



Request for Proposals - Maritime Security Research

RFP Announcement Date: August 31, 2017

Proposal Submission Deadline: October 13, 2017

Performance Period: January 1, 2018 – December 31, 2018

Introduction

The DHS [Maritime Security Center](#) announces a competitive research opportunity to address challenges in the maritime domain. This effort invites qualified researchers to propose projects that will provide DHS stakeholders with innovative research that addresses critical issues in the areas of *Maritime Risk, Threat Analysis, and Resilience Research, Maritime Domain Awareness (MDA) Research, Maritime Technology Research, and Integration of Science and Engineering with Maritime Security Governance and Policy Research*.

Proposals are due October 13, 2017, 5pm EDT to MSC@stevens.edu. MSC plans to fund at least one award for 12 months, up to \$300,000 per award. The performance period for this funding is January 1, 2018 through December 31, 2018.

The Center seeks innovative research and development (R&D) with a focus on outcomes that support the stakeholders in the homeland security enterprise and maritime domain, as well as DHS component agencies. Successful projects will relate to transformative, evolving, and/or maturing R&D that demonstrate significant improvement in the safety, security and domain awareness of the Maritime Transportation System (MTS).

As a Department of Homeland Security Center of Excellence, MSC is specifically funding research for the purpose of improving the safety, security, and resilience of the maritime domain with the expressed outcome of improving the Nation's homeland security. Proposals must document the problem to be addressed, what knowledge gaps exist, and define why having new knowledge will enable us to better secure the maritime domain. For proposed projects, successful proposals will demonstrate end user involvement through the life of the project.

Proposals will be reviewed by the Center's Scientific Review Committee comprised of representatives from the academic/research community. Projects recommended for funding will be scored, ranked and forwarded to DHS for a mission relevance review and for final approval. Proposals that are interdisciplinary, highly collaborative and have strong potential for transition to the end user are encouraged. The application timeline for this award can be found at the end of this document.

The Maritime Security Center leverages the physical infrastructure and intellectual capital of its academic, industry and government partners to conduct innovative research, develop new tools and technologies, and provide relevant maritime security-focused educational programs to enhance the Nation's maritime domain awareness, the resiliency of the Maritime Transportation System (MTS) and the technical skills and leadership capabilities of the current and prospective maritime security workforce.

RFP CONTENT

Introduction..... 1
Key Information 3
Research Proposal Requirements 5
Part I. Research Proposal Submission Form 5
Part II. Narrative (Sections A-H)..... 6
Part III. Literature Review 7
Part IV. Proposed Budget 7
Part V. Appendices 8
Priority Areas of Research 2018..... 9
Submission Summary 14
Review and Award Timeline 15

KEY INFORMATION

Award Information

Type of Award:	Cooperative Agreement Supplemental
2018 Funding Range:	Up to \$300,000 per award
Funding Period:	January 1, 2018 – December 31, 2018
Project Length:	12 months

Due Dates

Proposal Submission Deadline:	October 13, 2017, 5pm EDT to MSC@stevens.edu
Expected Selection Notification:	Mid-December 2017

Eligibility

Proposals will be accepted from accredited U.S. colleges and universities, for-profit organizations, and organizations that meet the definition of non-profit in OMB Circular A-122, relocated to 2 CFR Part 230. Please note the following eligibility exceptions:

- Non-profit organizations described in Section 501(c)(4) of the Internal Revenue Code that engage in lobbying activities as defined in Section 3 of the Lobbying Disclosure Act of 1995 are not eligible to apply.
- Federally Funded Research and Development Centers (FFRDCs) or laboratories funded by federal agencies are not eligible to apply. FFRDC employees may cooperate or collaborate with eligible applicants within the limits imposed by applicable legislation, regulations, and policies, are not eligible to serve in a principal leadership role, and may not receive salaries or in other ways augment their agency's appropriations through awards made by this program.
- For-profit organizations intending to apply may not include profit margins in their cost.

