



Computational Foundations for Information Fusion

INTRODUCTION:

This publication constitutes a Broad Agency Announcement (BAA) as contemplated in Federal Acquisition Regulation (FAR) 6.102(d)(2), and the Department of Defense Grants and Agreements Regulations (DoDGARS) 22.315(a). A formal Request for Proposals (RFP), other solicitation, or additional information regarding this announcement will not be issued.

The Office of Naval Research (ONR) will not issue paper copies of this announcement. The ONR reserves the right to fund all, some or none of the proposals received under this BAA. ONR provides no funding for direct reimbursement of proposal development costs. Technical and cost proposals (or any other material) submitted in response to this BAA will not be returned. It is the policy of ONR to treat all proposals as sensitive competitive information and to disclose their contents only for the purposes of evaluation.

I. GENERAL INFORMATION

1. Agency Name -

Office of Naval Research
875 North Randolph Street – Suite 1425
Code 0311
Arlington, VA 22203-1995

2. Research Opportunity Title – Computational Foundations for Information Fusion

3. Program Name – Information Fusion and Decision Science

4. Research Opportunity Number -09-003

5. Response Date – 16 December 2008 no later than 4PM (1600 hours) Eastern Standard Time

6. Research Opportunity Description -

The Office of Naval Research (ONR) is interested in receiving proposals for scientific research that will forge major advancements in the state of scientific knowledge of computational foundations for representing data and information from diverse, disparate sources and across application areas. Our long-term, ultimate goal is to develop computing capabilities that automate the decision-making process in the network information environment to support naval operations. Such decision-making process encompasses sensing; data mining and analysis; information extraction and understanding; object, activity, and intent recognition; and course of action determination. Quintessential to automating the decision process is how to mathematically and computationally represent data, information, and knowledge and to use it algorithmically to analyze, understand, and reason under uncertainty.

It is envisioned naval maritime operations will be conducted at the convergence of the physical world and cyber space. This dramatically alters the scope of naval decision-making by opening a new global dimension for maritime domain awareness in which to realize coordinated persistent, pervasive surveillance. The emerging cyber-physical environment is shaped by major trends, including: increasing sensing of everything and multitudes of sensor feeds; ubiquitous knowledge of physical locations; ubiquitous association of entities (humans, events, nodes, sources and origin, time and locations, etc.) with information about those entities; autonomous operations enabled by networks of variably sensor-rich, information-rich, and computationally intelligent devices; emergence of social networks and integration of humans with cyber devices; and fluidity of collaborations and free-form interactions among dynamic layers and players of all kind at all levels in all locations. The capability to automate data mining, data fusion and decision-making in this emerging cyber-physical environment will offer an important competitive advantage for naval maritime operations.

Fundamental advances in theoretical and statistical frameworks for data mining and data fusion have been made during the past few decades. Knowledge representation and reasoning have reached a level of sophistication that they can be applied to simple, controlled information integration and learning situations. However, many questions remain open. Moreover, many new questions have risen, motivated by the opportunities and challenges in the cyber-physical space. For example, how can data that are both quantitative and qualitative at different levels of granularity, described over a network graph, be effectively represented, fused, and reasoned about? Can classical methods of artificial intelligence be generalized for cyber-physical space to handle the growing massive volume of data and increasing diversity of data types with different temporal characteristics, different physical attributes, different trustworthiness, and uncertainty? How can cognitive and social networks be integrated into a traditional command and control framework? Is a new framework required for cyber-physical space? How can the different uncertainties and information provenance be characterized, aggregated, and reasoned about? Is there a computational theory for decision-making process in which data acquisition, information extraction and integration are performed dynamically and

adaptively in order to arrive at a course of action that is consistent with mission objectives?

Decision-making is an optimization process that takes advantage of the available data and knowledge while mitigating its uncertainties. All sources of data and information and knowledge have their uncertainties regardless of source. All data is subject to timeliness, relevance, incompleteness, distortion, compromise, manipulation, and error. Scalability, extensibility, timeliness, relevance, usability, and higher cognitive-like abilities for reasoning still cut across all aspects of the decision-making process. Decision-making in the tactical naval environment is further complicated by the many separate but networked systems involved with decision-making at all levels of command. Knowing what can be and knowing what is are as important as knowing what can not be known despite the best optimization. It is a formidable mathematical and computational challenge. Research issues of particular interest to this program that all contribute to effective decision-making include:

Topics of highest interest:

