

ERDC Basic Research

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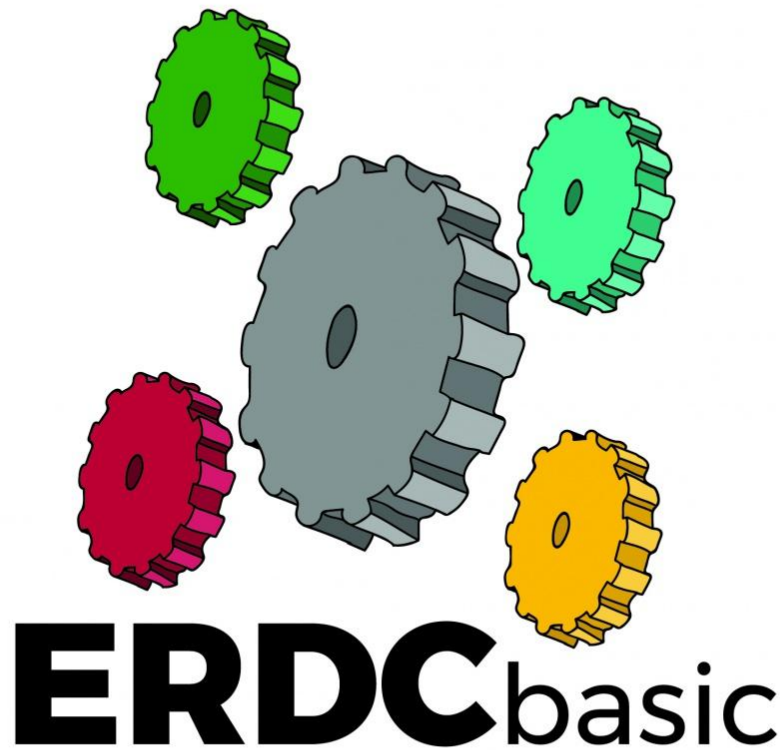
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Background

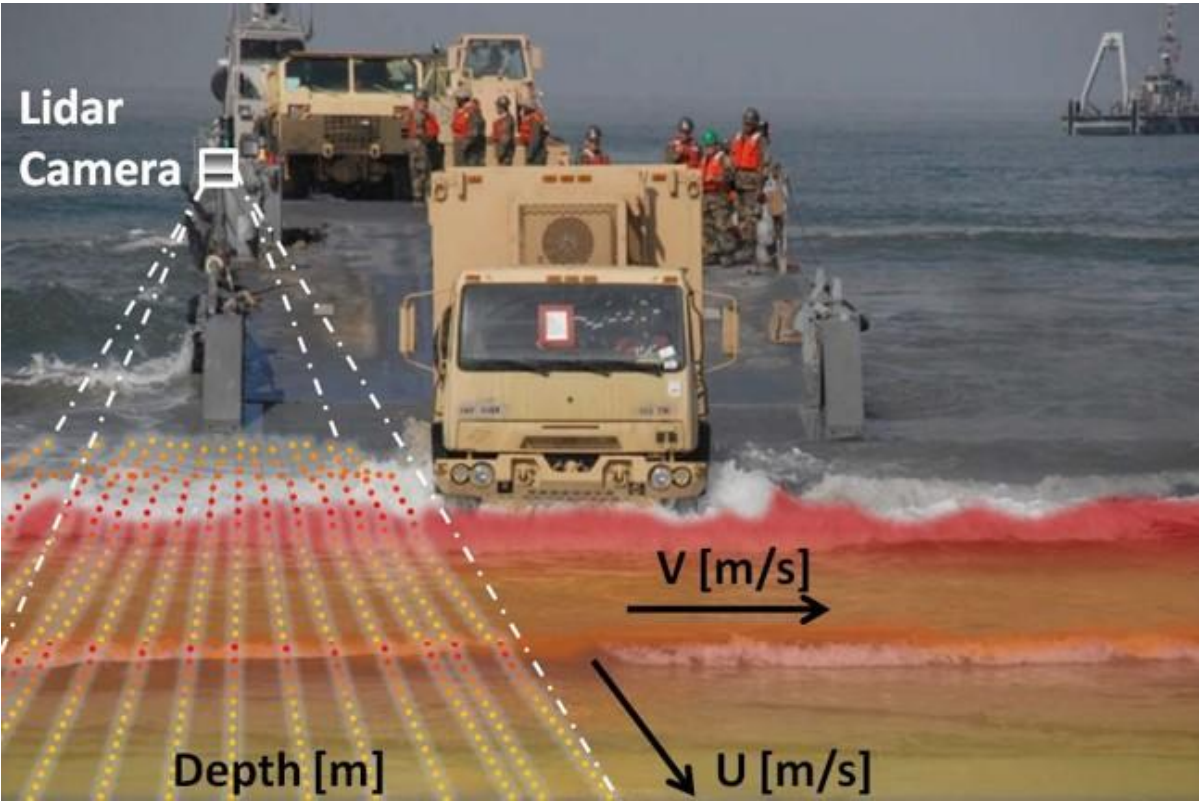
Basic Research (6.1) is the systematic study directed toward greater knowledge or understanding of the fundamental aspects of phenomena and/or observable facts without specific applications toward processes or products in mind (DOD Financial Management Regulation (Volume 2B, Chapter 5)).

