SAEINDIA BS Managing Committee Members 2020 - 22

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  Vice Chairman

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  Secretary

- Dr. Manish Jaiswal
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  Member

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  Member

- Mr. Vijai Gopalakrishnan
  Member

- Mr. Dhananjayan
  Member

- Mr. Vijayalayan
  Member
Welcome Note

Bengaluru Section Chairman: Mr. Damodaran Subramanian

Dear SAEINDIA members, warm wishes and regards from the Bengaluru section; it is my pleasure and honor to address you all through this newsletter. I do believe every one of you and your Family members is doing well and keeping safe and healthy. We just crossed a year living with a Historic event of the COVID-19 pandemic.

During this period, the entire world was forced to halt the business and restart them gradually. With new norm and techniques. Undoubtedly a Challenging time for the business and forced the Engineering community to invent, reinvent, reimagine, and sustain this grave situation. While we remember a year through these tough times; we hear that this situation is highly unpredictable, and we are currently facing the second wave. I urge and request along with my fellow committee members to upkeep all the safety and security measures to protect from the virus impact.

At the beginning of the year, I have been nominated as Chairman of the Bengaluru section, thank you for keeping the confidence and it is a great responsibility and I will do my best for the growth and sustenance of the SAEINDIA Bengaluru Section. SAEINDIA Bengaluru section continues its service in the last year to help the student, professional members by adapting to the new normal of disseminating knowledge and services uninterrupted way. We have revamped our strategy and actions continuing from the previous years. I want to congratulate the MC members for their tireless efforts to innovate new ideas and value to the members whether its students, faculties, or professional members.

We have successfully hosted several programs adapting to disruptive technologies, to bring a glimpse of the future to the Emerging technocrat communities. We received an overwhelming response and appreciations for these wonderful Programs and continued request for repeating the same. Our members also were part of the other forums and supporting SAEINDIA’s one SAEINDIA vision. We successfully hosted and supported AeroCON 2020, first of its kind virtual event which is further continuing with sequel of technical seminars and competition named AEROTHON 2021.

It is also a sad note to share we lost one of our senior member Mr. Kannan Marudhachalam from TVS Motors on 6th Jan 2021. He was a veteran and an active member of society and contributed to the student community and managing the Bengaluru section in various capacities. During his leadership, he made remarkable achievements and events. Through the Bengaluru section, I request and join all the members to acknowledge his Contributions. We are in discussion to conduct various competitions and events to grace his Remembrance.

With this brief welcome note, I wish all the success to our members for bringing out a power-packed newsletter for the benefit of the society members.

Best wishes and stay safe!
Tribute

Mr. M Kannan
26th Jan 1963 – 6th Jan 2021
Past Chairman – SAEINDIA Bengaluru Section
General Manager – R&D, TVS Motors

Shri. Kannan Marudachalam, fondly called as Kannan-San by all of us, has been a good friend for more than a decade. Our common platform has been SAEINDIA and its range of activities. I personally came across him in 2008 in one of the SAE events and these regular events / activities later became our regular connection places.

Over a period, we were involved in various programs such as AWIM, BAJA, Supra, SAE International President’s visit, Aerospace Board events, ITEC, REEV, Bengaluru Section MC Meetings etc. To add to it, our relationship has gone beyond these Professional activities and a lasting bond was formed, which allowed us to exchange ideas, thoughts and personal journeys during Our innumerable long calls.

Shri. Kannan has been a man of highest commitment and passion. He was considered as the busiest person in our circles! That’s Because! He had time for everyone and everything. He has always demonstrated personal touch in every activity. To Share few incidences – Once he has gone to City Railway station around 11pm to get pencils for AWIM program for the Following day. In another incident, he has travelled over 50 Km to a supplier with his personal money to get a part for a REEV project, that too after his office hours. There have been numerous such incidents with this great man, where he never hesitated to spare his time and money for the larger cause. It also clearly tells that he did nurtured a great family, who supported him for his untiring commitments towards his job as well as Social Activities.

Another outstanding character of Shri. Kannan was his ability to get along with seniors and juniors seamlessly and Humbly. In all the events, he would be the last person to leave the venue, after ensuring every small thing is take care of and after finding time to interact with each and everyone. During Our interactions, he will always end the conversation by personally enquiring about my wife and children by their Names. I feel proud, privileged and honoured to have spent these precious years with him. I take this opportunity once Again to pray for his noble soul to rest in peace. May God bless all the good things in life to his family.

