

Announcement & Call for Presentations

(As of 4/22/11)



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Military Operations Research Society
1703 North Beauregard Street – Suite 450
Alexandria, VA 22311-1745
703-933-9070
FAX: 703-933-9066
www.mors.org

Contents

79th MORSS General Information.....	4
79th MORSS Agenda.....	7
79th MORSS Program Staff	10
MORS Office Staff.....	10
79 th MORSS Symposium Registration Fees*	11
Procedures for Submitting Presentation Abstracts	12
Guidelines for Presenting a MORSS Paper	12
79 TH Symposium Schedule.....	13
Naval Postgraduate School, Monterey, CA, 20-23 June 2011	13
79 TH MORSS Working Group / Composite Group/.....	15
Focus Sessions / Distributed Working Group Chairs	15
CG A – Homeland and International Operations	15
CG B – C4ISR and Net-Centric Operations	15
CG C –Joint Warfare.....	16
CG D –Resource/Readiness/Training.....	16
CG E - Acquisition.....	17
CG F – Interdisciplinary Advances in OR.....	17
CG G – Hybrid Warfare.....	17
WG 1 – Strategic Operations	18
WG 2 – Chemical, Biological, Radiological, and Nuclear Defense	19
WG 3 – Non-Proliferation, Threat Assessment, and Threat Reduction	20
WG 4 – Infrastructure Analysis, Protection and Recovery (IAP&R).....	21
WG 5 – Homeland Security, Homeland Defense, and Civil Support.....	23
WG 6 – Battle Management Command and Control.....	25
WG 7 - ISR and Intelligence	26

WG 8 – Space Acquisition, Testing and Operations	27
WG 9 – Air and Missile Defense.....	28
WG 10 – Joint Campaign Analysis	29
WG 11 – Land and Expeditionary Warfare.....	31
WG 12 – Maritime Operations	32
WG 13 – Power Projection and Strike	33
WG 14 – Air Warfare.....	35
WG 15 - Casualty Estimation and Force Health Protection.....	37
WG 16 - Strategic Deployment & Distribution.....	38
WG 17 - Logistics, Reliability, and Maintainability	39
WG 18 - Manpower and Personnel	40
WG 19 – Readiness	41
WG 20 - Analytical Support to Training.....	42
WG 21 - Experimentation	43
WG 22 - Measures of Merit.....	44
WG 23 - Test and Evaluation.....	45
WG 24 – Analysis of Alternatives (AoA).....	47
WG 25 – Cost Analysis.....	48
WG 26 – Decision Analysis.....	50
WG 27 – Modeling and Simulation.....	51
WG 28 – Operational Environments	52
WG 29 - Computational Advances in Operations Research.....	53
WG 30 – Wargaming	55
WG 31 – Information and Cyber Operations.....	56
WG 32 - Special Operations & Irregular Warfare.....	58
WG 33 – Social Science Methods and Applications.....	59
WG 34 – Computational Social Sciences.....	61
DWG 1 – Human Behavior and Performance.....	63

DWG 2 – Unmanned Systems.....	65
FS 1 – National Security Risk Management.....	67
FS 2 – Red and Blue Teaming.....	68
79th MORSS Special Sessions.....	70
79th MORSS Poster Session: Excellence in Analysis!.....	70
79th MORSS Demo Sessions: Flaunt Your Toolkit!.....	70
79th MORSS Tutorial Sessions Call for Abstracts	70
Upcoming MORS Meetings.....	71
David Rist Prize	71
Symposium Caveats.....	74

79th MORSS General Information

Fellow MORSians and Analysts

With this Announcement and Call for Papers (ACP), we begin formal preparation for our 79th Symposium at the Naval Postgraduate School in Monterey, next June 20-23, 2011. The annual Symposium is always a special event, the highlight of our MORS year. This one I expect to be particularly significant: NPS at Monterey is where many of us began our career in operations research and it remains an intellectual hub for those of us in the business of using analysis in support of national security decision making.

The discipline of what we have traditionally referred to as military operations analysis is expanding in its scope to meet the demands of a changing world. From gauging attitudes among the population of Iraq and Afghanistan, to thwarting the threat posed by narco-trafficking, to building the right balance of military forces, we are challenged as analysts to find new methods and techniques to support decision makers facing the tough choices in our modern world. MORS members are tackling these problems of increasingly complexity on a daily basis. Just as importantly, we need to prepare the individual analyst for this new world of analytic challenges. This includes not only us “old dogs” faced with new tricks, but that next generation of analyst entering our ranks. This is expressed in my theme for the year and the Symposium, “Developing the Next Generation of National Security Analyst.”

Under Program Chair John Hummel, we have made significant changes to this year’s Symposium. We have re-tooled and expanded our Working Group structure to reflect the changing world our members face and the needs the analytic community must face in the future. We have strengthened our tutorials program to provide our attendees the opportunity to learn new techniques and expand their profession skills. The Symposium schedule will feature opportunities to interact with other members of the profession and the government leaders from the Department of Defense, Department of Homeland Security, and other governmental agencies that rely on the services of our analytic community. And, not the least in importance, the Symposium will offer us the chance to gather socially, catch up on old friendships, and build the community necessary to grow our profession.

As we begin our preparations for the 79th Symposium in earnest, I challenge our Working Group and Special Session Chairs to seek out presentations on contemporary issues consistent with the challenges facing our next generation of analyst. In keeping with our theme, I want to urge our younger analysts to not just attend the Symposium, but step forward in showing your work and sharing your experiences as presenters and I ask our Chairs to make a special effort to reach out to our “front line” practitioners who can bring current field experience to our sessions.

As you review this ACP and consider your participation in next year’s Symposium, I strongly urge you to take the time to prepare an abstract, submit it to the appropriate Working Group, and present at the Symposium. The Symposium is a great place to not only show off past work, but to talk about our current efforts and get the ideas of colleagues who come from different backgrounds and experiences. I’m convinced that there is no better place to learn and share, and expand your professional horizons than the 79th MORS Symposium at Monterey.

A handwritten signature in black ink, appearing to read "Terry McKearney". The signature is fluid and cursive, with the first name being more prominent.