Proposal Review/Selection Process

Reviewers from the academic/research community and DHS will evaluate the proposals. A two-part review process will be conducted to include a Scientific Merit Review and a Mission Relevance Review.

The Scientific Merit Review will be conducted according to the following criteria:

- Originality and/or Innovativeness (25%)
- Proposed Approach/Methodology (25%)
- Influence and Cooperative Linkages (25%)
- Qualifications of Personnel and Suitability of Facilities (15%)
- Costs (10%)

The Mission Relevance Review will be conducted according to the following criteria:

- Relevance to DHS mission areas (75%)
- Communicating/Transitioning Results (25%)

Reviewers will rate proposals using numerical ratings and apply the percentage-weighting factor as indicated for an overall rating.

Point of Contact

Please contact MSC@stevens.edu for all RFP related questions.

MSC RESEARCH PROPOSAL REQUIREMENTS

Proposals for research efforts funded by the Maritime Security Center (MSC) must include the following components, as outlined below. Proposals that do not adhere to instructions, are incomplete or exceed page limits and will NOT be reviewed.

Part I. Research Proposal Submission Form - including abstract

Part II. Narrative –7 page limit (12-point Times New Roman; single spaced, 1” margins)

Part III. Literature review – 3 page limit, single spaced (supporting and competing methods)

Part IV. Proposed Budget Form – Excel spreadsheet

Part V. Appendices

Please submit Parts I-III as a single Word document. Part IV Budget should be attached separately using an Excel spreadsheet. Appendices may be merged into a single Word or PDF document.

PART I. Research Proposal Submission Form

- *Complete Research Proposal Submission Form. (available on the MSC RFP webpage at www.stevens.edu/MSR-RFP)*
- *Include abstract (250-400 words).*
- *Attach Narrative and Literature Review to Research Proposal Submission Form.*

PART II. Research Proposal Narrative

- *Not to exceed 7 pages*
- *Use 12-point Times New Roman; single spaced, 1” margins.*
- *Proposals exceeding this limit will NOT be reviewed.*
- *Attach Narrative to the end of Research Proposal Submission Form.*

Required sections to include in proposal Narrative:

A. Introduction and Rationale

1. Describe the problem or unmet need in relation to maritime security, safety and domain awareness.
2. Explain the project’s significance in addressing current unmet needs, including:
 - how the project differs from previous efforts or existing research
 - aspects of the project that are novel, unique, and/or innovative
 - development of new capabilities
 - intended impact on potential stakeholders and end-users

B. Primary goals, objectives and deliverables

1. State clearly and concisely the project's overall objectives and specific goals.
2. Identify key research questions applicant is addressing from the RFP.
3. Describe anticipated results that demonstrate successful achievement of the research aims, both in terms of long-term benefits to maritime security, safety and domain awareness, as well as possible immediate steps that can be taken.
4. Describe metrics to measure efficacy or effectiveness of research effort and results.
5. Identify intended project outcomes. Include how outcomes will be disseminated or transmitted to commercial sector, DHS and/or end users.
6. Identify potential dual benefits, if any (e.g., application to maritime domain awareness, emergency response and preparedness, resiliency to a disruption of the MTS).

C. Research design and methods to be used to meet the stated objectives

1. Describe the project's research design and methods to be used to meet the stated objectives.
2. Describe how this proposed effort differs from similar approaches and/or solutions.
3. Identify key challenges to the project's success (e.g., access to proprietary data) and plans for addressing those issues.

D. Partners

1. Describe plans for integrating or partnering with multi-institutional collaborators into the project's management, approach, analysis of results, and/or dissemination of results (if applicable).
2. Identify areas for collaboration with existing projects within MSC and/or other DHS Centers of Excellence, if applicable, or DHS component research.

E. End User Engagement

1. Describe specifically how you will utilize the expertise of a potential end user(s) in the course of the research, e.g. assist in setting requirements, focus groups, accessing data, beta testing, piloting, etc.
2. Describe previous interaction with end user groups that would inform this project, if applicable.

