



2012
**ONR Naval
S&T Partnership
Conference & ASNE Expo**

Warfighter Performance

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O F F I C E O F N A V A L R E S E A R C H

Report Documentation Page

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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

Blast / TBI

Total Ownership Costs

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

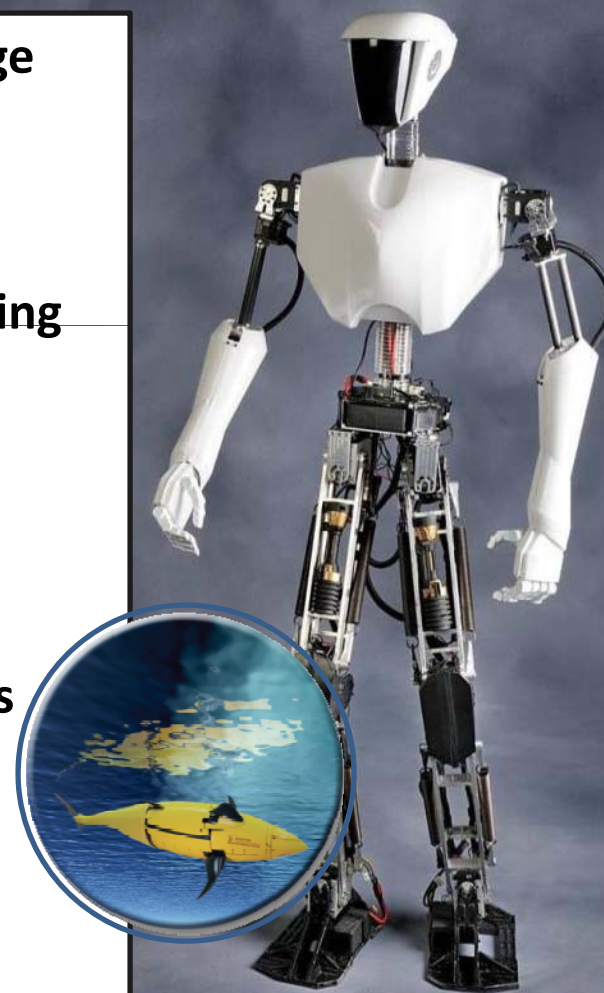




Warfighter Performance

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:

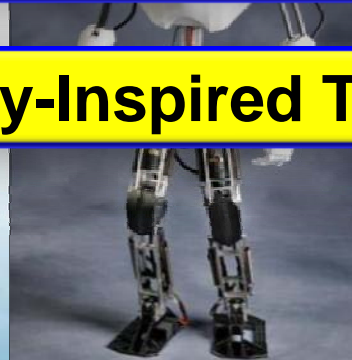
**Manpower, Personnel, Training, Design, Decision Support
Medical Technologies
Bio-Engineered Systems**



**Improved Point of Injury Care / CASEVAC
Resilience in Extreme Environments**



Biologically-Inspired Technologies





Panelists



Warfighter Performance S&T

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