Terry McKearney
MORS President

New for the 79th Symposium

There are some significant changes in the structure and planning for the 79th MORS symposium!

- The first major change is that the 79th Symposium has officially changed from a 3-day to a 4-day event. Additional symposium activities, such as Special Sessions and the Working and Composite Group Chairs kick-off, will now occur on Monday, 20 June 2011 in addition to registration, tutorials, and the Rist Prize judging.
- The second major change is that more timeslots for Working Group presentations are being made available. In past symposia, certain timeslots were “locked out” for use by Working Groups and reserved for other symposia activities. These timeslots will now be made available for Working Group presentations, thus increasing the number of presentations that can be accepted. Third, the Sponsors Special Sessions will be occurring at different times during the Symposium so that they do not overlap with one another.
- Finally, the deadlines for the receipt of the Presentation Release forms (MORS Forms 712 A and B) will be rigidly enforced this year. Late acceptance of the forms and the presentations will only be permitted if arrangements have been made in advance with the MORS office and the relevant Group chair.

79th MORSS Agenda¹

Naval Postgraduate School, Monterey, CA

20 – 23 June 2011

Monday, 20 June 2011

0830 – 1700	Tutorials
1000 – 1700	On-Site Registration Commences
1330 – 1700	Rist Prize Competition
1330 – 1500	Special Meetings Outbriefs
1530 – 1630	WG/CG/FS/DWG Chairs Kickoff
1530 – 1700	Special Session I
1730 – 1800	First Timer's Orientation
1800 – 2000	MORS Membership Reception

Tuesday, 21 June 2011

0700 – 1700	On-Site Registration
0830 – 1000	PLENARY SESSION
1030 – 1200	1 st Working Group Session
1215 – 1315	Tutorials
1330 – 1500	<i>Concurrent Sessions</i> 2 nd Working Group Session Poster Sessions Demonstrations Sponsor Hot Topics Composite Group A
1530 – 1700	<i>Concurrent Sessions</i> 3 rd Working Group Session Poster Sessions Demonstrations Special Sessions II Composite Group B
1715 – 1900	Welcome Mixer

Wednesday, 22 June 2011

0700 – 0800	WG/CG/FS/DWG Chairs Town Hall Meeting
0700 – 0800	Editors' Breakfast

¹All items subject to change. Be sure to check the final agenda for details.

0830 – 1000	<i>Concurrent Sessions</i> 4th Working Group Session Poster Sessions Demonstrations Army Sponsor Session
1030 – 1200	<i>Concurrent Sessions</i> 5th Working Group Session Poster Sessions Demonstrations Composite Group C Navy Sponsor Session
1215 – 1315	Tutorials
1330 – 1500	<i>Concurrent Sessions</i> 6th Working Group Session Poster Sessions Demonstrations Composite Group D DHS Sponsor Session
1530 – 1700	<i>Concurrent Sessions</i> 7th Working Group Session Special Sessions III Poster Sessions Demonstrations
1900 – 2230	Social Event – Monterey Bay Aquarium

Thursday, 23 June 2011

0630 – 0730	3 rd Annual 5K Run
0830 – 1000	<i>Concurrent Sessions</i> 8th Working Group Session Poster Sessions Demonstrations Air Force Sponsor Session Composite Group E
1030 – 1200	<i>Concurrent Sessions</i> 9th Working Group Session Poster Sessions Demonstrations Composite Group F Joint Staff Sponsor Session
1215 – 1315	Tutorials

1330 – 1500

Concurrent Sessions
10th Working Group Session
Special Meetings Outbriefs
Composite Group G
OSD Sponsor Session

1530 – 1700

Concurrent Sessions
Special Sessions IV
WG/CG/FS/DWG Chairs & Co-chairs Wrap-up

79th MORSS Program Staff

POSITION	NAME	PHONE	EMAIL
Program Chair	Dr. John Hummel	630-252-7189	jhummel@anl.gov
Advisor Program Chair (78th Chair)	Lt Col KiraBeth Therrien	719-556-5940	kirabeth.therrien@us.af.mil
Deputy Program Chair (80th Chair)	Bruce Wyman	571-642-6735	bruce.wyman@TASC.com
Deputy (Special Sessions)	Don Timian	703-681-2745	Donald.Timian@us.army.mil
WG / CG Coordinator	Tom Denesia	719-554-9680	thomas.denesia@northcom.mil
Deputy WG / CG Coordinator	Rochelle Anderson	913-684-7585	rochelle.a.anderson@us.army.mil
Heritage Session	John Andrew	719-333-9723	john.andrew@usafa.edu
Prize Session	Dr. Jerry Diaz	703-416-3083	jerry.diaz@hsi.dhs.gov
Education Session	Jane Krolewski	410-306-0317	jane.krolewski@ua.army.mil
Jr. / Sr. Analyst Session	Denny Baer, FS ²	703-448-6081	dbaer@wbbinc.com
Plenary Coordinator	Anne Patenaude, FS	703-377-8689	patenaude_annie@bah.com
Demos / Posters	Dan Dassow	314-234-9098	daniel.d.dassow@boeing.com
Communities of Practice	Renee Carlucci	703-806-5617	renee.carlucci@us.army.mil
Tutorials	Lisa Kaiser	703-806-5573	lisa.m.kaiser@us.army.mil
Coordinator for Strategist's Corner	Dr. Ted Bennett	228-688-4148	theodore.j.bennet@navy.mil
Rooms Coordinator	Dr. Donna Blake	703-967-5214	donna@bluestormtec.com
5K Run	Kelly Cormican	757-575-0311	kcormican@wbbinc.com
NPS Site Coordinator	CDR Harrison Schramm	831-656-2358	hcschram@nps.edu

MORS Office Staff

POSITION	NAME	PHONE	EMAIL
Chief Executive Officer	Krista Paternostro	703-933-9075	krista@mors.org
Director of Events	Jill Clark	703-933-9072	jill@mors.org
Director of Membership & Security	Eric Hamp	703-933-9073	eric@mors.org

²FS – Fellow of the Society

79th MORSS Symposium Registration Fees*

Entity	MORS Membership	Early	Regular	Late
US Federal Government	Member	\$340.00	\$495.00	\$595.00
US Federal Government	Non-Member	\$380.00	\$550.00	\$650.00
All Others	Member	\$405.00	\$585.00	\$685.00
All Others	Non-Member	\$450.00	\$650.00	\$750.00

***Registration Definitions:**

Early Registration ends on **Friday, April 1, 2011.**

Regular Registration begins on **Saturday, April 2** and ends on **Friday, May 20, 2011.**

Late Registration includes a \$100.00 non-refundable surcharge.