F. Personnel Qualifications

1. Briefly highlight background and accomplishments of Principal Investigator (PI) and other key personnel which relates to this proposed project.
2. Note: PI and Co-PI bio-sketch is also required.

G. Available Resources, Facilities, and Leveraged Funding

If applicable, describe any resources, facilities, or funding that will be leveraged to support this research effort.

H. Transition Potential

Describe any technology transfer applications, if applicable, and strategies for commercialization of new technologies.

PART III. Literature Review

- *Not to exceed 3 pages*
- *Use 12-point Times New Roman; single spaced, 1" margins.*
- *Include supporting and competing citations.*
- *Attach Literature Review to the end of the Research Proposal Submission Form and Narrative.*

PART IV. Proposed Budget

- *Submit budget request using an Excel spreadsheet.*
- *Include costs for 2018 only.*
- *For additional assistance concerning budget or justification, contact MSC@stevens.edu*
- *Submit Budget spreadsheet and justification as a separate attachment. (Do not submit as PDF file.)*

Additional guidance in completing the 2018 Proposed Budget:

A. Personnel

1. Identify project director/principal investigator (PI), investigators, students and staff.
2. Budget justification must include personnel name, title, percent of effort and relevant impact on the project.
3. Do NOT include consultants or contracted services in this section. (See Sect. E below.)

B. Travel

1. Travel is limited to project personnel and students receiving support under this project.
2. Do NOT include sub-contractor or consultant travel in this section. (See Sect. E below.)
3. Include estimated travel costs to attend the MSC Annual Meeting in Washington, DC. Budget should include travel, meals and lodging for the PI for up to two nights. Funding for up to one Co-PI or student may also be included for this meeting.
4. Up to one additional professional meeting related to the homeland security enterprise will be funded for PI, investigator or student. Travel justification should include destination and purpose of trip. You may also use a descriptive placeholder, e.g. "academic meeting," if specific event has not been identified at this time. Generally, attendance at one professional meeting will be approved.
5. Foreign travel may be considered, however MSC and DHS requires pre-approval by the Department of Homeland Security at least 60 days prior to departure.

C. Equipment

1. Budget justification should include a description of the equipment and plan for use on the project.
2. Equipment having a useful life of more than one year and an acquisition cost which exceeds the lesser of (a) the capitalization level established by the organization financial statement purposes, or (b) \$5,000) requires prior DHS approval.
3. Generally, computers and other devices are not allowable equipment.

D. Supplies

1. Please describe the types of supplies in the Budget Justification
2. Office supplies, general duplication costs, etc. are included in indirect costs.

E. Consultants/Professional Services

Include consultant travel and supply costs as part of consultant budget. Provide a description of services, scope of work, and consultant credentials in Budget Justification.

F. Sub-awards

Attach a separate detailed budget form for sub-awards to be issued to another institution. Rational including description of services and scope of work should be included in Budget Justification.

G. Other Direct Costs

Please include a description in Budget Justification.

H. Indirect Costs

If applicable, provide a copy of the latest rate agreement negotiated with a cognizant Federal agency in the appendices section (IDC rate). (Not required for Stevens Institute of Technology proposals. The IDC rate for Stevens projects is 53%.)

Reminder: The total 2018 direct, indirect and totals in the Budget Justification should match amounts entered on the Research Proposal Submission Form “Proposed Total Project Budget” (#5).

PART V. Appendices

- Appendix A. Budget Justification (required)
 - Appendix B. Personnel Bio-Sketch (required)
 - Attach PI and Co-PI bio-sketch using NIH template (4 page maximum bio).
 - See “Biographical Sketch Format page at <http://grants.nih.gov/grants/funding/phs398/biosketchsample.doc>
 - Appendix C. Institution indirect costs (IDC) (If applicable.)
 - Provide a copy of the latest rate agreement negotiated with a cognizant federal agency (IDC rate). Does not apply to Stevens Institute of Technology proposals; use current rate of 53%.
 - Appendix D. Facilities and Equipment (If applicable.)
 - Describe existing facilities and equipment capabilities, if applicable, that will support research activities.
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PRIORITY AREAS OF RESEARCH

Research Priorities

MSC seeks innovative research with a focus on outcomes that supports the Maritime Transportation System (MTS) and DHS components including but not limited to the U.S. Coast Guard and Customs and Border Protection. Funding will be given to projects with high potential for research transition to end users and established partnerships in the maritime domain are also highly desirable.

