The Office of Naval Research
The S&T Provider for the Navy and Marine Corps

• 4,000+ People
• 23 Locations
• $2.1B / year
• >1,000 Partners

Discover
Develop
Deliver
Technological Advantage
Warfighting Capabilities Enabled by S&T Investments

Portfolio is balanced across near, mid and long term S&T investments

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Naval S&T Focus Areas

Assure Access to the Maritime Battlespace
- Ocean/Atmospheric Sciences
- Underwater Acoustics
- Ocean Sensing

Autonomy and Unmanned Systems
- Robotics
- Machine Learning
- Perception
- Human Machine Interface

Expeditionary and Irregular Warfare
- Situational Awareness
- Decision Making
- Mobility / Logistics
- Soldier Protection

Information Dominance / Cyber
- Communications / Information Technology
- Computer Science
- Mathematics /Data Analytics

Power Projection and Integrated Defense
- Directed Energy
- Energetic Materials

Platform Design and Survivability
- Air/Surface/Subsurface Vehicles
- Materials
- Corrosion /Biofouling
- Manufacturing Technologies

Power and Energy
- Renewable Energy
- Propulsion
- Power Control
- Thermal Management

Electromagnetic Maneuver Warfare
- EM Propagation & Waveforms
- Sensors and Electronics
- Optical Systems

Warfighter Performance
- Biomedical / Bioengineering
- Cognitive / Neural Sciences
- Training Technologies
- Health Protection

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ONR is part of the NR&DE, Providing Full-Spectrum RDT&E

<table>
<thead>
<tr>
<th>RDT&amp;E Budget (6.1-6.7)</th>
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<tbody>
<tr>
<td>S&amp;T Budget (6.1-6.3)</td>
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<tr>
<td>6.1 Basic Research</td>
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<td>6.2 Applied Research</td>
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<td>6.3 Advanced Technology Development</td>
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<td>6.4 Adv. Comp. Development &amp; Prototypes</td>
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<td>6.5 System Development &amp; Demonstration</td>
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<td>6.6 RDT&amp;E Management Support</td>
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<tr>
<td>6.7 Operational System Development</td>
</tr>
</tbody>
</table>

Naval R&D Establishment
(ONR, SYSCOMs and their Warfare Centers, PEOs)

Office of Naval Research
ONRG Programs

**International Science Program**
23 Associate Directors located in six offices worldwide tasked with finding the best science and bringing it back to the Naval Research Enterprise

**Science Advisor Program**
25 Science Advisors embedded in Navy and Marine Corps staffs to connect the warfighter and the Naval Research Enterprise

**Naval S&T Cooperation Program**
Developing and maintaining US Navy military to military science & technology relationships

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Our Talented Workforce

ONR Global personnel positioned across the world:

• Science Advisor Program (25 Science Advisors)
  – Chief of Naval Research’s Ambassadors to the U.S. Naval Fleet Force
  – Assigned to U.S. Navy and USMC commands as S&T expert advisors
  – Predominantly Masters level engineers or scientists experienced with the Naval Research & Development Establishment (NR&DE) and DOD acquisition

• International Science Program (23 Associate Directors)
  – Global technology scouts for the ONR and Naval Research Enterprise
  – Assigned to ONR Global’s regional offices in Singapore, London, Prague, Tokyo, Santiago, & Sao Paulo
  – Predominantly PhD level scientists well-versed in basic and applied research

• Naval S&T Cooperation Program (2 Int’l Program Officers)
  – International Partnership Builders between ONR/NRL and foreign defense counterpart organizations
  – Assigned to ONR Global (Arlington, VA)
  – Predominantly Masters/PhD level engineers or scientists experienced with the Naval Research & Development Enterprise (NR&DE), DOD acquisition process, applied research, and international cooperation
ONR’s Global Network
Accelerating S&T Partnerships

ONR’s Bridge to the International S&T Community and Naval Fleet/Force;
S&T Engagements in More than 60 Countries

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Science Advisors Strive To

Articulate Fleet Force S&T needs and requirements to ONR, NRL, NR&DE

Communicate Command issues to CNR, ONR leadership and Program Officers

Serve as ONR on site rep during Fleet Force exercises and demonstrations

Lead S&T planning & experimentation processes to focus on meeting critical needs, then assist in transition of key technologies to the Warfighter