- a) Capturing and representing qualitative variables such as topology, orientation, shape, proximity, similarity, and their measurement
- b) Computing and reasoning with qualitative information and its associated uncertainties, and fusing quantitative and qualitative information
- c) Understanding the information content derived from observations of networks and sub-networks of sensors of varied configuration and modality
- d) Building new models for ubiquitous association of entities and information

Other topics of interest:

- e) Developing a generalizable framework for coupling low-level learning and inference with high-level knowledge
- f) General, composable, and cross-domain approaches for modeling time, space, causation, activity, intent, trustworthiness, and action.
- g) Controlling, coordinating and adapting distributed networks of sensors to meet changing mission objectives as required
- h) Developing a decision framework that is capable of dynamically assessing information gaps with regard to mission objectives and adaptively obtaining necessary information to fill the gaps.
- i) Exploring stability of decision processes that are mutually dependent and networked; ensuring effective control to handle discontinuities and singularities without adversely impacting decision quality.

Work funded under this BAA may include basic research. With regard to any restrictions on the conduct or outcome of work funded under this BAA; ONR will follow the guidance on and definition of "contracted fundamental research" as provided in the Under Secretary of Defense (Acquisition, Technology and Logistics) (USD AT&L) Memorandum of 26 June 2008. As defined therein "contracted fundamental research", in

a DoD contractual context, includes [research performed under] grants and contracts that are funded by Budget Activity 1 (Basic Research), whether performed by universities or industry. In conformance with the USD(AT&L) guidance and National Security Decision Directive 189, ONR will place no restriction on the conduct or reporting of unclassified fundamental research, except as otherwise required by statute, regulation or Executive Order. Normally, fundamental research is awarded under grants with universities and under contracts with industry. Potential offerors should consult with the appropriate ONR Points of Contact (POCs) to determine whether the proposed effort would constitute basic research.

7. Point(s) of Contact –

Questions of a technical nature should be submitted to:

Primary

Dr. Behzad Kamgar-Parsi
Program Officer
Mathematics, Computers and Information Research Division
Code 311
Office of Naval Research
875 North Randolph Street – Suite 1102B
Arlington, VA 22203-1995
Telephone Number: (703) 696-5754
E-mail address: behzad.kamgarpari@navy.mil:

Alternate

Dr. Tristan Nguyen
Program Officer
Mathematics, Computers and Information Research Division
Code 311
Office of Naval Research
875 North Randolph Street – Suite 1175
Arlington, VA 22203-1995
Telephone Number: (703) 588-2360
E-mail address: Tristan.nguyen@navy.mil

Secondary

Ms Kim McCormick
Office of Naval Research
Code 311, Program Analyst
875 North Randolph Street – Suite 1105C
Arlington, VA 22203-1995
Telephone Number: (703) 696-8528
E-mail address: kim.mccormick@navy.mil

Questions of a *business nature* should be submitted to:

Primary:

Amarilis Cartagena
Contract Specialist
Code BD 0251
Office of Naval Research
875 North Randolph Street, Suite 1425
Arlington, VA 22203-1995
Telephone Number: (703) 696-0690
E-Mail: amarlis.cartagena@navy.mil

Secondary:

Ms. Vera M. Carroll
Acquisition Branch Head
Contract and Grants Awards Management, Code 0251
Office of Naval Research
875 North Randolph Street, Suite 1425
Arlington VA, 22203-1995
E-mail: vera.carroll@navy.mil

8. Instrument Type(s) -

ONR expects to award both grants and contracts.

9. Catalog of Federal Domestic Assistance (CFDA) Numbers -

CFDA Number: 12.431

10. Catalog of Federal Domestic Assistance (CFDA) Titles -

Basic Scientific Research

11. Other Information -

This announcement is restricted to basic research. Contract and grant awards made under this BAA are for scientific study and experimentation directed toward advancing the state of the art and increasing knowledge or understanding.

II. AWARD INFORMATION

ONR plans to issue multiple awards that represent the best value to the Government in accordance with the evaluation criteria. ONR is seeking participants for this program that are capable of supporting the goals described in this announcement. Offerors have the opportunity to be creative in the selection of the technical and management processes and approaches to address the areas of interest described above.

The anticipated period of performance of the awards will range from 12 months to five years. The estimated start date is 16 April 2009, subject to date of final award and the availability of funds.

ONR anticipates a budget of approximately \$12,500,000 for the Discovery and Invention (D&I) Program over a five year period subject to budget availability. ONR plans to fund \$100,000 to \$1,000,000 lump-sum per year per award. However, lower and higher cost proposals will be considered.