MSC has identified the following project themes for 2018 funded projects. Proposals must address one or more of the following research theme areas:

Theme Area 1 - Maritime Risk, Threat Analysis, and Resilience Research

The DHS Component Agencies (e.g., U.S. Coast Guard, Customs and Border Protection, Federal Emergency Management Agency, Immigration and Customs Enforcement) must define and assess threats, vulnerabilities and the consequences of terrorism, crime and natural disasters in the maritime domain in order to devise strategies to minimize these consequences. Because federal resources are limited, DHS must identify and select the most efficient and effective approaches to reduce risks to maritime environments, including ports, inland waterways, islands, the Arctic, coasts and coastal infrastructure. To do this, DHS needs to understand how to deter threats and crime, prepare for both human-caused and natural disasters, and develop effective approaches to increase U.S. resilience to maritime challenges.

Addressing uncertainty is a challenge in all facets of maritime risk. However, some elements of this complex risk and threat environment are less uncertain than others. For example, the paths and impacts of hurricanes can be predicted somewhat based on evidence from past storms. By contrast, there are few empirical data on which to base predictions of how, where and when terrorists will attack. DHS needs innovative research on approaches to identify and address human-caused risk that will either generate new data on which to base future predictions, or obviate the need for collecting such data. Similarly, DHS needs research on a wide range of individual and institutional responses to both natural and human-caused catastrophic events. For example, how do people and organizations react to an event that closes a port, and how can DHS assist or build resilience to rapidly recover from a disruption?

DHS's ability to evaluate the effectiveness of alternative strategies to minimize adverse consequences in the maritime domain is limited by a lack of data and sound analytical tools. To address this, DHS needs new cost-effective analytical approaches and technologies to better understand maritime risk, threats and resilience on both specific and general scales.

As a Center of Excellence, the MSC is interested in fundamental and applied research in maritime risk, threat analysis, and resilience including, but not limited to the following topics:

Topic 1a - Maritime Risk and Threat Analysis:

1. What existing and new operations research constructs, including models of adversarial behavior, can be applied to or developed for an operational port and maritime environment to mitigate the risks of terrorism and criminal activity?
2. What empirically and theoretically sound research methods and data can be used to improve the measurement of deterrence and vulnerability reduction in the maritime environment? Are there standard sets of analytical and statistical techniques available to evaluate deterrence of incursions or attacks by non-state adversaries? What would be the precepts of a new area of investigation focused on developing a generalizable "deterrence science" field of study?
3. How can results of deterrence studies in one maritime environment be applied to another?

4. What theoretical and empirical basis exists or can be developed to evaluate the effectiveness of maritime critical infrastructure protection?
5. How can DHS and others improve coordination of public and private security efforts for maximum effect, and improve the “maritime presence” of limited law enforcement resources?
6. How should affected agencies assess and mitigate the risks of catastrophic maritime events in extreme environments? For example:
 - a. How should maritime agencies prepare for a catastrophic event in an extreme region (e.g. the Arctic/Alaska)? What are the essential elements of these preparations? What knowledge should be gathered to improve preparedness? How can U.S. Island and remote territories (e.g. Hawaii) best prepare for catastrophic maritime events?
7. After an event, how can we accurately quantify the “downstream” local, regional and national economic and security impacts within the maritime sector and associated sectors? What baseline information should be collected pre-event to measure the effects of catastrophic events?