Registration Policies:

- 100% of registration fees will be refunded for cancellations received through **Friday, May 20, 2011.**
- For cancellations received on or after **May 21, 2011** registration fees will be refunded less a 25% administration fee.
- All meals and social events are non-refundable after **Friday, May 20, 2011.**
- No refunds will be offered after **Friday, June 10, 2011.**

MORS Membership Dues (US Addresses):

MORS members pay discounted registration fees. If you join now, you may pay the member rate for the 79th MORSS. To purchase a MORS membership, please visit the MORS website at www.mors.org or you may contact Mr. Eric Hamp, director of member services, at 703.933.9073, or via email at eric@mors.org.

(1 year)	(2 years)	(3 years)
\$ 75	\$ 140	\$ 210

Accepted Credit Cards:



Please note that your credit card will be charged immediately. It is also MORS' policy to bill Government Forms SF182 approximately 3 weeks after the symposium. Various refunds (listed above) will be made approximately 30 days after the symposium.

Procedures for Submitting Presentation Abstracts

1. **Presentation Abstract Submissions** – Abstracts for presentations offered to working groups should be of interest to a specific working group. Abstracts for presentations offered to composite groups should be broad and comprehensive and should be of interest to each of the working groups assigned to the composite group.
2. **Abstracts** – All abstracts should be submitted through the new MORS “Call for Presentations” site at <https://morss2011.wingateweb.com/portal/cfp/login.wv>. Once you are on the site please follow the instructions provided. Be sure to complete as many of the spaces as possible, and include your email address. This will ensure that you receive a confirmation of your submission. The deadline to submit abstracts for consideration at the 79th MORSS is **27 January 2011**.
3. **Abstracts Disclosure Form 109 A/B** – If you would like your unclassified, approved for public release, distribution unlimited abstract to be included on the 79th MORSS Call for Presentations on-line website, a MORS Form 109 A/B must be completed. The abstract **MUST** be Unclassified and Approved for Public Release; Distribution Unlimited. (If obtaining a signature to clear your unclassified abstract is a long process, you may submit your unclassified abstract for consideration without the releasing official’s signature and follow up with a signed copy before the 11 March 2011 deadline.) **If you do not want your abstract included on the 79th MORSS Abstracts on-line website you do not have to complete form 109A/B.**
4. **Notification** – If you are not notified of acceptance or rejection of abstracts offered for presentation at the 79th MORSS by 23 February 2011 please call the WG Chair(s) or Session Chairs directly.

Guidelines for Presenting a MORSS Paper

Some people equate presenting a paper at MORSS to writing a thesis – this is not true. To present at the Symposium, a presenter simply needs the approved abstract and briefing slides. However, if the presentation is deemed notable, you may be invited to compete for the Barchi Prize, at which time a written paper will be required.

Another common misperception is that the research presented at the Symposium must be complete or a conclusion reached – this also is not true. Discussion of work in progress is an important part of the MORS working groups! This is a good opportunity to receive feedback from your peers on how your analysis is perceived and how it may be improved.

79th MORSS



79TH Symposium Schedule

“Developing the Next Generation of National Security Analysts”
Naval Postgraduate School, Monterey, CA, 20-23 June 2011

- | | | |
|----|------------|---|
| 19 | Nov 2010 | 79 th MORSS Announcement and Call for Presentations (ACP) goes live on MORS website. |
| 19 | Nov 2010 | MORS Forms 109 A/B (abstract disclosure), 712 A/B (presentation disclosure), and 226 A/B (security form) available for download from MORS website |
| 19 | Nov 2010 | Security and Presentation (unclassified and classified) procedures available for download from MORS website. |
| 27 | Jan 2011 | DEADLINE: Final date for abstracts to be submitted to the online 79 th CFP website |
| 8 | Feb 2011 | 79th MORS Symposium Registration Site Opens! |
| 21 | Feb 2011 | Working Group Chairs provide a DRAFT agenda based on the abstracts received from the 79 th MORSS CFP website. |
| 23 | Feb 2011 | All Working/Composite Groups, Focus Sessions, Special Sessions, Tutorials and Demonstrations Chairs MUST NOTIFY potential presenters and the MORS Office of acceptance or rejection of submissions. |
| 11 | March 2011 | DEADLINE: MORS Form 109 A/B (abstract disclosure form) due at the MORS office for all presentations, tutorials, special sessions, and demos. |
| 1 | April 2011 | <i>Early registration ends.</i> |
| 2 | April 2011 | <i>Regular registration begins.</i> |
| 16 | May 2011 | DEADLINE: MORS Form 712 A/B (presentation disclosure forms) due at the MORS office for all presentations, tutorials, special sessions, and demos. <i>This will now be a firm and final date! Any late submissions must be approved by the individual session coordinator.</i> |
| 19 | May 2011 | DEADLINE: MORS Form 226A/B (personal security forms) to the MORS office. ALL attendees must complete this form. |
| 19 | May 2011 | <i>Revisions to ALL 79th MORSS Agendas.</i> This will be the final agenda that will be handed out at the Symposium in the Quick Reference Program Schedule (QRPS). All agenda revisions must be made using the Speaker Resource Center (SRC). WG and other session agendas for the Quick Reference Program Schedule (QRPS) will be taken directly from the SRC. <u>Changes made after this date should be posted on the MORS message board in the front of the MORS On-site Office and on the door of the WG/CG class room with revisions.</u> |
| 20 | May 2011 | DEADLINE: Regular 79 th registration ends. |
| 21 | May 2011 | <i>Late 79th registration begins</i> |