J. Munirathnam
Chair – Engineering Education Board
SAEINDIA
## Events Organized by Bengaluru Section in 2020-21

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Event Date</th>
<th>Event Details</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>23rd May, 2020</td>
<td>Working Culture post Covid19: Trends &amp; Strategies - Industry &amp; Employee Perspective</td>
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<td>2</td>
<td>19th Jun, 2020</td>
<td>Quest in Quarantine – e-Panel and technical talks on Reimagining the Bridge between Industry &amp; Academia - Post Covid</td>
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<td>3</td>
<td>27th Jun, 2020</td>
<td>Webinar-TRIZ for Technical Innovation, Invent in India®</td>
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<td>4</td>
<td>25th Jul, 2020</td>
<td>Webinar on Model-Based System Engineering – Manage Complexity and reduce risk</td>
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<td>5</td>
<td>27th Jul to 01st Aug, 2020</td>
<td>PDP-Conventional, Hybrid and Electric Powertrains</td>
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<td>6</td>
<td>28th Aug, 2020</td>
<td>Webinar-Chassis Controls System</td>
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<td>7</td>
<td>29th Aug, 2020</td>
<td>Webinar-Virtual Calibration and Testing of Vehicle Powertrain Using Simulation-Based Approach</td>
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<td>8</td>
<td>21st - 24th Sep, 2020</td>
<td>PDP-Application AI and ML Techniques in Automotive Control Systems</td>
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<td>9</td>
<td>17th Oct, 2020</td>
<td>Webinar-Design Review Based on Failure Modes</td>
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<td>10</td>
<td>21st Nov, 2020</td>
<td>Webinar-Automotive Functional Safety</td>
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<td>11</td>
<td>12th Dec, 2020</td>
<td>Model-Based System Engineering – Manage Complexity and reduce risk</td>
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<td>12</td>
<td>9th Jan, 2021</td>
<td>Webinar-Migration of Legacy System to Autosar</td>
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<td>13</td>
<td>21st - 22nd Jan, 2021</td>
<td>Functional Safety Conference (First Ever Conference in India on the subject)</td>
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<tr>
<td>14</td>
<td>26th -30th Jan, 2021</td>
<td>PDP-Conventional, Hybrid and Electric Powertrains</td>
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<tr>
<td>15</td>
<td>6th Feb, 2021</td>
<td>Webinar-Application AI and ML Techniques in Automotive Control Systems (1)</td>
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<tr>
<td>16</td>
<td>3rd Apr, 2021</td>
<td>Webinar-Automotive Functional Safety</td>
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<tr>
<td>17</td>
<td>26th Mar, 2021</td>
<td>Webinar on Model-Based Systems Engineering for Hybrid Electric Vehicle Development</td>
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<tr>
<td>18</td>
<td>19th Apr, 2021</td>
<td>Automotive Functional Safety (ISO26262)</td>
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Range Extended Electric Hybrid Vehicle competition is an experiential learning program for Engineering students of all streams. This program gives unique opportunity for students to design the entire vehicle within engineering constraints and build the vehicle with latest technology in actual industry.

After successful completion of 1st Edition in Year 2020, the Team REEV, comprising of passionate leaders from the Automotive Industry has kicked off the 2nd Edition in Q1, 2021. So far 200+ talented students from various colleges have been registered and 14+ Faculty advisors have signed up for this program.

There are two major milestones of this program:

1. Vehicle Design evaluation based on CAD,CAE & Physics – June 2021
2. Physical Vehicle Build and Actual Competition – Feb 2022

As a part of disseminating Product development knowledge to the students and Faculty, Weekend Learning sessions have been kicked off. Mr. Rakesh Bidre- Head of Virtual Integration and Safety Crashworthiness, TCS has delivered session on Vehicle Dynamics. This includes design and development of brakes, chassis & suspension system. He touched upon control systems like ABS, EBD and Few ADAS features. Additionally, several sessions have been completed to share the REEV Edition 2 plan with students and faculty across SAE Collegiate Clubs in India.
Professional Development Programs (PDPs) and Webinars

The year 2020 saw unprecedented changes in knowledge delivery. Moving from venue-based delivery to online delivery witnessed a rapid adoption. The enablers were un-tested until the job was done. After almost a year of remote working for most professionals, online mode of technical learning has now become the norm and the preferred mode from both, a delivery and receiving perspective. 2021 continues to ride on this preferred delivery trend.

In today’s vastly available sources, Professional Development Programs (PDPs) and Webinars from SAE occupy a unique Space, worldwide. Thousands of professionals, world-over train through SAE’s portfolio to keep their organizations on the Leading edge of technical and business subjects. The PDPs and Webinars are different from any other available online Resources with the following distinguishing factors:

- Delivered by Industry Experts.
- Delivered “hot off the oven” – PDPs bring knowledge insights that are privy to professionals developing and pushing the technology frontiers.
- The content is typically not available to public otherwise.

SAEINDIA Bengaluru Section (SEIBS) is uniquely placed with professional association of Experts from cutting edge Technology companies and academia. The speakers in the past have delivered PDPs and Webinars in a wide variety of Topics ranging from traditional, to cutting edge technology domains.