III. ELIGIBILITY INFORMATION

All responsible sources from academia and industry may submit proposals under this BAA. Historically Black Colleges and Universities (HBCUs) and Minority Institutions (MIs) are encouraged to submit proposals and join others in submitting proposals. However, no portion of this BAA will be set aside for HBCU and MI participation.

Federally Funded Research & Development Centers (FFRDCs), including Department of Energy National Laboratories, are not eligible to receive awards under this BAA. However, teaming arrangements between FFRDCs and eligible principal bidders are allowed so long as they are permitted under the sponsoring agreement between the Government and the specific FFRDC.

Navy laboratories and warfare centers as well as other Department of Defense and civilian agency laboratories are also not eligible to receive awards under this BAA and should not directly submit full proposals in response to this BAA. If any such organization is interested in one or more of the programs described herein, the organization should contact an appropriate ONR point of contact (POC) to discuss its area of interest. The various scientific divisions of ONR are identified at <http://www.onr.navy.mil/>. As with FFRDCs, these types of federal organizations may team with other responsible sources from academia and industry that are submitting proposals under this BAA.

Teams are also encouraged and may submit proposals in any and all areas. However, Offerors must be willing to cooperate and exchange software, data and other information in an integrated program with other contractors, as well as with system integrators, selected by ONR.

Some topics cover export controlled technologies. Research in these areas is limited to "U.S. persons" as defined in the International Traffic in Arms Regulations (ITAR) - 22 CFR § 1201.1 et seq.

IV. APPLICATION AND SUBMISSION INFORMATION

1. Application and Submission Process -

The Application and Submission Process consists of full proposals only. Full proposals must be submitted electronically via grants.gov if a grant award is sought. Full proposals must be submitted hard copy via United States Postal Service (USPS) or a commercial carrier if a contract award is sought.

Full Proposals submitted under the BAA are expected to be unclassified; however, confidential/classified proposals are permitted. If a classified proposal is submitted, the resultant contract will be unclassified.

Unclassified contract proposals shall be submitted directly to the Technical Point of Contract (TPOC) identified earlier in paragraph number I.7 entitled, "Point(s) of Contact". Each proposal shall include a severable, self-standing Statement of Work, which contains only unclassified information and does not include any proprietary restrictions.

Classified full proposals shall be submitted directly to the attention of ONR's Document Control Unit at the following address:

Office of Naval Research
Document Control Unit
ONR Code 43
875 North Randolph Street
Arlington, VA 22203-1995

The inner wrapper of the classified proposal should be addressed to the attention of the TPOC. An unclassified Statement of Work (SOW) must accompany any classified proposal.

Proposal submissions will be protected from unauthorized disclosure in accordance with FAR Subpart 15.207, applicable law, and DoD/DoN regulations. Offerors are expected to appropriately mark each page of their submission that contains proprietary information.

IMPORTANT NOTE: Titles given to the Full Proposals should be descriptive of the work they cover and not be merely a copy of the title of this solicitation.

The proposal format and content identified below are applicable to the submission of proposals for contracts. Proposals seeking grant awards are to be formatted as required by Standard Form 424 (R&R) available at <http://www.grants.gov>.

a. FULL PROPOSALS

Full Proposal Format – Volume 1 - Technical and Volume 2 - Cost Proposal

- Paper Size – 8.5 x 11 inch paper
- Margins – 1 inch
- Spacing – single or double-spaced
- Font – Times New Roman, 12 point
- Number of pages – Volume 1 is limited to no more than 30 pages. Volume 2 has no page limit. The cover page, table of contents, and resumes are excluded from the page limitations.
- Copies – one (1) original, two (2) additional hard copies and one electronic copy submitted by e-mail as a pdf attachment.

Full Proposal Content

Volume 1: Technical Proposal

- **Cover Page:** This should include the words “Technical Proposal” and the following:
 - 1) BAA number (BAA 09-003);
 - 2) Title of Proposal;
 - 3) Identity of prime Offeror and complete list of subcontractors, if applicable;
 - 4) Technical contact (name, address, phone/fax, electronic mail address)
 - 5) Administrative/business contact (name, address, phone/fax, electronic mail address) and;
 - 6) Duration of effort. (differentiate basic effort and any proposed options).
- **Table of Contents:** An alphabetical/numerical listing of the sections within the proposal, including corresponding page numbers.
- **Statement of Work:** A Statement of Work (SOW) clearly detailing the scope and objectives of the effort and the technical approach. It is anticipated that the proposed SOW will be incorporated as an attachment to the resultant award instrument. To this end, the proposals must include a severable, self-standing SOW without any proprietary restrictions, which can be attached to the contract or agreement award. Include a detailed listing of the technical tasks/subtasks organized by year.

