

## Working Group / Task Force name

### Participating organisations:

Responsible Project Partner	APTE	Contributing Project Partners	VSB-TUO, ISCN, ACEA, EuroSPI, ITC
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### Geographical scope:

The SIITME conference is a regional conference focused on the Central and Eastern part of Europe, with international participation and audiences. It has been established in Romania.

### Target group(s)

The SIITME conference is targeted to the top researchers in the electronics domain (master's students, doctoral students, teachers, etc.) and to the electronics industry in the field of electronic technologies and systems.

### Summary/short description:

**SIITME Conference and Exhibition** is at the 30<sup>th</sup> edition, every year is held in other city in Romania and it's organized in collaboration with local academia and companies. Every year at least 120 people from industry, universities and research centers participate in the SIITME conference. The main sponsors in the recent years were Continental Automotive, Microchip, Bosch, Caelynx, Marvell, etc.

SIITME serves as a premier platform for international discussions and cooperation in electronic engineering and technology. Scheduled for the fall of 2024, SIITME brings together a global community of academics, researchers, and industry professionals to exchange knowledge, present cutting-edge research, and navigate emerging trends in electronic engineering. Through its involvement in the FLAMENCO project and the organization of events such as Professional student contest TIE and SIITME, APTE reaffirms its unwavering commitment to bridging the gap between the academic and industrial sectors. These initiatives demonstrate APTE's role in guiding the electronic technology sector towards a future marked by innovation, collaboration, and discovery.

### Objectives:

The **SIITME main objectives** are:

- Development of new research directions regarding digitization related to the conception, design and realization of electronic products (activities included in electronics packaging)
- Promoting innovation in the context of the European program Horizon 2020, Chips Act. Pack for Skills, IPCEI
- Debate forum for the issue of the activity of innovative clusters
- Challenges in global education, the training of human resources in accordance with the requirements of the economic environment, of innovation and the manufacture of electronic products
- Research on emerging technologies, industry partnerships - the research environment from and outside the academic space

## Methodology:

### Format

- **Sessions:** The conference includes plenary sessions, technical sessions, and poster presentations. These sessions cover a wide range of topics such as advanced packaging, nanotechnology, power electronics, and more.
- **Workshops:** There are also workshops (Education and Training focused) and professional development courses (PDCs) that provide hands-on experience and in-depth knowledge on specific subjects.
- **Networking Events:** Social events, cultural programs and networking sessions are organized to facilitate interaction among participants.

### Cooperation Among Members

- **Committees:** The conference is organized by the committees members (from academia and industry), including the Steering Committee, Organizing Committee, and Technical Program Committee. These committees consist of members from academia and industry who collaborate to ensure the smooth running of the event.
- **Review Process:** Submitted papers and abstracts are reviewed by an International Scientific Committee. This committee evaluates the submissions based on scientific content, relevance, and adherence to the conference topics in accordance with the IEEE criteria.
- **Collaborative Projects:** Participants often engage in collaborative projects and research initiatives, fostering a spirit of cooperation and knowledge sharing<sup>1</sup>.

### Communication Channels

- **Email:** Regular updates and important information are communicated to participants via email.
- **Conference Management System:** The SIITME Conference Management System is used for paper submissions, reviews, and registrations (Using Microsoft Conference Management Toolkit).
- **Website:** The official SIITME website provides comprehensive information about the conference, including schedules, submission guidelines, and contact details.
- **Social Media:** Updates and announcements are also shared through social media platforms (LinkedIn, Facebook, IEEE Network) to reach a broader audience.

## Activities:

To achieve the targets and objectives based on the collaboration model identified at the SIITME conference, consider the following steps, aligned with the conference's main objectives:

1. **Development of New Research Directions:** Focus on digitization in the conception, design, and realization of electronic products, particularly in electronics packaging. Encourage interdisciplinary research and collaboration to explore innovative solutions.
2. **Promoting Innovation:** Leverage programs like Horizon 2020, the Chips Joint Undertaking, Pack for Skills, and IPCEI to foster innovation. Engage with these initiatives to access funding, resources, and networks that can drive your projects forward.
3. **Debate Forum for Innovative Clusters/Hubs:** Create platforms for discussion and debate on the activities of innovative clusters and Digital Hubs. This can help in sharing best practices, addressing common challenges, and fostering a collaborative environment.

4. **Addressing Global Education Challenges:** Focus on training human resources to meet the demands of the economic environment, innovation, and the manufacturing of electronic products. Develop educational programs and partnerships that align with industry needs.
5. **Research on Emerging Technologies:** Strengthen partnerships between industry and academia to research emerging technologies. Encourage collaboration both within and outside the academic space to drive technological advancements.

#### Status Update / Best practices identified during the FLAMENCO Project:

##### Overall status:

- Conference has been registered and accepted to IEEE
- Submission of abstracts has been opened since 15th of May (Using the Microsoft Conference Management Toolkit)
- There have been 120 accepted abstracts (20 Oral presentation and 100 Poster presentations)
- Registration for participants and sponsors is open since 1<sup>st</sup> of September 2024.
- Important dates published on the website ([www.sitme.ro](http://www.sitme.ro))

##### Confirmed actions:

- Confirmed sponsors (BOSCH, NXP, ROMTEK, Eberspacher, ICCO EMT, SYSWIN Solutions, IFM, Rohde & Schwarz)
- Two Professional Development Courses
- Establishing the Preliminary Program (2.5 days)
- Workshop “Strategic Partnership for Education” – finalised agenda (2 keynote presenters + 4 panelists)

##### What was achieved so far:

- Dissemination activities: Call for papers sent by e-mail, SIITME Facebook & LinkedIn announcement
- 1 Keynote speakers, Main Sponsor and exhibitor confirmed (Continental Automotive Romania)
- Local organizer and event venue confirmed

#### Challenges and risks:

##### Current issues or blockers:

- Lack of external contributors
- Low number of exhibitors for the moment
- Addressing global education challenges and training human resources to meet industry demands requires significant effort.