The topics have ranged from GD&T to AI/ML, EVs, and Autonomous Tech. For 2021 too, we have a wide array of offerings lined up, with topics that are sure to be relevant to industry professionals and students of the future. The content will, as always be tailored to the audience and delivered using online mode, with the help of Industry and Research Experts from Academia.

- **Industry 4.0 topics** — Data, AI/ML, Programming, Product Strategy, AR, VR.
- **Advanced Automotive Technologies** — Data, Regulations, EVs, xEV, Autonomous, Sensors, Cybersecurity, CAN, OBD, Materials, Battery Tech, ADAS, Automotive IOT.
- **Chassis, Vehicle Dynamics** — Steering, Suspension, Tire & Wheel, Brakes.
- **Accident Reconstruction** — Principles, Data, Analysis, Rollover, Functional Safety, AV/ADAS, Side impact.
- **Finite Element Analysis (FEA) / CAE**
- **Manufacturing** — Additive Tech, Materials, Methods & Processes, Corrosion Engineering.
- **Powertrain / Propulsion** — Transmission/Gears, Differentials, Axles, Drivelines, Fuels, Gasoline/Diesel Engines, Electric Drives, Integration, HVAC.
- **Leadership** — People, Product, Strategy, Project Management, Career Talks.

With these invaluable delivery areas lined up, SAEIBS is excited for the upcoming months and cannot wait to deliver this unique value to our members. Look out for communications through our mailers & social media pages.
2021 Event List (May – July)

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<tr>
<th>S. No.</th>
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<tr>
<td>1</td>
<td>29-May-21</td>
<td>Structured Problem Solving</td>
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<tr>
<td>2</td>
<td>05-Jun-21</td>
<td>A Primer to Autonomous Driving Technology</td>
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<tr>
<td>3</td>
<td>17-18 Jun-21</td>
<td>Understanding SAE Specification for Autonomous Vehicles</td>
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<td>4</td>
<td>19-Jun-21</td>
<td>Workflow for developing battery management systems/power electronics controllers</td>
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<td>5</td>
<td>24-25 Jun-21</td>
<td>DFMEA - Design Failure Mode and Effect Analysis</td>
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<td>6</td>
<td>30th Jun-21</td>
<td>Structured Innovation using TRIZ</td>
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<tr>
<td>7</td>
<td>03-Jul-21</td>
<td>The Impact of Model-Based Design on Controls Today and in Future</td>
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<tr>
<td>8</td>
<td>10-Jul-21</td>
<td>Virtual Calibration and Testing of Vehicle Electronics using simulation-based approach</td>
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<td>9</td>
<td>22-Jul-21</td>
<td>Additive Manufacturing</td>
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<td>10</td>
<td>24-Jul-21</td>
<td>Workflow for Developing and testing Automated Driving /ADAS systems</td>
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<td>11</td>
<td>29-Jul-21</td>
<td>Forging a Career in the Automotive Domain</td>
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<tr>
<td>12</td>
<td>31-Jul-21</td>
<td>AI in Automotive /Pragmatic practices for adopting digital transformation</td>
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The details will be updated soon in webpages. Readers are encouraged to follow the latest updates in the following webpages:

https://saeindia.org/
http://saeibs.org/

Bengaluru is uniquely positioned being India’s technology hub. With technology evolving very fast (Electric Vehicles, Drones, connected cars, etc.,) it is very important to be relevant. With the above objectives, the Management Committee of Bengaluru Section identified few strategic initiatives to benefit-

1. Section growth
2. Members growth
3. Industry growth

By engaging: Students, Academic Faculty, Professionals and Entrepreneurs. Each month we would bring focus on one initiative.
SAEININDIA Functional Safety Conference (Virtual)

The 1st edition of Functional Safety Conference (FSC) was organized by SAEINDIA, with Support of Bengaluru Section on 21st & 22nd January 2021. The event was attended by over 600 participants from various industries, be it Automotive, Manufacturing, Aerospace, Digital Tools or Consulting. The two-day event had 5 Plenary sessions and 4 Paper Presentation sessions organized, which focused on a range of topics related with Functional Safety implementation, Analysis and its features. The event offered a great platform to share and collaborate on the cutting-edge technologies in the Functional Safety (FuSa) Domain. The inaugural edition of the conference was a huge success, thanks to a committed SAEINDIA office Staff, members of the Organizing Committee, SAEINDIA partnering agencies and the sponsors. The conference (originally planned as a Physical one in Bengaluru in 2020) got delayed due to pandemic and eventually took the shape of the virtual event. A series of free lectures on Functional Safety were organized in the last quarter of 2020, as a prelude to the conference, which was also very well received as it saw overwhelming participation from professional circles. Buoyed by the success of the conference, the OC has decided to schedule the next edition at start of 2023 to make it a biennial event.

Any queries or feedback can be sent to get-blr@saeibs.org or get@saeibs.org.