- 23 **May 2011** WG/CG Chairs submit for nominations for 80th MORSS slate of WG and CG Chairs
- 1 **June 2011** All unclassified presentations must be sent to the appropriate group Chair.
- 6 **June 2011** All classified presentations must be sent to the 79th MORSS SIPR address:
morss@nps.navy.smil.mil
- 15 **June 2011** MORS office opens at Monterey, CA.
- 20 **June 2011** Chairs begin onsite uploading of late unclassified presentations.
- 20 – 23 **June 2011** 79TH MORSS at the Naval Postgraduate School, Monterey, CA

79TH MORSS Working Group / Composite Group/ Focus Sessions / Distributed Working Group Chairs

MORS Working Groups (WG) are combined into a set of Composite Groups (CG) to reflect the shared interests of the WGs. Presentations can be submitted to Composite Groups if the material to presented covers multiple subject domains. The line-up of Composite Groups for the 79th MORSS and their leadership teams is listed below followed by the prospectuses of the individual Working Groups.

CG A – Homeland and International Operations

Chair:

Mr. Hunter Marks, 3 AF/A9O, +49 06371-405-1691 (DSN 314-478-1691), hunter.marks@us.af.mil

Co-Chair:

Ms. Rachel Echternach, STRATCOM J812, 402-232-5685, echternr@stratcom.mil

WG 1 – Strategic Operations
WG 2 - Chemical, Biological, Radiological and Nuclear (CBRN) Defense
WG 3 - Non-Proliferation, Threat Assessment and Threat Reduction
WG 4 – Infrastructure Analyses, Protection and Recovery
WG 5 – Homeland Security, Homeland Defense and Civil Support

CG B – C4ISR and Net-Centric Operations

Chair:

Ms. Cindy Noble, ATRC-FS, 913-684-3259 Noble@cindy.noble@us.army.mil

Co-Chairs:

Mr. Mike Leite, SAIC, 703-681-5503, Michael.Leite.ctr@osd.mil

Mr. Brian Hodges, ATRC-FS, 913-684-9140, brian.hodges@us.army.mil

Advisor:

Mr. Ken Rabb, 703-681-0630, Ken.Raab@us.army.mil

WG 6 – Battle Management Command and Control (BMC2)
WG 7- ISR and Intelligence
WG 8 – Space Acquisition, Testing and Operations

CG C –Joint Warfare

Chair:

Mr. David Flanigan, Johns Hopkins University Applied Physics Lab, 240-228-8129,
David.Flanigan@jhuapl.edu

Co-Chairs:

Dr. Roger Burke, US Military Academy Dept of Systems Engineering, 703-244-2954,
roger.burk@usma.edu

Mr. Chris Linhardt, INFORSCITEX Corp (AFRL/RBCD), 937-255-8635, chris.linhardt@wpafb.af.mil

Advisor:

Ms. Rochelle Anderson, TRADOC Analysis Center, 913-684-7585, Rochelle.A.Anderson@us.army.mil

WG 9 – Air and Missile Defense
WG 10 – Joint Campaign Analysis
WG 11 – Land and Expeditionary Warfare
WG 12 – Maritime Operations
WG 13 – Power Projections and Strike
WG 14 – Air Warfare

CG D –Resource/Readiness/Training

Chair:

Ms. Sheilah Simberg, US Army Materiel Systems Analysis Activity, 410-278-5532
sheilah.simberg@us.army.mil

Co-Chair:

Mr. Joseph Adams, IDA, 703-845-2148, jadams@ida.org

Advisor:

Mr. John Kearley, Dynamics Research Corporation, 757-398-6409, jkearley@drc.com

WG 15– Casualty Estimation and Force Health Protection
WG 16 – Strategic Deployment and Distribution
WG 17 – Logistics, Reliability and Maintainability
WG 18 – Manpower and Personnel
WG 19 – Readiness
WG 20 – Analytic Support to Training

CG E - Acquisition

Chair:

Mr. Joseph Anderson, TRADOC Analysis Center, 913-684-6867, Joseph.S.Anderson@us.army.mil

Co-Chairs:

Dr. James Simpson, Group OA, 850-882-0607 james.simpson@eglin.af.mil

Ms. Shannon Krammes, Marine Corps Operational Test and Evaluation Activity, 703-432-0945,
Shannon.Krammes@usmc.mil

WG 21 - Experimentation
WG 22 – Measures of Merit
WG 23 – Test and Evaluation (T&E)
WG 24 – Analysis of Alternatives (AoA)
WG 25 – Cost Analysis
WG 26 – Decision Analysis

CG F – Interdisciplinary Advances in OR

Chair:

Mr. Steve Notarnicola, Lockheed Martin Center for Innovation, 757-935-9503, steve.notarnicola@lmco.com

Co-Chair:

Mr. Harry Johnson, Lockheed Martin Center for Innovation, 757-935-9520, harry.e.johnson@lmco.com

Advisor:

Mr. Chris Herstrom, Global Cyberspace Integration Center, 757-225-2123,
christopher.herstrom.ctr@langley.af.mil

WG 27 – Modeling and Simulation
WG 28 – Operational Environments
WG 29 - Computational Advances in OR
WG 30 - Wargaming

CG G – Hybrid Warfare

Chair:

CDR Djamal Pullom, Joint Staff/J-8, Warfighting Analysis Division, 703-571-0867,
Djamal.Pullom@js.pentagon.mil

WG 31 – Information and Cyber Operations
WG 32 – Special Operations and Irregular Warfare
WG 33 – Social Science Methods and Applications
WG 34 – Computational Social Science

WG 1 – Strategic Operations

Chair:

Mr. Rick Paulsen, AFMC 709th NSS/CXO, 505-853-3041, richard.paulsen@kirtland.af.mil

Co-Chairs:

Dr. Gene Schroeder, AFMC 710th NSS/RS, 505-846-6018, gene.schroeder@kirtland.af.mil

Advisor:

Dr. Lalit Yudhbir, Systems Planning and Analysis, Inc., 703-399-7611, lyudhbir@spa.com

Strategic operations attempt to achieve our national security objectives in the most direct way possible by affecting an adversary's leadership, conflict-sustaining resources, and strategy. While during the Cold War, strategic operations were equated with nuclear deterrence, today's strategic operations include elements of offense and defense, nuclear, conventional, and nonkinetic effects, and coalition and interagency partners. One thing that has not changed is the importance of OR in supporting strategic operations, from fielding and maintaining strategic capabilities all the way to planning and assessing operations. The theme of 79th MORSS: "Developing the Next Generation of National Security Analysts," reflects the widening scope of strategic operations and the need to create new OR methods and refine existing ones, to equip this next generation to address emerging strategic challenges.

