



2019 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](#) 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.

2) 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.

a. PART 1 : Proposal Identification

1. Title of Proposal (recommend using larger font size than for contents below)
2. 2019 GRO Project Theme
3. 2019 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".)

b. 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...)
2. Research Abstracts and Goals
3. 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.

c. 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)

d. PART 4 : Budget (in US\$)

1. Total Budget: Describe Direct Expenses (labor, materials, etc.) and any Indirect costs (overhead, etc.)

e. Proposal Appendices : Resources & Others

1. CVs of PI, Co-PI(s), and the proposed graduate student(s)
2. Equipment or Facilities Description
3. Other Relevant Information (e.g. External Funding, Background IP, if applicable)

3) 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](#) 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 additionally execute the GRO Research Agreement prior to funding transfer. The completed GRO RA Acceptance Letter is not a substitute for the actual GRO contract.

4) Frequently Asked Questions & Contact Information

[Frequently Asked Questions](#) 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@samsung.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.

a. 2019 GRO Timeline

| | | |
|--|---|-----------------------------------|
| Web Submission Open | : | April 22, 2019 |
| Application Deadline | : | June 25, 2019 (9am, KST, UTC +9); |
| Announcement of GRO Awardees (via email) | : | August/September 2019 |

b. 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.

c. 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.

d. 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.

2. 2019 Research Themes

The 2019 GRO Program is seeking proposals in 12 research themes.

Detailed call for proposal on each theme is on the [GRO Website](#)

| Themes |
|---|
| 1. Machine Intelligence |
| 1-1. Deep reinforcement learning for graph optimization |
| 1-2. Rejection: Out-of-distribution detection |
| 2. Homomorphic Encryption |
| 2-1. Cryptanalysis, comparison and search, authentication of computation results |
| 3. Physical and Mental Health |
| 3-1. Healthcare sensors, algorithms, and systems |
| 3-2. Mental health assessment using mobile devices |
| 4. Autonomous Materials Development |
| 4-1. Inverse design methodology for periodic system |
| 5. Metaphotonics |
| 5-1. New frontiers in metaphotonics |
| 6. Functional Oxide |
| 6-1. Oxide thin films for memory and logic applications |
| 7. Next-Gen Computing |
| 7-1. Power grid design and analysis in advanced technology nodes |
| 7-2. Synergy between graphics and compute on mobile GPUs |
| 7-3. Machine learning techniques for power/thermal modeling and control algorithms for high-end CPU |
| 8. Air Pollution Remediation |
| 8-1. Decomposition (based on microbial conversion) of compounds that cause particulate matter |
| 8-2. New filtering technologies (Washable filter, CO ₂ elimination etc.) |
| 8-3. Simulation methodology of particulate matter and air quality |
| 9. Semiconductor Materials |
| 9-1. CMOS channel materials for low thermal budget process |
| 10. <i>Ab Initio</i> Reliability Simulation |
| 10-1. Defect engineering in semiconductor technology |
| 11. Spintronics Materials & Devices |
| 11-1. Spintronics materials & devices |
| 12. Halide Perovskite Materials |
| 12-1. New halide perovskite devices |