- **Future Naval Relevance:** A description of potential Naval relevance and contributions of the effort to the agency's specific mission.
- **Technical Approach and Justification:** The major portion of the proposal should consist of a clear description of the technical approach being proposed. This discussion should provide the technical foundation, the justification for pursuing this particular approach and the direction and why one could expect the objectives of the proposal to be met.
- **Project Schedule and Milestones:** A summary of the schedule of events and milestones.
- **Assertion of Data Rights and/or Rights in Computer Software:** For a contract award an Offeror may provide with its proposal assertions to restrict use, release or disclosure of data and/or computer software that will be provided in the course of contract performance. The rules governing these assertions are prescribed in Defense Federal Acquisition Regulation Supplement (DFARS) clauses 252.227-7013, -7014 and -7017. These clauses may be accessed at the following web address:

<http://farsite.hill.af.mil/VFDFARA.HTM>

The Government may challenge assertions that are provided in improper format or that do not properly acknowledge earlier federal funding of related research by the Offeror.

- **Deliverables:** A detailed description of the results and products to be delivered inclusive of the timeframe in which they will be delivered.
- **Management Approach:** A discussion of the overall approach to the management of this effort, including brief discussions of the total organization; use of personnel; project/function/subcontractor/subrecipient relationships; government research interfaces; and planning, scheduling and control practice. Identify which personnel and subcontractors/subrecipients (if any) will be involved. Include a description of the facilities that are required for the proposed effort with a description of any Government Furnished Equipment/Hardware/Software/Information required, by version and/or configuration.
- **Other Agencies:** Include the name(s) of any other agencies to which the proposal has also been submitted.

VOLUME 2: Cost Proposal

INSTRUCTIONS FOR CONTRACTS

Although not required and provided for informational purposes only, adhering to the instructions delineated below may expedite contract award placement. Detailed instructions, entitled "Instructions for Preparing Cost Proposals for Contracts and Agreements", including a sample template for preparing costs proposals for contracts

may be found at ONR's website listed under the 'Acquisition Department – Contracts & Grants Submitting a Proposal' link at: http://www.onr.navy.mil/02/how_to.asp

The Cost Proposal shall consist of a cover page and two parts, Part 1 will provide a detailed cost breakdown of all costs by cost category by calendar or Government fiscal year, and Part 2 will provide a cost breakdown by task/sub-task corresponding to the task numbers in the proposed Statement of Work. Options must be separately priced.

Cover Page: The words "Cost Proposal" should appear on the cover page in addition to the following information:

- * BAA number (BAA 09-003)
- * Title of Proposal
- * Identity of prime Offeror and complete list of subcontractors, if applicable
- * Technical contact (name, address, phone/fax, electronic mail address)
- * Administrative/business contact (name, address, phone/fax, electronic mail address) and duration of effort (separately identify basic effort and any proposed options)

Part 1: Detailed breakdown of all costs by cost category by calendar or Government fiscal year:

Direct Labor – Individual labor categories or persons, with associated labor hours and unburdened direct labor rates. Provide escalation rates for out years;

Indirect Costs – Fringe Benefits, Overhead, G&A, COM, etc. and their applicable allocation bases. If composite rates are used, provide the calculations used in deriving the composite rates.

Travel – Provide a breakout of travel costs including the purpose and number of trips, origin and destinations(s), duration, travelers per trip, and the airfare, hotel, per diem, car rental costs, etc. for each trip.

Subcontracts – A cost proposal as detailed as the Offeror's cost proposal will be required to be submitted by the subcontractor. The subcontractor's cost proposal can be provided in a sealed envelope with the Offeror's cost proposal or may be sent directly to the Government. Subcontractor proposals must be received and reviewed prior to contract award. The prime contractor should perform and provide a cost/price analysis of each subcontractor's cost proposal.*

*Note: DoD Federal Acquisition Regulation provision 252.215-7003 (48 CFR §252.215-7003) is incorporated into this solicitation by reference. The offeror is to exclude excessive pass-through charges from subcontractors. The offeror must identify in its proposal the percentage of effort it intends to perform and the percentage to be performed by each of its proposed subcontractors. If more than 70 percent of the total effort will be formed through subcontractors, the offeror must include the additional information required by the above-cited clause.