Topic 1b - Maritime Resilience:

1. How do we build resilience into the marine transportation system to reduce the impact of catastrophic events?
2. What critical information is needed by decision makers at each response/recovery level (local, regional, national) regarding the status or impacts to the Maritime Transportation System (MTS) and the connected intermodal components in order to facilitate MTS infrastructure recovery and the resumption of trade?
3. What is the quantifiable/qualifiable deterrence value of maritime security-related technologies? For example, which is the deterrence value of maritime law enforcement surveillance?

Theme Area 2: Maritime Domain Awareness (MDA) Research:

MDA is the effective understanding of anything associated with the global maritime domain that could impact the United States' security, safety, economy, or environment. Increased exploration and development of hydrocarbon and wind-based natural resources are projected in the coming decade, including in maritime areas that overlap with large marine ecosystems and communities dependent upon living marine resources. Growth of commercial activity in the maritime domain presents new security challenges, especially energy extraction-related growth. Increased and diversified utilization of maritime spaces will likely generate new security challenges and risks, and the potential for increased conflicts among maritime users, stakeholders, and interests. Therefore, coastal and marine spatial modeling and analysis, although still in developmental stages as a governance and technological tool, possess the potential to predict potential conflicts and security risks, and may contribute to their management. At the same time, coastal and marine spatial modeling and analysis may further commercial and economic development of the maritime domain by providing new tools and governance for managed development and growth.

Integrating information and intelligence across a diverse set of stakeholders can create challenges but will be critical to gaining transparency. Advancements in maritime intelligence integration, information sharing, and domain awareness promise to foster greater unity of effort among stakeholders. Community information access and integration will be critical to preventing terrorist attacks and protecting maritime-related population centers and critical infrastructures. The shared common awareness between stakeholders (i.e., intelligence, law enforcement, and operational communities) is complex and has many policy and legal implications that must be considered.

Topic 2a. Coastal and Marine Critical Infrastructure Development

- How can affected agencies evaluate how development of new offshore critical infrastructure (e.g. deepwater ports, communications cables, and seabed activities) alters risk in the maritime domain?

- What resources (social, biological, mineral, commercial) would be affected by development of the new infrastructure? How?
- What technology or policy approaches would improve the resilience of maritime infrastructure?
- How might future trends to extract resources (e.g., offshore aquaculture, alternative energy, deep seabed mining, bioprospecting, oils and gas extraction) in the U.S. Exclusive Economic Zone (EEZ), outer continental shelf (OCS), and the deep seabed pose new risks to the maritime domain?
- How can we best identify, track, and measure the potential implications, including safety and security implications, and risks of off-shore energy sources such as wind farms?

2b. Coastal and Marine Modeling and Analysis

- Given the varied stakeholders within the coastal zone, what analytics and information systems can be developed to increase awareness, and improve the security and safety of commercial, recreational, and defense/law enforcement activities?
- What new and existing analytics and technologies can be developed or applied to the maritime domain to identify, quantify, display, evaluate, and predict user and stakeholder conflicts? Examples of potential conflicts include: fishing vs. energy development; marine transportation vs. energy development; and marine transportation vs. off-shore aquaculture
- What new applications of land-based technologies, methodologies, and models, (e.g., governance models for complex systems, and quantitative models of complex adaptive systems) can be developed to bolster MDA for operational decision makers and users in order to identify, measure, and predict risk in the maritime domain?

2c – Information and Intelligence Integration within Maritime Operations:

- Command, Control, and Communications: What approaches and systems can best allow for multiple layers of security and diverse forms of surveillance, interdiction, and enforcement to be effectively integrated and communicated? Specifically:
- What are the best ways to provide communications and a common operating picture to maritime prevention and response personnel in remote, sparsely populated regions with difficult terrain? What are the best ways to provide communications and information in congested maritime regions and waterways?
- What are the best ways of ensuring port community stakeholders (both governmental and private sector) receive appropriate access to information in order to ensure coordinated security, response, and recovery operations?
- What new approaches, technologies, and command and control system innovations can increase timely access to relevant information at multiple levels, including first responders, authorized elements in the private sector, and international partners, while maintaining appropriate information security?
- What are the critical issues that obstruct information sharing and how can they be addressed by technology, processes, and policies?
- What new policies are needed for effective information sharing?

