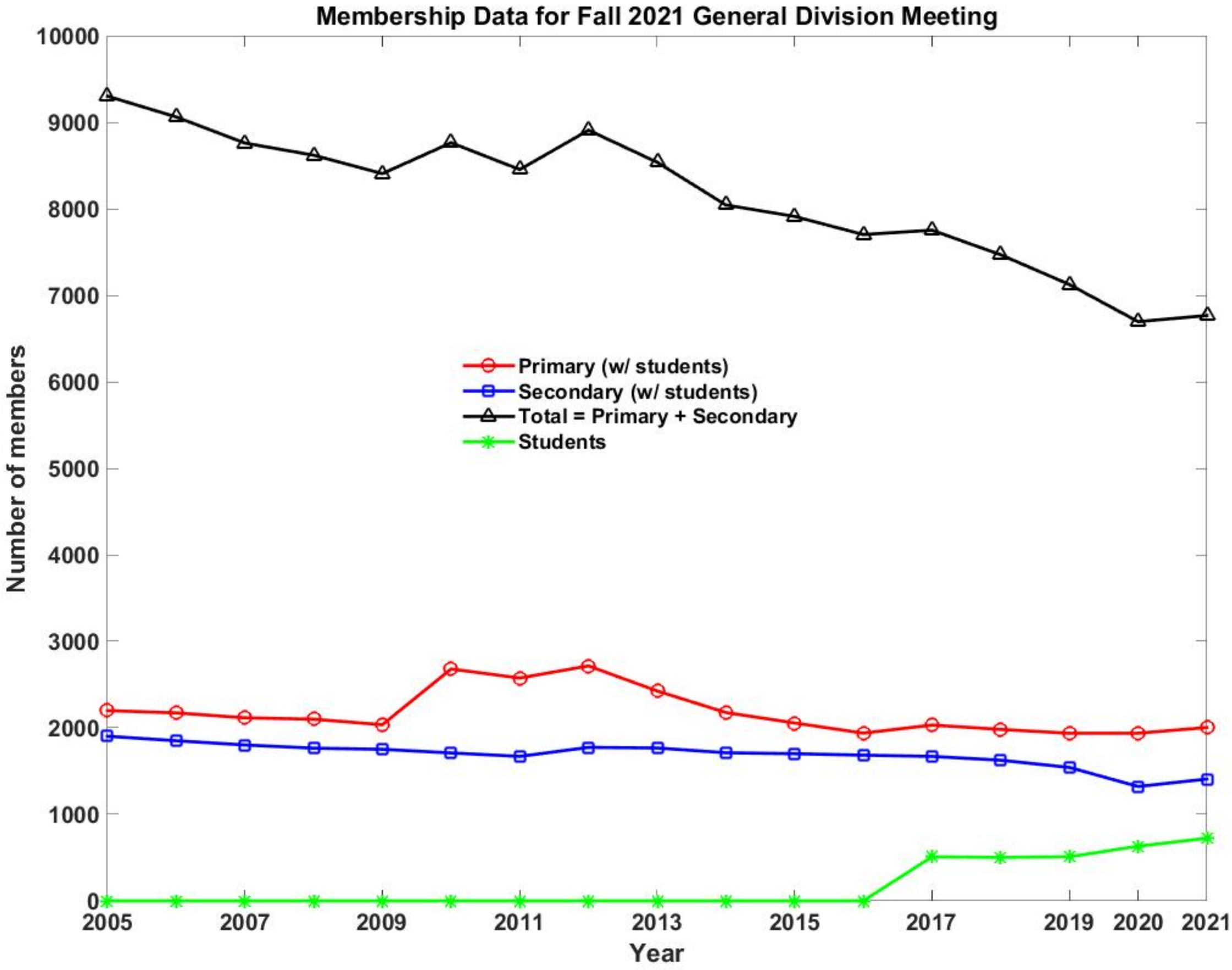
Please nominate yourself, or someone you know, for the Associate Editor position – 12 AEs completed their terms in 2021.

ASME requirements: For university faculty, (a) AEs must be tenured, (b) cannot be AE for multiple ASME journals, (c) one department cannot have multiple AEs.

Current average load for AEs is 10-12 papers/year.

Student Registration Grants for ACC 2021

- Budget used to support student registration due virtual modality
- Student registration grants will cover full cost of student registration ($75 early, $100 “on-site”), applications are still ongoing
- Students asked to submit an application form and indicate their society membership (i.e. ASME, IEEE, etc.)
- Currently, 29 students have applied for registration grants under the ASME designation
  - Approximate cost (29 x $75 = $2175)
  - More accurate figures will be available after the conference.


Membership Data for Fall 2021 General Division Meeting
Number of members
Year
Primary (w/ students)
Secondary (w/ students)
Total = Primary + Secondary
Students
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
2005
2007
2009
2011
2013
2015
2017
2019
2020
2021

Website report

Over the past months, the assistant webmaster, Alireza Mohammadi, has been brought up to speed. We have made some edits to the website, and need to gather the necessary information to make other edits. This information includes the award winners in particular, as they are out of date, as well as the technical committee leadership.

One challenge in getting things updated is the difficulty in knowing who to contact and when for some of the updates that need to be made. It may be desirable to have a regular routine of having all stakeholders review and submit changes at a certain time (e.g., when turnover of leadership happens, and/or when key conferences occur), so that a regular procedure is established. A calendar of "standard" updates could be useful.

One question that has come up is what conference links should be included on the website; obviously ASME organized conferences of relevance should be there, but what about non-ASME conferences? In particular, ACC and the IEEE CDC are conferences of interest to many of our community. While ASME does have a role in ACC, IEEE is organized by another society so it seems more debatable on whether it should be promoted on our website.