

**2020 Global Research Outreach (“GRO”) Program**

**Proposal Guide & Format**

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**PROPOSAL SUBMISSION:**

1. **Required Documents & Submission**

Please submit the following two documents [**online**](https://www.sait.samsung.co.kr/saithome/ApplyGro.do?method=form) for your GRO proposal package:

1. **Research Proposal**: Please keep your Project Specification to ten (10) pages or less; additional pages may be used for supporting figures, images, data, CV and other documentation. For CVs, please provide one-(1) or two-(2) page overview for Principal Investigator, any co-Principal Investigator, and the proposed Graduate student. Please attach at the end of the Research Proposal.
2. **Scanned Copy of Signed GRO Research Agreement (RA) Acceptance Letter**: To be eligible, applicants shall submit an unmodified GRO RA Acceptance Letter completed and signed by an authorized University official.
3. **Format of Research Proposal**
* File Name Format for Proposal: *number of sub-theme\_Proposal Title\_University Name\_PI Name*

(Example:If you submit proposal in the sub-theme of Security & Privacy: Continuous Authentication, the file name will be: ***10-1\_Proposal Title\_Samsung University\_JaneSmith***)

* Please provide your proposal in English, in ***MS Word format***.
* It is preferred that you submit proposal content with Font Size of 11-point Arial.
	1. **PART 1 : Proposal Identification**
1. Title of Proposal (recommend using larger font size than for contents below)
2. 2020 GRO Project Theme
3. 2020 GRO Project Sub-theme (if applicable)
4. Principal Investigator (“PI”) Information:
	* + - * Full name of PI
				* Affiliation (University, School, College and/or Department)
				* Contact Information (Postal Address, e-Mail, Phone)
5. Co-PI Information (if applicable)
	* + - * Full name of Co-PI
				* Affiliation (University, School, College and/or Department)
				* Contact Information (Postal Address, e-Mail, Phone)
6. Statement of Joint Proposal (if applicable)

(e.g., This proposal is a joint proposal of “A” university and “B” university. Primary/Lead university is “A”.)

* 1. **PART 2 : Project Summary** (Approximately 1 page)
1. Announcement of Multi-year Proposal (if applicable)\*

(e.g., I/We propose three (3) year research, and specific plan for this year is…)

1. Research Abstracts and Goals
2. Keywords (2-3 words) that best capture the principal focus of proposed research

\* If your proposal is multi-year based, please specify in PART 2. PARTs 1, 3, and 4 will be based on a one (1)-year proposal.

**NOTE**: For multi-year proposals, funds will be awarded for one (1) year only. Your project may be considered for up to three (3) consecutive years, subject to available funding and at Samsung’s discretion. In addition, the funding will be available ONLY after you submit Reports, updated Proposal(s) and are selected for the subsequent year(s). Your SAMSUNG Principal Investigator will provide guidance of how you can renew your project during the first year.

* 1. **PART 3 : Description of Project**
1. Project Duration (mm/dd /yyyy ~ mm/dd/yyyy)
2. Research Objectives
3. Significance of Research
4. Research Plan and Technical Approach
5. Milestones (Month1, Month 2…)
6. Expected Outcomes and Results (Please describe tangible outcomes and intangible outcomes separately)
	1. **PART 4 : Budget (in US$)**
7. Total Budget: Describe Direct Expenses (labor, materials, etc.) and any Indirect costs (overhead, etc.)
	1. **Proposal Appendices : Resources & Others**
8. CVs of PI, Co-PI(s), and the proposed graduate student(s)
9. Equipment or Facilities Description
10. Other Relevant Information (e.g. External Funding, Background IP, if applicable)
11. **GRO Research Agreement (RA) Acceptance Letter**

**The GRO Research Agreement is available upon request**.Please have your university representative request it.

The [**GRO RA Acceptance Letter**](http://www.sait.samsung.com/saithome/Page.do?method=main&pagePath=01_about/&pageName=ag_going) is provided as a file on the GRO Website.

The GRO RA Acceptance Letter **must be completed and signed – without modification – by an authorized official of the University**. Applicants are responsible for determining the appropriate University officer. Samsung will not accept the Applicant’s signature as proof of concurrence by the University.

Applicants shall submit scanned GRO RA Acceptance Letter in PDF File Format via the online submission process.

Selected Award winners must additional execute the GRO Research Agreement prior to funding transfer. The completed GRO RA Acceptance Letter is not a substitute for the actual GRO contract.