Our working group addresses not only strategic operations and planning but necessary supporting capabilities including offensive and defensive systems, command and control, nuclear and non-nuclear production infrastructure, and understanding adversary centers of gravity and decision-making processes. We seek presentations on ongoing or finished analysis in new or traditional applications of OR for strategic operations. In particular, participants in the recent Nuclear Posture Review, Ballistic Missile Defense Review, Quadrennial Defense Review, or Space Posture Review are encouraged to submit abstracts for consideration for special focus sessions.

Please join us at the 79th MORSS!

WG 2 – Chemical, Biological, Radiological, and Nuclear Defense

Chair:

Ms. Laura Sears, Defense Threat Reduction Agency, 703-767-6046, laura.sears@dtra.mil

Co-Chairs:

Mr. Jon Calomiris, USANCA, 703-806-7879, jon.calomiris@us.army.mil

Mr. Gaurang Dave, NSWC-DD, 540-653-0423, gaurang.dave@navy.mil

Mr. Charlie Holman, ATEC-AEC, 703-681-3376, charlie.e.holman@atec.army.mil

Mr. Christopher Kiley, DTRA, 703-767-3460, christopher.kiley@dtra.mil

Mr. Eric Lowenstein, DTRA, 703-767-3380, eric.lowenstein@dtra.mil

LTC Thomas Rothwell, Center for Army Analysis, 703-806-5173, thomas.rothwell@us.army.mil

Mr. Andrew Wiedlea, DTRA, 703-767-3021, andrew.wiedlea@dtra.mil

Advisor:

Mr. Jerry Glasow, DTRA, 703-767-3458, jerry.glasow@dtra.mil

The employment or threat of chemical, biological, radiological, and nuclear (CBRN) weapons pose serious challenges to US military operations worldwide. The deadly, destructive, and disruptive effects of these weapons and materials merit continuous consideration by the Combatant Commands and supporting commanders. The vast amount of national treasure that we as a nation have and are consuming focused against CBRN demonstrates our resolve to counter that threat. However, it is this same tidal wave of CBRN funding and initiatives that have caused an explosion in the need for the next generation of National Security analysts to take the time required to generate real data and do hard analysis on the best ways to defend the nation against CBRN attack.

Against this backdrop of great uncertainty, this MORS working group seeks presentations on efforts that have generated new data for CBRN analysis and/or that demonstrate tackling hard analysis despite our data shortfalls and limitations.

WG 3 – Non-Proliferation, Threat Assessment, and Threat Reduction

Chair:

Ms. Christina Obergfell, AETC/SAS, 210-652-087, christinaobergfell@randolph.af.mil

Co-Chairs:

Mr. Thad Middleton, SAF/OS, 703-697-8141, thad.middleton@pentagon.af.mil

Mr. Derek Leggio, USSTRATCOM/J811, 402-294-5942; Derek.leggio@stratcom.mil

Advisor:

Mr. Hunter Marks, 3AF/A9O, 225-612-4605, DSN 314-478-1691, Hunter.Marks@us.af.mil

In April of 2010 over 40 heads of state met in Washington D.C. for the 2010 Nuclear Security Summit with a highlighted focus on “Next Generation Nuclear Security.” The goal of the summit was “to develop a plan of action to secure vulnerable nuclear materials, prevent nuclear material smuggling, and deter, detect and disrupt attempts at nuclear terrorism.” This formal gathering demonstrated and recognized the global responsibility for non-proliferation, threat assessment, and threat reduction.

While deterrence remains an enduring goal, the U.S. recognizes its responsibility to actively engage in threat assessment and reduction as a means to conduct stability operations around the globe, including most recently, countries like Iraq and Afghanistan. Both of these missions present challenges to the OR community as we try to develop methodologies to assess capabilities and outcomes in these mission areas. The global nature of these missions presents the challenge of theatre security cooperation as missions typically span more than one geographic combatant command. In addition to these three challenges, we find the resurging need for arms control in today's world. While nuclear arms control appears minor in scope compared to the days of the Cold War, we also face the need for arms control in the realms of space, missile defense, and cyberspace. The continued importance of these issues is accompanied by an elevation of attention given to it by the MORS community.

In order to respond globally, the working group is soliciting analytically leading papers on the full spectrum of current and future issues. These issues include but are not limited to: Non-Proliferation; Threat Assessment and Threat Reduction; Deterrence, Causes and Prevention of War; Conflict and Peacekeeping; Emerging, Catastrophic, and Disruptive Events; Regional Security Forces and Strategy; Theatre Security Cooperation; Arms Control; Proliferation Maintenance, Monitoring, Prevention and Mitigation; Stability and Escalation Dynamics; Diplomatic and Military Approaches; Delivery and Defenses; Alternative/Potential Futures; Sustainment; Development; and Changing Environments.

Papers employing modeling, simulation, game theory, optimization, decision analysis, management science, assessment across PMESII and other quantitative/ analytical techniques are especially welcomed. Both completed tasks and work in progress are encouraged.

WG 4 – Infrastructure Analysis, Protection and Recovery (IAP&R)

Chair:

Mr. Rupert L. Seals, The Boeing Company, 610-591-3092, Rupert.l.seals@boeing.com

Co-Chair:

Mr. Danon L. Price, The Boeing Company, 610-591-3053, danon.l.price@boeing.com

Advisor:

Dr. Gerald Diaz, Department of Homeland Security, 703-416-3083, jerry.diaz@hsi.dhs.gov

The major thrust of this working group is the examination of critical infrastructure and the requirements for restoration in the event of a natural or man-made disaster. The Department of Homeland Security has defined critical infrastructure and key resources below.