ERDC basic research is driven to solve and understand fundamental problems and phenomena underlying Army technical priorities or that may result in leap ahead technologies/capabilities with a timeline of 15 to 30 years before maturation into technology in the hand of the soldier or user. As a result of the need to accelerate research and development to overmatch capabilities of peer or near-peer adversaries, the Army has adopted



6 priority technology areas to which it is focusing its applied research funding: Long range precision fires, Next generation combat vehicle, Future vertical lift, Network/3CI, Air and missile defense, and Soldier lethality (U.S. Army Posture Statement, 2018) with additional areas of interest: Cold regions due to warming environments, Artificial intelligence and Synthetic biology. In response to the Army's modernization priorities, ERDC has identified seven core competencies: (1) Blast and weapons effects on structures and geo-materials, (2) 3D mapping and characterization, (3) Civil and military engineering, (4) cold regions science and engineering, (5) Computational Prototyping of Military Platforms, (6) Coastal, River, and Environmental Engineering, and (7) Military Installations and Infrastructure. These are generally broad capabilities and details on these capabilities can be found on the **ERDC Programs Office** (<https://intranet.usace.army.mil/erdc/programs/pages/home.aspx>) page. ERDC applied 6.2 and 6.3 programs have been directly aligned to support Multi-Domain Operations, Army modernization priorities and ERDC core capabilities. By expanding our basic understanding of these core competency areas and the fundamental knowledge gaps described throughout this document, the ERDC can support future Applied Research and Advanced Technology Development in a time period of approximately 10-15 years, by which the sustainability, readiness, decision-making, and prediction capabilities of the Army can be significantly improved and support the Multi-Domain Operations Concept.

==FY23 Basic Research Calendar of Events Important Dates Below==



| Suspense Date | Action to be Completed |
|--------------------------|--|
| 21 Oct, 2021 by NOON CST | Suspense for submitting pre-proposals. |
| 10 Dec, 2021 | Suspense for pre-proposal acceptance/rejection notification. |
| 3 Feb, 2022 by NOON CST | Suspense for submitting full proposals. |
| 11 Feb, 2022 | External reviewers for each proposal provided by contractor for RDA concurrence. |
| 23 Feb, 2022 | Suspense for RDA approval of recommended external reviewers. |
| 1 Apr, 2022 | External and pro-bono reviews completed. |
| 8 Apr, 2022 | Suspense for HGL final deliverables. |
| 6 May, 2022 | Suspense for BREP 1-n rankings. |
| 20 May, 2022 | Suspense for final RDA approved PFM read ahead documentation. |
| 7-9 Jun, 2022 | ERDC 6.1 Portfolio Management Review. |
| 24 Jun, 2022 | Suspense for final RDA approved Program Review read ahead documentation and FY 24 SRA revisions. |
| 11-16 Jul, 2022 | ERDC PMB Program Review. |
| 14 October, 2022 | Suspense for FY21 completing 6.1 effort closeout. |

FY23 Marketing Charts Template]]==News==

- The call for FY23 Basic Research Proposals is currently open

- The FY23 Roadshow is pre-recorded and available virtually below.

- Please contact Ms. Brenna Murray for Individual PI Session scheduling Brenna.C.Murray@usace.army.mil

Office of the Technical Directors POCs (*note- this list is a living document and not exhaustive of all the OTD contacts)

Media:OTD_POCs_for_Basic_Research.xlsx

Previous Highlights

There are 18 new start efforts for FY22. Top ranked funded proposals from FY 22 will be included below for reference. Please contact your local Office of the Technical Director for more information regarding additional funded efforts.

