I4I IDEAS FOR INNOVATION

Overview

Ideas for Innovation is META's call for proposals. Through a competitive process, META will award the best submissions with grants of up to $150,000 per innovation. It is a 2-phase process. Submissions for phase 1 will be accepted from 00:01 EST on October 1, 2021, to 23:59 EST on January 15, 2022. If accepted, proposals will be invited for a phase 2 submission. The selection committee is comprised of renowned scientists, including META's Scientific Advisory Board.

Key Dates

- Phase 1 submission deadline: January 15, 2022, 23:59 EST
- Phase 1 decisions by: February 15, 2022
- Phase 2 submission deadline: March 15, 2022, 23:59 EST
- Phase 2 decisions by: April 2022

Research Areas

META is seeking project submissions in the following application areas: Mobility & Communications, Imaging & Display, Energy & Environment, Healthcare, Aerospace & Defense, and Way Beyond Tech (future applications to be defined, such as extreme spatial dispersion, topological metamaterials, time-switched metamaterials, and more).

MOBILITY & COMMUNICATIONS
- Optical Computing and Signal Processing
- Next-gen Wireless and Optical Communications
- Advanced LiDAR and RADAR technologies
- Wireless Power Transfer
- Smart Home & IoT devices
- Novel Antenna Concepts

IMAGING & DISPLAY
- Next-gen Imaging and Sensing Concepts
- Flat and Tunable Optics
- OLED/LED Light Extraction
- 3D Imaging and Stereoscopic Displays

ENERGY & ENVIRONMENT
- Solar Power and Light Management
- Thermal Radiation Control
- Energy Storage (Batteries, Supercapacitors)
- Energy Harvesting (Geothermal, Thermoelectric)
- Smart City Applications

HEALTHCARE
- Medical Imaging
- Smart Bio-Sensors
- Wearable Devices
- Neuro-Sensing

AEROSPACE & DEFENSE
- Tunable Optics (e.g., Electro-optics)
- Directed Energy and Countermeasures
- Thermal Imaging and Signature Control
- Safety and Protection

WAY BEYOND TECH (define-an-app)
- New metamaterial concepts
- Extreme EM parameters (e.g., ENZ, hi-μ)
- Extreme spatial dispersion
- Anomalous EM behavior
- Topological metamaterials
- Time-switched metamaterials
- Quantum metamaterials . . . *and more* . . .

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I4I Round 1 Proposal Guide – Phase 1

Required Documents

Please submit by email to i4i@metamaterial.com a single PDF document, no more than 5 pages long.

Format of Phase 1 Research Proposal

- Please submit proposals in PDF format.
- Maximum 5 pages: 3 pages of text, 12-point minimum, and 2 pages of supporting figures.
- The filename should include: *ProjectName_UniversityName_PIName*

The proposal should include the following information.

- Research topic area, including background info, importance, and potential market applications. How will the world be different in 10 years if this technology became widely commercially available?
- Technical approach, including a problem description and challenges with existing solution.
- Qualifications, including description of facilities, key personnel, and relevant previous work.
- Description of team qualifications and experience relative to proposed effort.
- Brief cost breakdown and deliverables.

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I4I Round 1 Proposal Guide – Phase 2

By invitation only

Required Documents

Please submit by email to i4i@metamaterial.com these two documents:

- Research Proposal: The main body of your proposal should be ten (10) pages or less. Please include in addition CVs (up to two pages) for the Principal Investigator, any co-Principal Investigator, and proposed Graduate student(s), if known at the time of submission. You can also include a 1-page Gantt chart to support your proposal.
- Signed Ideas for Innovation Research Project Acceptance Letter: All proposals must be accompanied by an unmodified I4I Acceptance Letter completed and signed by an authorized University official.

Format of Research Proposal

- Please submit proposals in PDF format.
- The filename should include: *ProjectName_UniversityName_PIName*

1. Project Title and Contact Information (1 page – not scored)

- Project Title
- Research Topic Area
- Project Duration (mm/dd /yyyy ~ mm/dd/yyyy)
- Principal Investigator ("PI") Information:
- Full name of PI
- Affiliation (University, School, College and/or Department)
- Contact Information (Postal Address, e-Mail, Phone)
- Co-PI Information (if applicable)
- Full name of Co-PI
- Affiliation (University, School, College and/or Department)
- Contact Information (Postal Address, e-Mail, Phone)
- Joint Proposal (if applicable)
- (please identify the Primary/Lead university)

2. Project Summary (1 page – not scored)

- Research topic area
- Key Objectives
- Target market applications
- Project Timeline (multi-year proposals may be submitted, see note below)
- Keywords (4-5 words)

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3. Description of Project (10 pages)

A. Need – what is the problem or challenge being solved?
- *What is the main motivation for the project?*
- *What is the technological challenge or need?*
- *What is the current state-of-the-art and its limitations?*
- *What is the prior work you have done in the area?*

B. Innovation – what are the research objectives
- *How do you respond to the need?*
- *What is the nature of the innovation?*
- *How does it improve the state of the art?*
- *What are the expected project outputs? (e.g., demonstrator, prototype, report)*

C. Research Plan
- *Timeline – what are the key milestones to monitor progress?*
- *Please attach 1-page Gantt chart*
- *Team – who are the key people or roles involved?*
- *Please attach 2-page CVs of key people involved*
- *Equipment and facilities*
- *Costs – describe direct Expenses (labor, materials, etc.) and any Indirect Costs (overhead, etc.) in US$.*

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General Information

Ideas for Innovation Research Project Acceptance Letter

The Acceptance Letter is provided as a file on the META Website.

The 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. META will not accept the Applicant's signature as proof of concurrence by the University.

Projects which are selected must also execute the full Ideas for Innovation Research Contract prior to funding transfer. The Acceptance Letter is not a substitute for the Research Contract.

Frequently Asked Questions & Contact Information

FAQs will be posted on the META Ideas for Innovation page. For further inquiry and any comments, please contact us by email to:
i4i@metamaterial.com

Funding Scheme

NOTE: Funds will be awarded in one-year increments. Projects may be considered for annual renewals, subject to available funding and at META's discretion. Funding for additional years will be available only upon selection of an updated proposal. Your META Principal Investigator will provide guidance regarding renewal of your project.

Eligibility for Funds

To be eligible for funds, an Applicant's University must accept the Ideas for Innovation Research Contract as part of the proposal-submission process. Key provisions of the contract 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 the Acceptance Letter without modification. The Acceptance Letter also confirms that no confidential or proprietary information will be included in the submitted proposal. META does not wish to receive any confidential or proprietary information.

Evaluation Criteria

META evaluates proposals based upon level of innovation, potential for eventual commercialization and/or scientific/social impact, feasibility of research (time, scope, expected results and resources).

META will have sole discretion in the I4I Award Selection. No feedback will be provided to the applicant.

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Confidential and Proprietary Information

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

Ownership of Developed IP

Any IP developed or created during execution of the Ideas for Innovation Research Project will be owned by META, with a non-exclusive, royalty free license to the applicant's organization for research purposes only.

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