



भारत अमृत महोत्सव

हर राह पर बढ़ते कदम



सूक्ष्म संरचना 21

MEMS INNOVATION CHALLENGE



Semiconductor Technology and Applied Research Centre
सेमीकंडक्टर प्रौद्योगिकी और अनुप्रयुक्त अनुसंधान केंद्र
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सूक्ष्म संरचना 21

MEMS INNOVATION CHALLENGE



About the contest:

Hon'ble Prime Minister Shri Narendra Modi ji has given a clarion call to celebrate the 75th year of Independence of India, as the Azadi ka Amrit Mahotsav. On this auspicious occasion, Semiconductor Technology and Applied Research Centre (STARC), a unit of SITAR Society, is launching the सूक्ष्म संरचना 21 MEMS INNOVATION CHALLENGE.

It is an open challenge to encourage budding student MEMS designers in the country to design MEMS sensors of international standards for Aerospace & Defence applications. Participants may propose their designs for MEMS incorporating the emerging technologies to keep up with advancements in technology which requires businesses to have a vision for the next few years . Participants may also be suggested to look out for " MEMS sensor fusion " by integrating multiple sensors into one package so that MEMS can capture global environment perception .

After evaluation by experts, the best three MEMS designs will be awarded 1st, 2nd and 3rd prize. STARC may adopt suitable designs , guide them to maturity.

About STARC:

Semiconductor Technology and Applied Research Centre (STARC), a Unit of SITAR Society is a dedicated MEMS (microelectromechanical systems) foundry for the production of MEMS sensors for strategic applications. STARC serves its DRDO/ Defence customers from a 23-acre campus with a 16000 sq.ft. clean room area in Bangalore. STARC has a MEMS manufacturing facility for 6" (150 mm) wafers. STARC Foundry offers the flexibility to use substrate materials like silicon, SOI, glass, quartz, and CMOS-wafers. STARC offers services with high quality and reliability, advanced process development, prototyping and low volume manufacturing. STARC is an ISO 9001:2015 certified company.

Innovation Areas:

सूक्ष्म संरचना 21 MEMS INNOVATION CHALLENGE may include the design of any one of the following devices used in Aerospace & Defence applications:

- Gyroscope (Single axis/Three axis)
- Magntometer (Single axis/Three axis)
- G-switch, Impact Switch for Fuzing/Safety and Arming Systems
- Electrothermal Actuator

Participants may propose their designs for MEMS incorporating the emerging technologies to keep up with advancements in technology which requires businesses to have a vision for the next few years. Participants may also be suggested to look out for "MEMS sensor fusion" by integrating multiple sensors into one package so that MEMS can capture global environment perception

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ELIGIBILITY CRITERIA

Only Indian students studying full time (BTech/MSc/MTech/PhD) in any of the Indian universities/ institutes are eligible to submit their entries in various categories as enlisted. Further, participants may be allowed to perform in teams with not more than 4 participants in each team.

There is no restriction on the number entries from a University/ Institution.

INNOVATION CHALLENGE PROCESS

The Innovation Challenge will be available on www.mems-innovation.sitar.in

The last date of submission of entry is 31st October 2021

The applicant may submit their proposals by mail to: mems-innovation@sitarindia.com

Applicants are advised to provide self-contained proposals with essential supporting materials provided as uploads for an informed and fair evaluation/review.

Originality of the proposal/work to be authenticated by the Guide/HOD/Principal/Dean of respective Institution or university. The Applicants have to submit an authentication certificate issued by the Institution/University.

No changes will be accepted once proposals are submitted.

Providing incorrect information will lead to outright rejection of proposals.

There is no restriction on the number of entries from a college/University.

EVALUATION PARAMETERS

- Innovation in design
- Simulation results
- Fabrication Feasibility *
- Overall device size (< 10 mm²)
- Scalability for commercial production

* Applicants are required to design the devices considering design rules and process flow mentioned in '**Design rules and process flow.pdf**' available for download in the Registration section.

SELECTION PROCESS

There will be a two stage Selection Process:

1st Stage - Screening of eligible entries

2nd Stage - Evaluation by Jury based on online presentation by students

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The proposals will be verified based on eligibility criteria, evaluation parameters and forwarded for preliminary screening.

Preliminary screening of eligible proposals will be done by a committee through online presentation. Screened proposals are required to be re-submitted with refinements, if any, within the specified date.

The proposals will be submitted to Jury for final selection.

Students will present their ideas to the jury online for the final selections and at the end of the event, the results of the MEMS Innovation Challenge will be announced.

The Jury may be a mix of leading experts from Government, Industry & Academia and experts from Public/ Private Sectors for assessing the participants.

Jury decision is final and binding.

Shortlisted MEMS designs will be awarded.

Winners of the contest have to provide their KYC documents.