CNR’s Ambassadors to the Fleet!
Science Advisor Requirements/Attributes

- **Apply through USAJOBS** (Vacancy Announcement **Nov 2016 – Dec 2016**)
- **Contact Existing Science Advisors**, talk to your lab-warfare center SA Program Manager
- Most are senior engineers & scientists with **over 10 years of practical experience** working on Fleet Force Systems (Aircraft, Ship, Submarines, Components) & Processes
- **Have Experience Interacting and Briefing** Flag/General Officers and SES
- Have a working knowledge of ONR, NRE, and DoD Acquisition Process
- **Provide an Endorsement Letter** from your “Home” Command
  - Approves you applying to become an ONR SA
  - Home command agrees to take you back at equal or greater pay, position at end of tour
- **TS SCI Clearance** at the start of the assignment preferred
- Must Be a **Self- Starter, Highly Motivated, Agent of Change**, and have a **Positive Attitude**
- **Strong Communication Skills**
- Can **maintain a sense of humor** under high stress situations
- **Customize your resume to address SA unique attributes; be honest not modest!**
Associate Directors Strive To

Act as a tech broker linking ONR, NRL, and the NRE with International S&T

Identify disruptive S&T in order to avoid Naval technical surprise

Gain enhanced awareness of S&T through direct, regular contact with international colleagues

Initiate and manage grants to provide tangible links between foreign scientists and their US Naval counterparts

Provide ONR forward presence with global innovators and technologists

CNR’s Global S&T Scouts!

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Required
• Masters Degree in technical field
• In-depth experience in performing basic or applied research
• Ability to network/interface in a tech broker role
• US citizenship
• Ability to travel extensively

Preferred
• PhD in relevant field
• Experience with ONR/NRE
• Foreign language capability
• International S&T experience


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Serve as the action officer to coordinate & manage government to government S&T partnerships

Engage with US Program Officers and foreign defense organizations to identify & develop collaborative projects that solve Naval capability gaps

Interface throughout ONR & NRL; NR&DE

Gain exposure across the S&T portfolio

Connect across USG (OPNAV, NIPO, AF/Army/DARPA, OSD, DOS, OSTP, etc)

CNR’s Government to Government Partnership Builders!
International Program Officer
Requirements/Attributes

**Required**
- Strong technical credentials
- Interest in technical broker role
- Ability to network/interface
- Strong Communication Skills
- Self-Starter, Highly Motivated, High Energy, Positive Attitude

**Preferred**
- Experience Interacting and Briefing Flag/General Officers and SES
- Experience with ONR/NRE
- International S&T experience
- TS SCI Clearance

Potential Vacancies in Summer 2017*

Science Advisor:

• MARFORPAC (Honolulu, HI)
• OPNAV N81 (Washington, DC)
• OPNAV N9 (Washington, DC)
• SUBFOR (Norfolk, VA)
• SPECWARCOM (Dam Neck, VA)
• UWDC (San Diego, CA)
• C6F (Naples, IT)
• C7F (Yokosuka, JP)
• PACOM (Honolulu, HI)
• USFF (Norfolk, VA)
• II MEF (Camp Lejeune, NC)

Associate Director:

• Platform Design and Survivability (Singapore, SG)
• Power and Energy (Singapore, SG)
• Expeditionary and Irregular Warfare (Singapore, SG)
• Warfighter Performance (London, UK)
• Assure Access to Maritime Battlespace (São Paulo, BR)
• Global Technical Awareness (Santiago, CL)

* New SAs/ADs/IPOs in place July/Aug 2017

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Potential Vacancies in Summer 2017*

International Program Officer:

• International Program Officer for Asia-Pacific, Middle East and North Africa (Arlington, VA)
• International Program Officer for Europe and Latin America (Arlington, VA)
• Director, NSTCP (Arlington, VA)

Business Operations:

• Financial Analyst (London, UK)
• Admin Program Specialist/Grants Administrator (London, UK)
Potential Vacancies in Summer 2018*

Science Advisor:
- NAVCENT/C5F (Manama, BH)
- II MEF (Camp Lejeune, NC)
- III MEF (Okinawa, JP)
- NAVSURFOR (San Diego, CA)
- CNAF (San Diego, CA)
- UWDC (San Diego, CA)
- COMPACFLT (Hawaii)
- NWDC (Norfolk, VA)
- C4F (Mayport, FL)
- C10F (Fort Meade, MD)
- MARFORCOM (Norfolk, VA)

Associate Director:
- Platform Design and Survivability (London)
- Electromagnetic Maneuver Warfare (Tokyo)
- Global Technical Awareness (Hyderabad, India)
- Global Technical Awareness (Hyderabad, India)

International Program Officer:
- None

* Tentative projection of positions
<table>
<thead>
<tr>
<th>Event Description</th>
<th>Date</th>
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<tbody>
<tr>
<td>Vacancy announcement (VA) opens-closes</td>
<td>Sept-Oct</td>
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<tr>
<td>CERT &amp; endorsement letters received by Science Advisor Program Director</td>
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<tr>
<td>Candidate packages reviewed, 3 to 5 are selected for interviews for each position</td>
<td>Nov-Dec</td>
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<tr>
<td>ONR Interviews Conducted</td>
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<tr>
<td>Candidates referred to Commands for follow on interview</td>
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<tr>
<td>Command down selects or approves candidate</td>
<td>Apr-May</td>
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<tr>
<td>Candidate is officially notified of selection, pre orientation packet sent to candidate</td>
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<tr>
<td>General On-boarding and MOA processing</td>
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<tr>
<td>New SA One Week Orientation Conducted at ONR Arlington, VA</td>
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<tr>
<td>New SAs prepares for Assignment, Logistics Finalized</td>
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<tr>
<td>New Science Advisors 2 week transition with existing SA</td>
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<tr>
<td>New ONR SA on board serving the Command</td>
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These dates projected as of 22 August 2016