- Critical Infrastructure are the assets, systems, and networks, whether physical or virtual, so vital to the United States that their incapacitation or destruction would have a debilitating effect on security, national economic security, public health or safety, or any combination thereof.
- Key Resources are publicly or privately controlled resources essential to the minimal operations of the economy and government.

DHS has also defined the Critical Infrastructure and Key Resources (CIKR) Sectors below. Each item below has a Sector-Specific Plan (SSP). The Sector-Specific Plans detail the application of the National Infrastructure Protection Plan (NIPP) risk management framework to the unique characteristics and risk landscape of each sector and provide the means by which the NIPP is implemented across all CIKR sectors. Each Sector-Specific Agency developed an SSP through a coordinated effort involving their public and private sector CIKR partners.

- Agriculture and Food
- Banking and Finance
- Chemical
- Critical Manufacturing
- Commercial facilities
- Communications
- Dams
- Defense Industrial Base
- Emergency Services
- Energy
- Government Facilities
- Healthcare and Public Health
- Information Technology
- National Monuments and Icons
- Nuclear Reactors
- Materials and Waste
- Postal and Shipping
- Transportation Systems
- Water

WG 4 welcomes papers in concepts under development and research as well as proven applications and techniques from all disciplines that highlight the use of operations research methods in the subject areas listed above. Presenters can include operations research analyst, statisticians, behavioral scientists, clinical providers, medical planners, logisticians, and other scientists. In keeping with this year's symposium theme, please include and encourage participation by junior analysts as much as possible.

Papers that describe development of IAP&R analysis tools, techniques, and methodologies are welcome. Note that all presentations and discussions must be kept at the Secret level or lower. We look forward to hearing from you!

WG 5 – Homeland Security, Homeland Defense, and Civil Support

Chair:

Dr. Ross Snare, Department of Homeland Security, 202-254-7080 ross.snare@associates.dhs.gov

Co-Chairs:

Ms. Kim Warren, Mitre, 703-298-7423, kwarren@mitre.org

Ms. Cherie Gott, NORAD and USNORTHCOM, 719-554-3945, cherie.gott@northcom.mil

Mr. Clarke Ansel, Homeland Security Institute, 703-416-3482, clarke.ansel@hsi.dhs.gov

Ms. Deena Disraelly, Institute for Defense Analyses, 703-575-6685, ddisrael@ida.org

Mr. George Herc, Picatinny Arsenal, 973-724-9751, george.h.herc@us.army.mil

Mr. Richard Rigazio, US Coast Guard, 202-372-3072, richard.c.rigazio@uscg.mil

Advisor:

Dr. Julie Seton, Indelible Enterprises, LLC, 575-639-3158, julie@indentus.com

Since the September 11, 2001 terrorist attacks on the World Trade Center and the Pentagon, there have been major efforts in the United States to secure the homeland, particularly with the establishment of the Department of Homeland Security (DHS), March 2002, and the establishment of US Northern Command (USNORTHCOM), 1 Oct 2002, within the Department of Defense (DoD). USNORTHCOM is teamed with the bi-national North American Aerospace Defense Command (NORAD) in providing homeland defense with their complementary missions. Specifically, USNORTHCOM anticipates and conducts Homeland Defense and Civil Support operations within the assigned area of responsibility to defend, protect, and secure the United States and its interests. NORAD's mission is, in close collaboration with homeland defense, security, and law enforcement partners, prevent air attacks against North America, safeguard the sovereign airspaces of the United States and Canada by responding to unknown, unwanted and unauthorized air activity approaching and operating within these airspaces, and provide aerospace and maritime warning for North America. DHS was established to provide the unifying core for the vast national network of organizations and institutions involved in efforts to secure the United States of America. DHS's mission is to prevent and deter terrorist attacks and protect against and respond to threats and hazards to the nation. We will ensure safe and secure borders, welcome lawful immigrants and visitors, and promote the free-flow of commerce³.

WG-5 embraces this year's MORS Symposium theme, "*Developing the Next Generation of National Security Analysts*" by encouraging analytic leaders to seek ways to engage junior analysts. This should, at a minimum, involve junior analysts attending and presenting in our working group. Another possibility is to provide the junior analyst with opportunities to excel in the often challenging activities of writing study plans and conducting independent, but supervised, research.

WG5, as home to the analytic cadre from DHS and the components and agencies within the Homeland Security Enterprise, will encourage analysts involved in all core mission areas and throughout the enterprise to share insights and learn from the considerable experiences of others.

Many of the goals from last year will remain our areas of emphasis: (a) working through obstacles and differing priorities in the homeland security and homeland defense continuum, (b) assessing the issues, authorities, and associated policies of DoD's support to civil authorities, (c) evaluating information sharing within and across US and global partners in their respective missions, and (d) sharing or exchanging classified and/or sensitive information (databases, etc.) between and among national and international partners.

³ From website: www.dhs.gov

This working group will serve as a test bed for new thoughts, ideas, and approaches that our analytic community can bring to increase the security of the Homeland. We must be more collaborative in order to provide senior decision makers better options and recommendations on the issues that drive our global security effort.

WG-5 intends to work throughout the year to address some of these analytic areas and will be active in MORS events to demonstrate our commitment to conducting analyses that can lead to improvement of interaction and response for all agencies involved in National and Global Security.

WG 6 – Battle Management Command and Control

Chair:

Mr. Terence Peterson, Kwedz Research, LLC; 703-798-7121, terence.peterson@us.army.mil

Co-Chair:

Mr. Steven Forsythe, Johns Hopkins University / Applied Physics Laboratory,
937-912-5601, Steven.Forsythe@jhuapl.edu

Advisor:

Mr. Dwayne T. Hill, US Army Test and Evaluation Command, 703-681-2749,
Dwayne.Thomas.Hill@us.army.mil.

