2012
ONR Naval S&T Partnership Conference & ASNE Expo

Warfighter Performance

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ONR34 Department Head
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OFFICE OF NAVAL RESEARCH

Agenda

- ***Warfighter Performance Focus Area***
  - ✓ ***Manpower, Personnel, Training & Education***
  - ✓***Human System Design and Decision Support***
  - ✓***Bio-Engineered Systems***
  - ✓***Warfighter Health and Survivability***

- ***Training and Medical Research Leadership Panel***
  - ✓ ***RADM Don "DQ" Quinn, Commander Naval Education and Training Command***
  - ✓***RADM Bruce Doll, Director of Research Office of the Navy Surgeon General***

- ***Discussion / Question and Answer Session***

Warfighter Performance Focus Area
Strategic Drivers

Network-Centric Data Overload

Human Interaction with Autonomy

Distributed Decision-Making

MPT and Design Integration / Trades

Seabasing

Total Ownership Costs

Blast / TBI

Irregular & Cyber Warfare

Humanitarian Assistance / Disaster Relief

Warfighter Performance Focus Area

Human System Design and Decision Support

Bio-Engineered Systems

Manpower, Personnel, Training and Education

Warfighter Health and Survivability

Warfighter Performance

Manpower, Personnel, Training & Education

- ✓ **Human-System Engineering Trades in Platform Design**
  Dr. William "Kip" Krebs
- ✓ **Adaptive Scenario-based Warfighter Training**
  Dr. Ami Bolton, Dr. Ray Perez
- ✓ **Fleet Synthetic Training**
  Dr. Harold Hawkins
- ✓ **Small Unit Team Training, Resilience**
  Dr. Ami Bolton, Dr. Peter Squire
- ✓ **Recruit Training, STEM Education**
  CDR Joseph Cohn, Dr. Harold Hawkins, Dr. Ray Perez

Warfighter Performance

Human-System Design and Decision Support

- ✓ **Command Decision-Making**
  Dr. Julie Marble, Dr. Jeff Morrison
- ✓ **Mission Planning Decision Support**
  Dr. William "Kip" Krebs
- ✓ **Human-Robot Interaction / Intelligent Autonomy**
  Dr. Paul Bello, Dr. Tom McKenna
- ✓ **Human Social, Cultural, Behavioral Sciences**
  Dr. Rebecca Goolsby, Dr. Harold Hawkins
- ✓ **Noise-Induced Hearing Loss Prevention & Mitigation**
  Mr. Kurt Yankaskas

Warfighter Performance

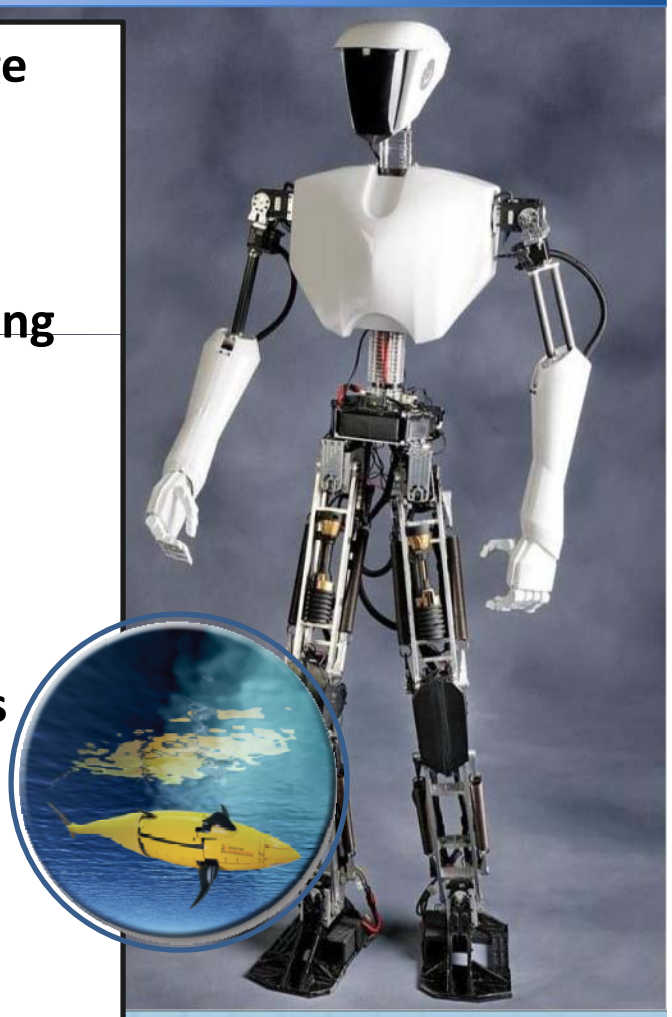
Bioengineered Systems

- ✓ **Human and Machine Intelligence, Natural Language Human-Machine Collaboration**
  Dr. Paul Bello, Dr. Tom McKenna

- ✓ **Brain-based Intelligent Sensors and Signal Processing**
  Dr. Tom McKenna

- ✓ **Autonomous Vehicles**
  Dr. Tom McKenna

- ✓ **Synthetic and Systems Biology, Microbial Fuel Cells Sentinel Cells, Biomaterials**
  Dr. Linda Chrisey, Dr. Laura Kienker



Warfighter Performance

Warfighter Health & Survivability

- ✓ **CASEVAC Medical Devices, Hemorrhage Control, Blast**
  Dr. Tim Bentley, Dr. Mike Given
- ✓ **Hyberbaric Oxygen Toxicity, Decompression Sickness**
  CDR Matt Swiergosz, LCDR Chris Steele
- ✓ **Physiological Stress, Fatigue, Resilience**
  CDR Sheri Parker, Dr. Laura Kienker, Dr. Peter Squire
- ✓ **Marine Mammal Health**
  Dr. Laura Kienker
- ✓ **Synthetic Biology / Battlefield Medical Analysis**
  Dr. Linda Chrisey

Warfighter Performance Focus Area Vision

Safe, Effective, Efficient, Affordable **System Performance:**

Manpower, Personnel, Training, Design, Decision Support
Medical Technologies
Bio-Engineered Systems

Improved Point of Injury Care / CASEVAC
Resilience in Extreme Environments

Biologically-Inspired Technologies

Panelists

RADM Bruce Doll, Director of Research
Office of the Navy Surgeon General

Previous Postings
- NATO Senior Health Care Executive
- Deputy Commander, Navy Medicine East
- Deputy Chief, Navy Dental Corps
- CO, Navy Expeditionary Medical Unit
- COO, Rutgers / Cleveland Clinic Regen Med research consortium

Education
- DDS, Doctor of Dental Surgery
- PhD, Cell & Molecular Biology

RADM Don Quinn, Commander
Naval Education & Training Command

Previous Postings
- Commander, Naval Air Training Command
- Commander, Navy Personnel Command
- Commander, Carrier Air Wing 9
- CO, Electronic Attack Squadrons VAQ-139, VAQ-129

Operational Assignments
- Attack Squadron VA-52, VA-185, VA-65
- Deputy Chief of Operations for Commander, Joint Task Force SW Asia

Education
- US Naval Academy
- MA, Nat'l Security & Strategic Studies
- MS, General Management