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FY16 ONRG AD Selection Process

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<td>CERT received by Associate Director Technical Director</td>
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<td>New Associate Director (AD) begins transition with existing AD</td>
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<td>New AD arrives to Duty location</td>
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FY16 ONRG IPO Selection Process

- Vacancy announcement (VA) opens-closes
- CERT received by Director, Naval S&T Cooperation Program
- Candidate packages reviewed, 3 to 5 are selected for interviews for each position
- ONR Interviews Conducted
- Candidate is notified of selection, pre-orientation packet sent to candidate
- General On-boarding and MOA processing
- New IPO One Week Orientation Conducted at ONR Arlington, VA
- New IPO prepares for Assignment, Logistics Finalized
- New International Program Office (IPO) begins transition with existing IPO
- New IPO arrives to Duty location

These dates projected as of 22 August 2016

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Sample SA Project

Program Description

The Technology: TALONS is a system developed to lift and tow a variety of payloads 1000+ feet in the air behind ships, underneath flexible parafoil wings, as an artificial mast in the sky.

Objective: Conduct several experiments to determine the suitability of TALONS to current naval vessels and operations, to answer key Fleet-implementation related questions, and introduce TALONS capabilities into the Fleet.

Key Metrics: Wind envelopes, launch and recovery times, officer of the deck and ship impacts, robustness of power and communication options, compatibility with emergency procedures

S&T to Demonstrate:

• Payload effectiveness from TALONS system hardware and flight environment
• Minimal Manning and operator training for launch, flight, and recovery
• Maximum and minimum wind speeds when towing TALONS system
• Minimum launch and recovery times
• Off-axis launch, flight, and recovery
• Rugged and reliable power and signal tether operations
• Emergency procedures

Value to Fleet:

Leveraging previous DARPA funding and development work, C6F and C4F Science Advisors requested ONR Experimentation funds to experiment with TALONS based on their theater requirements.

TALONS lifts payloads from any ship to altitudes by towing them under a parafoil wing. Possible payloads include EO/IR systems, radar, communications relay / RF antennas, and more. TALONS increases the situational awareness of large or small ships. Simple battery-operated configurations are available as well as long-endurance systems with power and signal embedded in the tow tether.

Partners: 4th and 6th Fleet, NSWC Carderock, PEO-IWS, NAVSEA, NAVAIR, DARPA

Transition Sponsor: USFF, 4th and 6th Fleet

Major goals/Schedule:

• Ship wake field testing – December 2015
• 26ft boat testing – January 2016
• 60ft boat testing – June 2016
• 4th Fleet testing (Spring)
• 6th Fleet testing (Summer)
• Completion – October 2016

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SA/ AD/ IPO Opportunities

Orientation at ONR prior to Assignment (1 week in June)
• Meet/Interact with Other SAs/ADs/IPOs, ONR Department Heads and Program Managers
• Administrative Requirements

Scientist-to-X (S2X) Program
• Aviation/Ship/Submarine tours; USMC field exercises
• First-hand perspective of the end user requirements and operating environment

Industry Tours
• Week-long tours for mainly SAs focused on a geographic region
• First-hand exposure to a full range of production facilities, industry, labs, and future technologies

Technical Conference Attendance
• Building professional network and staying current in technical fields
Title: Collective sensing and guidance

- Bat swarms perform collective sonar sensing and flight coordination.

- The study of bat swarms can lead to new insight and bio-inspired swarm autonomy techniques.

Title: Thermal Performance of Carbon Nanotubes in the Form of Cables and Woven Fabrics.

Short Description: Development of continuous process for synthesis of high quality, high performance single wall carbon nanotube fibers, rope, and yarn.
Summary

Science Advisors, Associate Directors, and International Program Officers Provide a **Threefold** Return on Investment:

- Serving Naval Commands and Fostering International Collaboration
- Providing a Critical Link to between Operating Forces/International Scientific Community and ONR/NR&DE
- Gaining a “hands-on” experience with Fleet Force operations and International Science Community which you can leverage for the remainder of your careers

*Vacancy Announcements (USA Jobs) on the street ~ September - October*
Points of Contact

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703.696.6815

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Christopher.Bassler@navy.mil
703.696.0686

USA JOBS: https://www.usajobs.gov/

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