Consultants – Provide a breakdown of the consultant's hours, the hourly rate proposed, any other proposed consultant costs, a copy of the signed Consulting

Agreement or other documentation supporting the proposed consultant cost, and a copy of the consultant's proposed statement of work if it is not already separately identified in the prime contractor's proposal.

Materials & Supplies – Provide an itemized list of all proposed materials and supplies including quantities, unit prices, proposed vendors (if known), and the basis for the estimate (e.g., quotes, prior purchases, catalog price lists).

Contractor Acquired Equipment or Facilities – Equipment and/or facilities are normally furnished by the Contractor. If acquisition of equipment and/or facilities is proposed, a justification for the purchase of the items must be provided. Provide an itemized list of all equipment and/or facilities costs and the basis for the estimate (e.g., quotes, prior purchases, catalog price lists).

Other Direct Costs – Provide an itemized list of all other proposed other direct costs and the basis for the estimate (e.g., quotes, prior purchases, catalog price lists).

Options – The Base Period of Performance and Option Periods must be priced at the submission of the proposal. Any proposal containing unpriced options will not be included in the contract.

Fee/Profit (Contract Proposals Only) – Profit or fee is not allowed on direct costs for facilities or in cost-sharing contracts.

Note: Indicate if you have an approved Purchasing/Estimating System and/or describe the process used to determine the basis of reasonableness (e.g., competition, market research, best value analysis) for subcontractors, consultants, materials, supplies, equipment/facilities, and other direct costs.

Part 2: Cost breakdown by task/sub-task corresponding to the same task breakdown in the proposed Statement of Work. When options are contemplated, options must be separately identified and priced by task/subtask.

INSTRUCTIONS FOR GRANTS

The offeror must use the Grants.Gov forms from the application package template associated with the BAA on the Grants.Gov web site located at <http://www.grants.gov/>. Elements of the budget should include:

Direct Labor – Individual labor categories or persons, with associated labor hours and unburdened direct labor rates or percentage of effort or total man-years. Provide escalation rates for out years.

Indirect Costs – Fringe Benefits, Overhead, F&A, G&A etc. and their applicable allocation bases. If composite rates are used, provide the calculations used in deriving the composite rates.

Travel – Provide a breakout of travel costs including the purpose and number of trips, origin and destinations(s), duration, travelers per trip, and the airfare, hotel, per diem, car rental costs, etc. for each trip. Or a basis for estimate, i.e., based on previous efforts, based on past experience, etc.

Subawards - Cost proposal as detailed as the recipient's cost proposal will be required to be submitted by the subrecipient. The subawardee's or subrecipient's cost proposal can be provided in a sealed envelope with the recipient's cost proposal or may be sent directly to the Government. Subawardee proposals must be received and reviewed prior to award.

Consultants – Provide a breakdown of the consultant's hours, the hourly rate proposed, any other proposed consultant costs and a copy of the consultant's proposed statement of work if it is not already separately identified in the prime recipient's proposal. Strong justification must be provided, and consultants are to be used only under exceptional circumstances where no equivalent expertise can be found at a participating university.

Materials & Supplies – Provide an itemized list of all proposed materials and supplies including quantities, unit prices, proposed vendors (if known), and the basis for the estimate (e.g., quotes, prior purchases, catalog price lists). Justify in Field K.

Recipient Acquired Equipment or Facilities – Equipment and/or facilities are normally furnished by the Recipient. If acquisition of equipment and/or facilities is proposed, a justification for the purchase of the items must be provided. Provide an itemized list of all equipment and/or facilities costs and the basis for the estimate (e.g., quotes, prior purchases, catalog price lists). For computer/laptop purchases include a statement indicating the computer/laptop will be integrated into the program or used as an integral part of the research effort.

Other Direct Costs – Provide an itemized list of all other proposed other direct costs such as Graduate Assistant tuition, laboratory fees, report and publication costs, and the basis for the estimates (e.g., quotes, prior purchases, catalog price lists).

NOTE: If the grant proposal is for a conference, workshop, or symposium, the proposal should include the following statement: "The funds provided by ONR will not be used for food or beverages."

Options – The Base Period of Performance and Option Periods must be priced at the submission of the proposal. Any proposal containing unpriced options will not be included in the award.

Fee/Profit - Fee/profit is unallowable under grants.