Theme Area 3 - Maritime Technology Research:

Gaps in maritime security continue to evolve and maritime technology is one potential solution for addressing those gaps. DHS seeks innovative research and technologies to address maritime knowledge gaps that can be developed or adapted further to help, for example, first responders. DHS is seeking research to develop technologies to detect and prevent possible attacks by underwater divers or by remotely operated underwater vehicles. Employing these technologies must not adversely impact maritime commerce.

DHS is interested in scientific research and development that will contribute to maritime spatial understanding, resilience, and awareness to achieve safety and security in the maritime domain. Technology should contribute to improving command, control, communications, computers, intelligence, surveillance, reconnaissance (C4ISR) capabilities and enhance information collection for maximum use. Technologies should improve effectiveness and efficiency of sensors communication capabilities, and other platforms noted below.

Technology research and development is an underpinning that cuts across many areas of maritime security (listed below). DHS is interested in fundamental and applied research in maritime technology including, but not limited to the following topics:

- *Topic 3a* - MDA: Development of MDA technology and global MDA partnerships will require research into new and more efficient capabilities to improve cooperation and cost effective integration.
- *Topic 3b* - Maritime Robotics: Robotics includes autonomous technologies above, on, and below the water's surface that can be deployed in congested port environments, remote off-shore locations, and in the harshest of ocean environments (e.g., unmanned aircraft systems (UAS), remotely operated vehicles (ROV), autonomous underwater vehicles (AUV), and unmanned surface vehicles (USV).
- *Topic 3c* - Environmental Technologies: DHS needs to understand how security and rescue operations affect the marine environment and how to reduce its operational impact in environmentally sensitive areas. Technologies that may contribute to increasing that understanding include aids to navigation (ATON) or sensor buoys, and environmentally friendly structures to provide sustainable power, sensors, and communications to support MDA technologies.
- *Topic 3d* – Law Enforcement: What new technologies can help with law enforcement and detection of criminal and terrorist activities in the maritime environment?
- *Topic 3e* – Low Cost: What low-cost technologies can help improve navigation, and persistent surveillance of fisheries, security zones and ports?
- *Topic 3f* - Maritime Incidents of National Significance (IONS) Response and Recovery: The employment of emergent technologies, their assessment, and time-critical field testing. DHS seeks the development of emergent technologies; and, the refinement of an emergent technology assessment (ETA) protocols.

Research questions (apply to all topics in Theme Area 3):

1. What new technologies can be developed and applied to effectively improve surveillance, detection, classification, and identification of vessels, suspicious materials, and persons in the maritime domain both on and below the water?
2. What new technologies, including technologies combined with new non-technological inspection methods and tools, can effectively improve a user's ability to screen, detect, and mitigate threats?
3. What new technologies and information management system improvements can maximize MDA by leveraging maritime intelligence capabilities and the diverse expertise of domestic and international intelligence and law enforcement communities?
4. What new robotics technologies (man-in-the-loop, autonomous) can be deployed to enhance operations that are hazardous to humans, or require demand long-term repetitive actions, and/or reduce personnel costs without degrading mission performance?
5. What new low cost unmanned capabilities can be developed to enhance homeland security mission capabilities in providing persistent surveillance of ports, coastal approaches, maritime sanctuaries, protection of sunken military vessels and wrecks, fisheries, and smuggling activities?
6. What new technology can significantly reduce operational costs of critical maritime system safeguards (ATON, screening devices, distress notification, and mariner identity technologies)?