1. **Frequently Asked Questions & Contact Information**

[**Frequently Asked Questions**](http://www.sait.samsung.com/saithome/Page.do?method=main&pagePath=01_about/&pageName=ag_faq) can be found on the official GRO Website.

For further inquiry and any comments, please contact us:

Americas (North, Central, South) gro.usa@samsung.com

Asia & Oceania (except China & Japan) gro.asia@sasmung.com

China gro.china@samsung.com

Japan gro.japan@samsung.com

Europe gro.europe@samsung.com

Russia & CIS gro.russia@samsung.com

**APPENDIX:**

1. **Overview**

The GRO Program is SAMSUNG’s annual call for proposals, which is conducted by the Samsung Advanced Institute of Technology (SAIT). This program is open to world-leading universities and designed to create opportunities to explore breakthrough & innovative research.

* 1. **2020 GRO Timeline**

Web Submission Open : June 22, 2020

Application Deadline : August 25, 2020 (9am, KST, UTC +9);

Announcement of GRO Awardees (via email) : October 2020

* 1. **Eligibility for Funds**

To be eligible for funds under the GRO Program, an applicant’s university must accept the GRO Research Agreement (RA) as part of the proposal-submission process. Key provisions of the RA specify project conditions including funding for the project, IP rights, and clarify other aspects of research collaboration.

Initial acceptance by the Applicant’s University is accomplished through submission of a GRO RA Acceptance Letter without modification. GRO RA Acceptance Letter also confirms that no confidential or proprietary information will be included in the submitted proposal. Samsung GRO does not wish to receive any confidential or proprietary information.

* 1. **Evaluation Criteria**

Samsung evaluates proposals in the following (but not limited to) criteria:

* + 1. Innovativeness of research
		2. Potential business and/or scientific/social impact
		3. Feasibility of research with respect to planned time, objectives, intended results and resources (subjected to availability)

Samsung will have sole discretion in the GRO Award Selection. No feedback will be provided to the applicant.

* 1. **Confidential and Proprietary Information**

Samsung does not wish to receive confidential or propriety information in the submitted proposals.

Samsung does not require, and does not desire to receive any information that may be deemed confidential by the University and its partners. Samsung will treat all information submitted in proposals as non-confidential and non-propriety.

1. **2020 Research Themes**

The 2020 GRO Program is seeking proposals in 11 research themes.

Detailed call for proposal on each theme is on the [**GRO Website**](https://www.sait.samsung.co.kr/saithome/about/collabo_apply.do)

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| --- |
| **Themes** |
| **1. Ultralow-power Cryogenic Computing** |
|  1-1. Ultralow-power Device for Cryogenic Computing |
|  1-2. Ultralow-power Architecture for Cryogenic Computing |
| **2. Metaphotonics for Next Information & Communication Technologies (ICT)** |
|  2-1. Metaphotonics for next computing and information processing |
| **3. Next generation DRAM/NAND** |
|  3-1. Concept, Device & 3D implementation technology |
| **4. Functional Oxide** |
|  4-1. Oxide Thin Films for Memory and Logic Applications |
| **5. New Quantum Dot** |
|  5-1. Quantum dot of new structure and composition |
|  5-2. Safety analysis of quantum dot |
| **6. New Light Sensitive Materials** |
|  6-1. Acid Generation Materials |
|  6-2. Dendrimer Materials |
| **7. Privacy Preserving Computing** |
|  7-1. Machine Learning Models & Applications using Privacy Preserving Computing |
| **8. Machine Intelligence** |
|  8-1. On-device Artificial Intelligence |
| **9. 6G communication systems** |
|  9-1. Physical layer and hardware component innovation for upper mmWave and THz technology |
| **10. Fundamental technology for semiconductor equipment** |
|  10-1. Plasma RF Generation to overcome extreme semiconductor process challenge |
|  10-2. Next-gen. Computational Imaging technique for semiconductor wafer metrology&inspection |
|  10-3. EUV Source Improvement and Simulation Technology |
|  10-4. Precision Heater and Temperature Measurement Technology |
| **11. Bulk Acoustic Wave** |
|  11-1. Loss Mechanisms and Causes of Failure under High Power Loads in BAW Resonators |
|  11-2. Multiplexer Design, simulation for 5G communication |
|  11-3. Filter level thermal mechanism analysis (Heat Transfer) |