Battle Management Command and Control (BMC2) is one of the six joint functions that enable the conduct of joint, interagency, intergovernmental and multinational tasks across the range of military operations. Joint Publication 3-0 states that command and control is “the authority and responsibility for effectively using available resources and for planning, employing, organizing, directing, coordinating, controlling, and protecting military forces for the achievement of assigned missions.” For over the past 2 decades, the United States has been increasingly relied on to command and control joint, interagency, intergovernmental and multinational forces during offensive, defensive and stability operations in locations around the world. From these operations, analysts have been involved in not only helping plan and support these operations, but responsible for identifying and providing solutions to real-time battlefield issues.

The execution of BMC2 in current and future operations will require the development and implementation of structures, systems, and procedures. These elements will be defined, in part, by asymmetric threats; operations in urban environments; collaboration with joint, interagency, intergovernmental and multinational entities; and planning, employing, organizing, directing, coordinating, controlling, and protecting military forces. For the 79th MORSS, WG 6 will provide an opportunity for military, government, and civilian operations research analysts to examine topics, methodologies, analyses, and innovations pertinent to the challenges of C2 within this context.

Working Group 6 invites papers and discussions regarding the current and future analysis of BMC2 issues, systems, architectures, investment strategies and processes as well as educational programs, training programs and tools that support the continued growth and development of BMC2 capabilities. In keeping with this year’s theme “Developing the Next Generation of National Security Analysts,” WG 6 extends a special offer to junior analysts in the BMC2 field to present their work. Presentations may include completed studies or work-in-progress.

WG 7 - ISR and Intelligence

Chair:

Mr. Scott Schoeb, USA, ISR Branch, CIMCAD Division, USAMSAA, scott.schoeb@us.army.mil

Co-Chair:

Mr. Bryan Tollefson, USN, Surveillance Systems, CODE 56370, bryan.tollefson@navy.mil

Advisor:

Mr. Tim Elder, Lockheed-Martin, IS&GS, 858-922-5651,
tim.elder@lmco.com

For the foreseeable future, the United States will maintain the technological edge in "battlefield awareness" and precision-guided weaponry. However, in the decades to come, we will face three types of threats: Asymmetric threats in which state and Non-state adversaries avoid direct engagements with the US military but devise strategies, tactics, and weapons to minimize US strengths and exploit perceived weaknesses; Strategic threats, including mobile missile and submarine threats, in which Russia, China, and probably North Korea, Syria, and Iran, will have the capability to strike the United States or their allies; and Regional military threats, in which a few countries maintain large military forces with a mix of Cold War and post-Cold War concepts and technologies. Many of these potential adversaries are undertaking increasingly sophisticated Cover, Concealment, Camouflage, Denial and Deception (C3D2). These efforts are designed to hide key activities, facilities, and capabilities (e.g., mobilization or attack preparations, WMD programs, advanced weapons systems developments, treaty noncompliance) from US intelligence; to manipulate US perceptions and assessments of those programs; and to protect key capabilities from US precision strike platforms. With the increase in dynamic targeting, smaller yield weapons, a desire for reduced collateral damage and a large and growing inventory of coordinate-seeking weapons, special emphasis will be placed on the ability of intelligence assets to provide accurate Target Location Accuracy. Foreign knowledge of U.S. intelligence and military operations capabilities is essential to effective C3D2. Advances in indications and warning capabilities; the growing availability of camouflage, concealment, deception, and obscurant materials; advanced technology for, and experience with, building underground facilities; and the growing use of fiber optics and encryption will increase the C3D2 challenge.

The 2004 Intelligence and Terrorism Prevention Act calls for actionable intelligence tailored to the threats of the 21st century. Key to producing actionable intelligence from raw information is having highly trained and skilled professionals, who comprehend advanced analytical techniques. We must continue to evolve and advance analytical training with interactive high fidelity tools and modeling and simulation data when real world data are not available. Papers that explore multidisciplinary themes are highly desired. Papers are also solicited in the areas of foreign use of Operations Research (OR) to support intelligence, OR support to joint and coalition intelligence, peacekeeping and humanitarian aid and the use of new or nontraditional methodologies/sciences in support of the intelligence community.

WG 8 – Space Acquisition, Testing and Operations

Chair:

Mr. Paul Alexander Page, Army Space and Missile Defense Command, 256-955-2892,
Paul.Page@us.army.mil

Co-Chairs:

Dr. Steve Carr, JHU/APL, 443-778-8586, Stephen.Carr@jhuapl.edu

Mr. Tom DeLaCruz, SCITOR, 719-554-3184, thomas.delacruz.ctr@peterson.af.mil

Mr. David Eubanks, Boeing Research and Technology, 714-896-6581, David.A.Eubanks@boeing.com

Mr. Thomas H. Jacobs, Air Force Research Laboratory, 937-255-5006, Thomas.Jacobs@wpafb.af.mil

Mr. Milt Johnson, AFSPC/A9FA, 719-556-9828, Milton.Johnson@peterson.af.mil

Dr. Lee Lehmkuhl, MITRE, 719-572-8307, LeeL@mitre.org

Mr. Michael Tedeschi, Air Force Space Command, 719-554-8107, michael.tedeschi@afspc.af.mil

Mr. Mike Tomlinson, SAIC, 256-864-8355, TomlinsonW@saic.com

Advisor:

Ms. Lynda Liptak, Applied Research Associates, Inc., 505-883-3636, lliptak@ara.com

Working Group 8 focuses on Operations Research (OR) efforts that help our nation “secure the high ground” in space. The presentations will demonstrate analytically sound OR techniques that help our nation acquire and operate space capabilities/systems by assessing their strategic, tactical, and operational contributions (real or projected). Presentations will further our understanding of space capabilities incorporating this year’s theme “Developing the Next Generation of National Security Analysts.”

Today, more than ever, space is the true “high ground” given more nations around the world have organic space capabilities, access to the space domain, or both. Leveraging space provides the most global perspective possible allowing for enhanced global security, protection of lives and assets, movement of information, and augmentation of the Warfighter’s operational environment. As nations around the world continue to leverage and acquire space capabilities, it becomes increasingly critical for the U.S. to maintain Space Superiority across the broad range of space operations. This WG discusses the analysis of technological challenges and solutions that bring about unrestricted use of space, enabling our military and intelligence communities to effectively decide, detect, and deliver on a global scale.