Top Ranked Full Proposals FY 22 Coming Soon/ FY 21 Shown Below

Task 1

Task 2

Task 3

Task 4

FY 21 Pre-Proposals for Top Ranked Full Proposals/FY 22 Coming Soon

Pre-Proposal Task 1

Pre-Proposal Task 2

Pre-Proposal Task 3

Pre-Proposal Task 4

Weird of the Year Award: Highest Innovation/Technical Risk

FY 21

FY 20

FY 19

ERDC 6.1 Marketing Videos

Basic Research for Biological Optimized Structures

Click **here** (<https://youtube/p4fWYIbLOIg>) for the video.

Basic Research for Ice Adhesion

Click **here** (<https://vimeo.com/449407303>) for the video

Basic Research for Network Science

Click [<https://www.dvidshub.net/video/733416/erdc-basic-research-network-science> **here**] for the video

Interested in creating a video? Visit the ITL media team request site:
<https://livestream.erdcdren.mil/index.php/2019/08/27/mrf/>

6.1 Roadshow

The 6.1 Roadshow, presented by Dr. Mihan McKenna Taylor (ST), and Ms. Jessica Coleman (<mailto:Mihan.H.McKenna@usace.army.mil>) is primarily aimed at interested potential and existing 6.1 researchers and their chain of command. The focus on this year's brief will be the unified ERDC 6.1 Portfolio, with explanations on the continuance of legacy programs, Strategic Research Area call specifics, and linkages to the 6.2-6.3 portfolios under the Cross-Function Team (CFT) rubric and Multi-Domain Operation Concept. In addition, the brief will provide the traditional wrap-up of the FY22 call and logistics specifics for the FY23 call. Furthermore, the roadshow will provide insight in to the CFTs and the Program Objective Memorandum (POM) cycle. Personnel not interested in Basic Research specifically, can still use this as a forum to gain clarification for what these changes mean for the ERDC.

FY 23 Presentation Resources

Bunny Talk

FY21 Proposal Development Workshop

Financial Literacy Workshop

FY23 Roadshow

FY 23 SRA 1&2 Writing Workshop

FY 23 SRA 3-6 Writing Workshop

FY 23 SRA 7-9 Writing Workshop

FY 23 SRA 10-12 Writing Workshop

Contact Jessica Coleman for Workshop videos: jessica.g.coleman@usace.army.mil

FY23 Cycle Frequently Asked Questions and Answers

FY 23 Basic Research Roadshow Microsoft Teams Recording-Click Below!

Click [1] (https://armyeitaas-my.sharepoint-mil.us/:v:/g/personal/jessica_coleman13_civ_army_mil/EWAqXGTedspOpKoBB4WTl_AB0b-smwfj3sXJA8ylfc5DFQ) for the video.

FY 23 Proposal Material Below: Refer to ERDC-Wide Call for FY 23 Proposals through PAO on 8/24/2021

All information for preparing and submitting a 6.1 pre- and full proposal will be posted here for the FY 23 cycle; FY 22 is currently shown below. Instructions for submitting to the online portal is detailed in the FY23 Basic Research Guidance document. The link to submit your proposals can be accessed by clicking **here** (<https://strse.erdcdren.mil/>).

FY23 Basic Research Guidance

FY23 Strategic Research Areas

FY23 Pre-Proposal Template Instructions

FY23 Pre-Proposal Template

FY23 Full Proposal Template Instructions

FY23 Full Proposal Template

FY23 Checklist for Formatting

FY23 Quarterly Report Template

FY23 Marketing Charts Template

Army Level Resources and Information

AFC PAM 525-2 The Future Operational Environment

Army G2 Tech Focus Areas Booklet

Army G2 Tech Focus Areas Pamphlet

Research is Reconnaissance Article by Dr. Bull Holland

Research is Reconnaissance Presentation by Dr. Bull Holland [

(https://web.microsoftstream.com/video/ba599319-c1e0-4cd5-9aea-4a6d7a3083a7?channelId=069dfa81-3e92-48dc-ace8-b2918e2ca6c5))]

'Research is Reconnaissance Q&A [(<https://web.microsoftstream.com/video/25dcf804-82a9-4417-b1c6-7f0ec3610ae2?channelId=069dfa81-3e92-48dc-ace8-b2918e2ca6c5>)]

Opportunities in Synthetic Biology by Dr. Edward Perkins

Points of Contact

[mailto: Jessica.g.coleman@usace.army.mil Jessica Coleman] - ERDC Programs Officer for Basic Research

[mailto: Patrick.M.Kieffer@usace.army.mil Patrick Kieffer] - Chief, ERDC Programs Office

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Category: Engineer Research and Development Center (ERDC)

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