STARC may adopt suitable designs, guide them to maturity

IMPORTANT DATES

Launch of सूक्ष्म संरचना 21 MEMS INNOVATION CHALLENGE	18 th September 2021
Last Date for submission of proposals for preliminary screening	31 st October 2021
Preliminary Screening	1 st - 10 th November 2021
Last date for submission of final Proposals with refinements	30 th November 2021
Evaluation by the Jury	1 st - 10 th Dec 2021
Announcement of Results	11 th December 2021

AWARDS

Following Three Cash Awards will be given

	Prize Amount
First	Rs. 1,00,000
Second	Rs. 75,000
Third	Rs. 50,000

AWARDS will be distributed during 13- 18th Dec 2021

TERMS AND CONDITIONS

1. The contest is open to Indian Citizens only.
2. The paper should be submitted in English language only.

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3. It is strongly advised not to wait till the closure time for submission of entries. STARC shall not be responsible for late/ non receipt of entries on account of server errors/ traffic.
4. STARC may decide to associate with the proposer for further development of the proposed Concept/ Idea. Terms and conditions for such further development, if any, shall be decided by STARC.
5. The decision of Jury/Expert Committee will be final. No communication will be entertained into with any person in relation to any decision of the committee or process.
6. All prizes will be awarded and paid in INR to winners through Cheque or ECS only.
7. Taxes on Prize Money are the sole responsibility of the winners receiving prizes. Prizes may be subject to tax reporting and other purposes. Applicable winners agree to supply Organizers with any necessary information to affect the same and to fully cooperate in fulfilling all applicable legal requirements.
8. By making a submission in the contest, all applicants warrant and represent that to the best of their knowledge, their submission is original and does not violate or misappropriate any third party trade secret, "know-how," copyright, patent or other intellectual property right. Applicants also warrant and represent that there are no obligations of any nature, legal or otherwise, which would prohibit, restrict, or interfere with their participation in the Contest or submission of their proposal, and agree to obtain any necessary clearances, authorizations and/or approvals prior to participation.
9. Applicants, by submitting an application, grant STARC all rights to distribute the paper to the nominated jury/expert committee for the purpose of evaluation.
10. STARC assumes no responsibility for any error, omission, interruption, deletion, defect, delay in operation or transmission, communications line failure, theft or destruction or unauthorized access to, or alteration of entries.
11. Applicants represent, warrant and covenant that the submissions do not:
 - Infringe on any third party intellectual property rights and further do not violate any confidentiality obligations of the Applicant;
 - Contain material that may be considered as defamatory, libellous, hateful, racially or religiously biased or offensive, threatening or harassing to any individual, partnership or corporation;
 - Violate any statutory provisions.
12. No liability: STARC, members of Evaluation Panel, Selection Committees, supporting organizations or any employee or agent of STARC shall not be liable for:
 - Any costs incurred or loss or liability suffered by the applicant in relation to the Challenge;
 - Any loss in expectation of profits by applicant.
 - Any failure by applicant to understand the rights in relation to Intellectual Property, or the rights of Organizers, IR, supporting organizations or any third party in relation to Intellectual Property; or
- Any other benefit the applicant may expect to gain by participating in the Challenge.

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13. Applicant agrees to defend, indemnify, and hold STARC, members of Evaluation Panel, Selection Committee, supporting organizations harmless against any loss, cost, liability, and expense (including reasonable attorneys' fees) arising from any action or claim brought or threatened against STARC or members of Evaluation Panel, Selection Committee, supporting organizations or its customers alleging that any of the applications submitted, short listed and or selected, infringe any patent, copyright, trademark, trade secret, or other intellectual property rights of any third party, and / or if STARC or members of Evaluation Panel, Selection Committee, supporting organizations suffers any injury, loss or damages by breach of the warranties mentioned above.
14. All the information received during this Challenge shall remain confidential and shall not be disclosed to any person or entity by any party thereto and cannot be disclosed outside the Program organizers, supporting organizations of STARC.
15. STARC may change the Terms and Conditions of participation at any time without prior notice. The amended Terms and Conditions will be effective immediately upon being posted on the website. It is applicants's sole responsibility to regularly visit the website to read any changes to the Terms and Conditions of the Challenge.
16. While STARC shall take all possible measures to ensure protection of intellectual property, applicants should not include technical details to a level which might affect their capacity to protect and, at some future point, exploit their Intellectual Property through registered rights.
17. STARC will not incur any costs for applicants participating in the Challenge nor entertain any claims for the same except specified above.
18. The decision of Semiconductor Technology and Applied Research Centre (STARC) will be final and binding with regard to selection on all stages.
19. STARC reserves the right, at its sole discretion, to cancel, terminate, suspend this contest and modify the rules, prizes & funding related to the contest without prior notice. In no event shall Government or any other organizers be liable for any claims, losses, expenses or damages, arising out of or in connection with the foregoing.
20. CORRESPONDENCE: All correspondence with participant will be done through an email provided by the participant at time of submitting the application. Organizers are not liable in case of email delivery failures.

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DISCLAIMER

STARC reserves the right, at its sole discretion, to cancel, terminate, suspend this contest and modify the rules, prizes & funding related to the contest without prior notice. In no event shall STARC/SITAR Society or any other organizers be liable for any claims, losses, expenses or damages, arising out of or in connection with the foregoing.



For details contact:

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