3. Significant Dates and Times –

SCHEDULE OF EVENTS		
Event	Date	Time (Eastern Standard)
Full Proposal Due Date	16 December 2008	(1600 hours) 4:00 PM
Notification of Selection: Full Proposals *	18 January 2009	N/A
Contract Awards *	16 April 2009	N/A

**These dates and times are estimates as of the date of this announcement.*

NOTE: Due to changes in security procedures since September 11, 2001, the time required for hard-copy written materials to be received at the Office of Naval Research has increased. Thus, it is recommended that any hard-copy proposal be mailed several days before the deadline established in the solicitation so that it will not be received late and thus be ineligible for award consideration.

4. Submission of Late Proposals –

Any proposal, modification, or revision that is received at the designated Government office after the exact time specified for receipt of proposals is “late” and will not be considered unless it is received before award is made, the contracting officer determines that accepting the late proposal would not unduly delay the acquisition and:

- If it was transmitted through an electronic commerce method authorized by the announcement, it was received at the initial point of entry to the Government infrastructure not later than 5:00 P.M. one working day prior to the date specified for receipt of proposals; or
- There is acceptable evidence to establish that it was received at the Government installation designated for receipt of proposals and was under the Government’s control prior to the time set for receipt of proposals; or
- It was the only proposal received.

However, a late modification of an otherwise timely and successful proposal that makes its terms more favorable to the Government will be considered at any time it is received and may be accepted.

Acceptable evidence to establish the time or receipt at the Government installation includes the time/date stamp of that installation on the proposal wrapper, other documentary evidence of receipt maintained by the installation, or oral testimony or statements of Government personnel.

If an emergency or unanticipated event interrupts normal Government processes so that proposals cannot be received at the Government office designated for receipt of proposals by the exact time specified in the announcement, and urgent Government requirements preclude amendment of the announcement closing date, the time specified for receipt of proposals will be deemed to be extended to the same time of day specified in the announcement on the first work day on which normal Government processes resume.

The contracting officer must promptly notify any offeror if its proposal, modifications, or revision was received late and must inform the offeror whether its proposal will be considered.

5. Submission of Grant Proposals to Grants.gov

Grant Proposals must be submitted through Grants.gov. To be considered for award, applicants must include the ONR Department Code 311 in Block 4 entitled 'Federal Identifier' of the Standard Form (SF) 424 R&R.

For electronic submission of grant full proposals, there are several one-time actions that must be completed in order to submit an application through Grants.gov (e.g., obtain a Dun and Bradstreet Data Universal Numbering System (DUNS) number, register with the Central Contract Registry (CCR), register with the credential provider, and register with Grants.gov). See www.grants.gov, specifically www.grants.gov/GetStarted.

Use the Grants.gov Organization Registration Checklist at http://www.grants.gov/applicants/register_your_organization.jsp which will provide guidance through the process. Designating an E-Business Point of Contact (EBiz POC) and obtaining a special password called 'MPIN' are important steps in the CCR registration process. Applicants who are not registered with CCR and Grants.gov should allow at least 21 days to complete these requirements. The process should be started as soon as possible. Any questions that may arise relating to the registration process, system requirements, how an application form works, or the submittal process must be directed to Grants.gov at 1-800-518-4726 or support@grants.gov.

Detailed instructions entitled "Grants.Gov Electronic Application and Submission Information" on how to submit a Grant proposal through Grants.gov may be found at the ONR website listed under the 'Acquisition Department – Contracts & Grants Submitting a Proposal' link at: http://www.onr.navy.mil/02/how_to.asp

The entire proposal package including the technical and cost proposal should be scanned into a single PDF file and attached to the SF 424 (R&R) Form at Field number 20 entitled "Pre-Application"

Special Notices Relative to Grant Applications to be submitted through Grants.gov:

All attachments to grant applications submitted through Grants.gov must be in Adobe Portable Format (i.e., PDF files). Proposals with attachments submitted in word processing, spreadsheet, or any format other than PDF will not be considered for award.

The grant Application Package Template to be used for submission of grant applications through Grants.Gov is based on the PureEdge Forms software. It is anticipated that before the end of 2008 the use of an Adobe Forms Package will be required in place of the PureEdge Application Package Template. Once this occurs, prospective grantees must download the new Adobe Application Package in order to be able to submit Grant Applications through Grants.Gov.