#### Results / Assesed Progress

To measure the success of your initiatives based on the SIITME conference objectives, you can use the following Key Performance Indicators (KPIs):

- Number of research papers published on IEEE eXplore: 100 papers average
- Number of PDCs: 2 average

- Number of participants and regional distribution: average 150 participants from 12 countries (10 from Europe)
- Number of Poster Sessions: 5 Poster Sessions and 4 Oral sessions
- Industrial sessions with company presentations: 2 on average
- Exhibitors: 10 companies average
- Sponsors: 12 sponsors in average

The workshop “Strategic Partnership for Education” called for a concerted effort to bridge the gap between education and industry, emphasizing collaboration, innovation, and investment in education and technology to address future challenges. The key takeaways included the need for reskilling the workforce, integrating digital tools and AI, fostering early education in science and technology, and enhancing industry-academia partnerships. By addressing these areas, the workshop aimed to prepare the semiconductor and electronics industries for future advancements and ensure a skilled and capable workforce.

## Action Plan

### 1. Addressing Skill Gaps

- **Reskilling Programs:** Develop and implement reskilling programs targeting advanced packaging design and manufacturing skills. Partner with industry leaders to create relevant training modules.
- **Continuous Learning:** Encourage continuous learning and professional development through online courses, workshops, and certifications.

### 2. Enhancing Technological Education

- **Digital Tools Integration:** Invest in and integrate digital tools and AI into educational curricula to enhance learning and experimentation.
- **Hands-on Learning:** Increase opportunities for hands-on learning through labs, internships, and real-world projects.

### 3. Strengthening Industry-Academia Collaboration

- **Partnership Programs:** Establish and strengthen partnerships between universities and industries to provide students with practical experience and exposure to real-world projects.
- **Innovative Projects:** Organize hackathons, competitions, and collaborative projects to engage students and foster innovation.

### 4. Financial Support and Scholarships

- **Scholarship Programs:** Create scholarship programs to support students financially, allowing them to focus on their studies without the need for full-time jobs.
- **Funding Initiatives:** Seek funding from government, industry, and private sectors to support educational programs and research initiatives.

### 5. Early Education Initiatives

- **STEM Outreach:** Launch outreach programs to introduce science, technology, engineering, and mathematics (STEM) education at an early age.

- **Real-world Applications:** Develop educational content that connects theoretical knowledge with real-world applications to inspire students.

#### 6. Curriculum Adaptation

- **Industry-Relevant Curricula:** Regularly update educational curricula to align with current industry needs and technological advancements.
- **Feedback Mechanisms:** Establish feedback mechanisms with industry partners to ensure curricula remain relevant and effective.

#### 7. Promoting Role Models and Mentorship

- **Mentorship Programs:** Create mentorship programs where industry professionals guide and inspire students.
- **Role Model Campaigns:** Highlight successful professionals in the semiconductor and electronics industries to serve as role models for students.

#### 8. Investment in Research and Development

- **R&D Funding:** Increase investment in research and development to stay competitive in technology and drive innovation.
- **Collaborative Research:** Encourage collaborative research projects between academia and industry to address common challenges.

#### 9. Improving Science Communication

- **Communication Training:** Provide training for educators and researchers in effective science communication to make advanced fields more accessible and attractive to students.
- **Public Engagement:** Organize public lectures, workshops, and events to engage the community and raise awareness about the importance of semiconductor and electronics technologies.

#### 10. Bridging the Technological Gap

- **Teacher Training:** Offer training programs for teachers to enhance their technological skills and ability to use digital tools effectively.
- **Resource Allocation:** Allocate resources to ensure schools and universities have access to the latest technology and equipment.

#### Financial support:

- Participants fees
- Sponsorships and Exhibitors Fees
- National grants (uncertain availability)

#### Replication and Sustainability:

The conference and exhibition can be organised annually in different regions of Europe, ideally where there are stationed electronics companies and academic universities with curricula programs in the field of electronics technologies.

It is important that the Organizing committee members are invested in the event and that a strong promotional campaign is rolled each year to gain sponsors and exhibitors.

APTE reaffirms its unwavering commitment to bridging the gap between the academic and industrial sectors. Preparation and formalization of concrete collaboration between ASA and SIITME conference will increase the sustainability of the event.

#### ASA- Automotive Skills Alliance

ASA members can be involved directly by:

- Promotion of the event in a wider community.
- Participation in one or more of the Workshops/ Panels and Round tables.
- Participation in the Professional Development Course (as trainer or trainee)
- Participating as an author/co-author to a scientific paper for publication to IEEE eXplore
- Participation as an Exhibitor and Sponsor/Partner

#### Further Reading and Acknowledgements:

Website: <https://siitme.ro>

LinkedIn: <https://www.linkedin.com/company/siitme/>

Facebook: <https://www.facebook.com/siitmeconf>