7. What new technologies can be developed to support the response phase of a maritime Incident of National Significance (IONS) – including a catastrophic maritime accident involving hazardous material or mass rescue operation, transportation security incident, and mass migration?
8. What new technologies can be developed to enhance the recovery of the MTS for effective resumption of commerce?
9. What new technologies or new applications of existing technologies can be applied to improve success in operations? Consider the interdiction of illegal maritime border activities: i.) while the perpetrators are water-borne ii). when they land and move inland.
 - How can multiple technologies be used in conjunction to improve interdiction operations?
 - How can combinations of airborne sensors, surface vessel sensors, and persistent sensors be used in combination to maximize effectiveness in interdicting illegal operations? What sensor technologies are optimally placed on each type of asset?
 - Model various scenarios to quantitatively assess the improvements provided by the proposed systems of sensors.
 - Develop new algorithms and signal processing techniques based on systems of multiple and diverse sensors to maximize probability of detection and target classification.

Theme Area 4 –Integration of Science and Engineering with Maritime Security Governance and Policy Research:

Technological developments can enhance the effectiveness of maritime security, commerce, environmental management and disaster preparedness. However, technology must be understood in the context of maritime policy, laws, and international relationships. Understanding the long-term geopolitical drivers and improving cooperation among stakeholders that share common interests will be crucial to reducing risks. DHS needs physical, biological, and social science research to improve understanding of how technological change will affect policy and governance, as well as research to determine what policy and governance regimes will foster the growth of beneficial technologies in the maritime domain, e.g., improved communication among state and non-state actors.

DHS is interested in the following topics:

- *Topic 4a* - Technological change expected in the global maritime domain and the U.S. EEZ, and its effect on emerging national interests, technology, industry, and resource and infrastructure development.
 - *Topic 4b* - Technologies and related governance that can enhance cooperation among nations and international organizations regarding the security of the maritime domain.
 - *Topic 4c* - Institutional changes needed to improve and expand the use of modern and automated systems, processes, and information to improve security, for example, vessel registration, ownership and operation, and crew and cargo identification.
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PROPOSAL SUBMISSION SUMMARY

*Please submit proposal package as **three** separate attachments outlined below. Proposal packages are due October 13, 2017, 5:00pm EDT to MSC@stevens.edu.*

Attachment 1

(Word document)

Part I. MSC Research Proposal Submission Form

- Available on the MSC website (www.stevens.edu/MSR-RFP)
- Includes 250-400 word abstract

Part II. Project Narrative

- 7 page limit using 12-point Times New Roman; single spaced, 1" margins.
- Attach to MSC Research Proposal Submission Form (Part I above).

Part III. Literature Review

- 3 page limit using 12-point Times New Roman; single spaced, 1" margins.
- Attach to end of Narrative (Part II above).

Attachment 2

(Excel spreadsheet)

Part IV. Budget Spreadsheet

- Completed Budget spreadsheet.
- Total 2018 budget requested (12 months). Should also be entered on the Research Proposal Submission Form. "Proposed Project Budget" (#5).

Attachment 3

(Word or PDF document)

Part V. Appendices

Do NOT attach appendices to the Narrative.

Appendices may be submitted as a single document or as separate documents.

- Appendix A: Budget Justification
- Appendix B: PI and Co-PI bio-sketches – Use NIH format, 4-page maximum/bio
- Appendix C: Latest rate agreement negotiated with a cognizant Federal agency (IDC rate). Does not apply to Stevens Institute of Technology proposals; use current rate of 53%.
- Appendix D: Facilities and equipment capacity – if research is dependent on special facilities and/or equipment.



RESEARCH PROPOSAL AND EXPECTED REVIEW/AWARD TIMELINE

August 31, 2017	Request for proposals announced.
October 13, 2017	Proposals are due to MSC@stevens.edu
Mid-October – mid-November 2017	MSC's Scientific Review Committee reviews and recommends projects for funding.
Mid-November, 2017	Final proposals recommended for funding are submitted to DHS Office of University Programs (OUP) by MSC.
Mid-November – mid-December, 2017	DHS OUP reviews proposals and completes final approval of projects.
Mid-December 2017	DHS OUP makes project award(s) notification.
January 1, 2018	Project workplan approved. 2018 performance period begins. (12 months)
December 31, 2018	2018 performance period ends.