Process to Obtain a Waiver from the Use of Grants.Gov for Submission of Full Grant Proposals: If a prospective grantee is unable to comply with the requirement to use Grants.Gov "APPLY" for submission of a grant application under this BAA or finds it would be an excessive burden to comply with this requirement, a waiver request may be submitted not less than 30 calendar days prior to the closing date for receipt of Full Proposals. Such a request should be submitted by the Electronic Business Point of Contact listed in the CCR for the organization and should contain the Organization/Individual's name, address, telephone, and e-mail address. The request should state the reason for the request in sufficient detail so a decision can be made. The Waiver Request should be submitted to the ONR Acquisition Department point of contact or Grants Officer listed in the BAA. Such request can be sent by registered mail or e-mail. The "postmark" stamp on the envelope or the time annotated on the e-mail will be used to determine timeliness of the request. A decision and response will be issued within fourteen (14) calendar days of receipt of the request by ONR. Foreign Grantees who are not registered in CCR may request a waiver on that basis since CCR registration is integral to the Grants.Gov application process.

6. Address for the Submission of Hard Copy Full Proposals for Contracts.

Hard copies of full proposals for contracts and grants should be sent to the Office of Naval Research at the following address:

*Office of Naval Research
Attn: Dr. Behzad Kamgar-Parsi
ONR Department Code:311
875 North Randolph Street
Arlington, VA 22203-1995

V. EVALUATION INFORMATION

1. Evaluation Criteria –

Award decisions will be based on a competitive selection of proposals resulting from a scientific and cost review. Evaluations will be conducted using the following evaluation criteria:

- 1) Overall scientific and technical merits of the proposal;
- 2) Potential Naval relevance and contributions of the effort to the agency's specific mission;
- 3) The offeror's capabilities, related experience, facilities, techniques or unique combinations of these which are integral factors for achieving the proposal objectives;
- 4) The qualifications, capabilities and experience of the proposed Principal Investigator (PI), team leader and key personnel who are critical in achieving the proposal objects; and
- 5) The realism of the proposed costs and availability of funds.

Overall, the technical factors (1 – 4 above) are more important than the cost factor, with the technical factors all being of equal value. The degree of importance of cost will increase with the degree of equality of the proposals in relation to the other factors on which selection is to be based, or when the cost is so significantly high as to diminish the value of the proposal's technical superiority to the Government.

For proposed awards to be made as contracts to large businesses, non-profit organizations and universities, the socio-economic merits of each proposal will be evaluated based on the extent of the Offeror's commitment in providing meaningful subcontracting opportunities for small businesses, small disadvantaged businesses, woman-owned small businesses, HUBZone small businesses, veteran-owned small businesses, service disabled veteran-owned small businesses, historically black colleges and universities, and minority institutions.

The Government will evaluate options for award purposes by adding the total cost for all options to the total cost for the basic requirement. Evaluation of options will not obligate the Government to exercise the options during contract performance.

2. Evaluation Panel -

Technical and cost proposals submitted under this BAA will be protected from unauthorized disclosure in accordance with FAR 3.104-4 and 15.207. The cognizant Program Officer and other Government scientific experts will perform the evaluation of technical proposals. Cost proposals will be evaluated by Government business professionals. Restrictive notices notwithstanding, one or more support contractors may be utilized as subject-matter-expert technical consultants. Similarly, support contractors may be utilized to evaluate cost proposals. However, proposal selection and award

decisions are solely the responsibility of Government personnel. Each support contractor's employee having access to technical and cost proposals submitted in response to this BAA will be required to sign a non-disclosure statement prior to receipt of any proposal submissions.

VI. AWARD ADMINISTRATION INFORMATION

1. Administrative Requirements –

- The North American Industry Classification System (NAICS) code – The North American Industry Classification System (NAICS) code for this announcement is “541712” with a small business size standard of “500 employees”.
- Central Contractor Registry (CCR) - Successful Offerors not already registered in the CCR will be required to register in CCR prior to award of any grant or contract, Information on CCR registration is available at <http://www.onr.navy.mil/02/ccr.htm>.
- Certifications –

Contracts:

For contracts, in accordance with FAR 4.1201, prospective contractors shall complete and submit electronic annual representations and certifications at <http://orca.bpn.gov>. In addition to completing the Online Representations and Certifications Application (ORCA), proposals must be accompanied with a completed DFARS and contract specific representations and certifications. These "DFARS and Contract Specific Representations and Certifications", i.e., Section K, may be accessed under the Contracts and Grants Section of the ONR Home Page at http://www.onr.navy.mil/02/rep_cert.asp.

Grants:

For grant proposals, the certification package is entitled Certifications for Grants and Agreements

Grant awards greater than \$100,000 require a certification of compliance with a national policy mandate concerning lobbying. Grant and other assistance applicants will provide this certification by signing and submitting the Standard Form (SF) 424 (R&R) as a part of a hard copy grant proposal submission (complete Blocks 18 and 19).

The following certification applies to each applicant seeking federal assistance funds exceeding \$100,000:

CERTIFICATION REGARDING LOBBYING ACTIVITIES

(1) No Federal appropriated funds have been paid or will be paid by or on behalf of the applicant, to any person for influencing or attempting to influence an officer or employee

of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the Federal contract, grant, loan, or cooperative agreement, the applicant shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The applicant shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, title 31, U.S.C. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

• **Subcontracting Plans** - Successful contract proposals that exceed \$550,000, submitted by all but small business concerns, will be required to submit prior to award a Small Business Subcontracting Plan in accordance with FAR 52.219-9.

2. Reporting -

The following are samples of data deliverables that are typically required under a research effort:

- *Technical and Financial Progress Reports
- *Presentation Materials
- *Final Report

Additional data deliverables may be proposed and finalized during negotiations. Research performed under contracts may also include the delivery of software, prototypes, and other hardware deliverables.

VII. OTHER INFORMATION

1. Government Property/Government Furnished Equipment (GFE) and Facilities

Each proposer must provide a very specific description of any equipment/hardware that it

needs to acquire to perform the work. This description should indicate whether or not each particular piece of equipment/hardware will be included as part of a deliverable item under the resulting award. Also, this description should identify the component, nomenclature, and configuration of the equipment/hardware that it proposes to purchase for this effort. The purchase on a direct reimbursement basis of special test equipment or other equipment that is not included in a deliverable item will be evaluated for allowability on a case-by-case basis. Maximum use of Government integration, test, and experiment facilities is encouraged in each of the Offeror's proposals.

Government research facilities and operational military units are available and should be considered as potential government-furnished equipment/facilities. These facilities and resources are of high value and some are in constant demand by multiple programs. It is unlikely that all facilities would be used for any one specific program. The use of these facilities and resources will be negotiated as the program unfolds. Offerors should explain as part of their proposals which of these facilities are critical for the project's success.

2. Security Classification

In order to facilitate intra-program collaboration and technology transfer, the Government will attempt to enable technology developers to work at the unclassified level to the maximum extent possible. If access to classified material will be required at any point during performance, the Offeror must clearly identify such need prominently in its proposal.

3. Department of Defense High Performance Computing Program

The DoD High Performance Computing Program (HPCMP) furnishes the DoD S & T and RDT & E communities with use-access to very powerful high performance computing systems. Awardees of ONR contracts, grants, and assistance instruments may be eligible to use HPCMP assets in support of their funded activities if ONR Program Officer approval is obtained and if security/screening requirements are favorably completed. Additional information and an application may be found at <http://www.hpcmo.hpc.mil/>.

4. Protection of Proprietary and Sensitive Information

The parties acknowledge that, during performance of the contract or grant agreement resulting from this BAA, the recipient may require access to certain proprietary and confidential information (whether in its original or derived form) submitted to or produced by the Government. Such information includes, but is not limited to, business practices, proposals, designs, mission or operation concepts, sketches, management policies, cost and operating expense, technical data and trade secrets, proposed Navy budgetary information, and acquisition planning or acquisition actions, obtained either directly or indirectly as a result of the effort performed on behalf of ONR. The recipient shall take appropriate steps not only to safeguard such information, but also to prevent

disclosure of such information to any party other than the Government. The recipient agrees to indoctrinate company personnel who will have access to or custody of the information concerning the nature of the confidential terms under which the Government received such information and shall stress that the information shall not be disclosed to any other party or to recipient personnel who do not need to know the contents thereof for the performance of the contract/agreement. Recipient personnel shall also be informed that they shall not engage in any other action, venture, or employment wherein this information will be used for any purpose by any other party.

5. Project Meetings and Reviews

Individual program reviews between the ONR sponsor and the performer may be held as necessary. Program status reviews may also be held to provide a forum for reviews of the latest results from experiments and any other incremental progress towards the major demonstrations. These meetings will be held at various sites throughout the country. For costing purposes, offerors should assume that 40% of these meetings will be at or near ONR, Arlington VA and 60% at other contractor or government facilities. Interim meetings are likely, but these will be accomplished via video telephone conferences, telephone conferences, or via web-based collaboration tools.

6. Submission of Questions

Any questions regarding this solicitation must be provided to the Science and Technology Point(s) of Contact and/or Business Point(s) of Contact listed in this solicitation. All questions shall be submitted in writing by electronic mail.

Questions regarding **full proposals** must be submitted by 2:00 P.M. Eastern Standard Time on **18 November 2008**. Questions after this date and time may not be answered, and the due date for submission of the proposals will not be extended.