We are seeking presentations on strategic, tactical, and operational contributions of space capabilities/systems, space families of systems, or space architectures whether in the concept, R&D, acquisition, or operational phase. Presentations may also address innovative analytical processes, methodologies, utilization of models and simulations, or techniques as they are applied to space capabilities/systems operations and/or acquisition. Submissions should demonstrate operations research techniques, whether innovative, unique, or traditional, and may be completed works or works in progress. It is the intent of this WG to obtain a variety of topics to ensure an interesting exchange of approaches, interests, and ideas among the space focused OR community.

WG 9 – Air and Missile Defense

Chair:

Mr. Woodrow Bevill, Lockheed Martin Corporation, 703-416-2350, woodrow.bevill@lmco.com

Co-Chair:

Dr. Richard C. Godwin, 256-450-0152, rich.godwin@mda.mil

Advisor:

Ms. Kelly L. Francis, Raytheon Missile Systems, 520-794-3595

“Developing the Next Generation of National Security Analysts” has a special meaning for Air and Missile Defense. Our perspectives of both Homeland Defense and Regional Air Defense have evolved over the years from protecting against the former Soviet Union’s massive bomber and ICBM/SLBM attacks against the Continental United States and their massed air and ground campaigns against Western Europe. While the manned aircraft threat endures, unmanned air vehicles, cruise/ballistic missiles and rockets continue to proliferate. Ballistic and cruise missiles present a significant threat to US and Allied forces overseas, as well as to the United States, its territories, and interests. Missiles are attractive to many nations as they can be used effectively against an adversary with a formidable air defense system, where an attack with manned aircraft would be impractical or too costly. In addition, missiles can be used as a deterrent or an instrument of coercion. Even limited use of these weapons could be devastating, because missiles can be armed with chemical, biological, or nuclear warheads. Reflecting the evolution of the threat, our Air and Missile Defense perspective has also evolved from the Cold War stance of employing a nuclear-armed Sprint or Spartan missile, through the limited point-defense capability we saw in the first Gulf War, to the present’s conventionally armed hit-to-kill interceptor. Evolution? Perhaps revolution is more accurate as current capability includes directed-energy defense capability. To add even greater complexity, we are now working to integrate the counter rocket, artillery and mortar mission, cyber-defense, and space operations under the umbrella of Air and Missile Defense. How do we use OR to reflect our understanding of the Air and Missile Defense mission? How do we develop the next generation of national security Analysts with all of the lessons experienced from our collective Cold War/Gulf War experience? What methodologies are appropriate to derive requirements for future systems, and how we teach our upcoming analysts how to use them effectively? How do we develop the operational concepts, tactics, techniques, and procedures (TTPs) that will allow war fighters to more effectively use tomorrow’s advanced air and missile defense systems? These challenges, dealing with both nation state and non-state actor, in a politically charged environment, confront the Air and Missile Defense analyst. Need more challenges? Command and control of air and missile defense assets is driven both by threat diversification by the emergence of a net-centric command and control structure. Effective command and control is further challenged by the need for positive airspace control measures with exponentially increasing aerial entities using lower airspace from ground level to 1,000 feet. The battlefield maneuver commander requires unmanned aerial vehicles to assist with their combat missions. How does the air and missile defense team ensure their positive identity and effective airspace control measures?

Supporting the 79th MORSS, WG 9 will focus on current and future studies and analyses that address enhanced defensive systems, their command and control and employment across multiple services, joint forces, Allies, and Coalition partners. The ability to perform centralized command and control of Air and Missile Defense systems that will effectively engage from ‘mud-to-space’ while allowing decentralized execution and providing for the elimination of fratricide is critical to the air and missile defense mission supporting global security. Air and Missile Defense is a critical combat capability of the Combatant Commander. WG 9 will foster education, promote critical thinking, and enhance collaboration on the diverse and changing facets of air and missile defense.

WG 10 – Joint Campaign Analysis

Chair:

Mr. James T. Treharne, Center for Army Analysis (CAA), 703-806-5580, james.treharne@us.army.mil

Co-Chairs:

Mr. Michael A. Ottenberg, AT&T Government Solutions, Inc (OSD CAPE Simulation and Analysis Center (SAC)), 703-696-9360, michael.ottenberg.ctr@osd.mil

Dr. David Knudson, Center for Army Analysis (CAA), 703-806-5317, david.knudson@us.army.mil

Mr. Paul J. Bross, Lockheed Martin Corporation Center for Innovation
757-935-9504, paul.bross@lmco.com

Mr. Miles Douglas Edwards, Center for Army Analysis (CAA), 703-806-5615,
Miles.Edwards@us.army.mil

Mr. Michael G. McMillie, HQ USAF/A9IW, 703-588-8671, michael.mcmillie@pentagon.af.mil

Mr. William H. Woodson, Marine Corps Combat Development Command (MCCDC), 703-784-6044,
William.woodson@usmc.mil

Advisor:

Mr. R. Eric Johnson, Unisys Corp (Manager, Federal Systems, OSD Program),
703-601-0417, richard.e.johnson@unisys.com

The integration of land, sea, air, space, cyberspace, and special operations forces into joint and interagency campaigns is a demanding challenge for warfighters. The synergies, complementary capabilities, and sometimes competing demands of each combat element require a unique balance to enable the warfighter to achieve overall campaign objectives in an optimum manner. The challenge to military operations research professionals is to provide responsive, comprehensive and credible analyses informing decision makers of the results, insights and alternatives of warfighting campaigns, which will allow civilian and military leaders to successfully tackle critical national security issues. The focus of Working Group 10 is to provide a forum for discussions and presentations that relate primarily to joint campaigns, but consider interagency concerns as well. The working group emphasizes the unique challenges faced when attempting to model, simulate, and analyze joint warfighting operations. Results of analysis will be presented and measures of effectiveness will be discussed. Peer review of the analysis techniques and results will be an important element of the working group activity. Of special interest to WG 10 are models, analytical simulations, and other automated tools supporting campaign analysis. The Joint Campaign Analysis Working Group concentrates on events that are bringing significant change and visibility to the national defense establishment and its analytical community. As the Society's 79th Symposium convenes, our armed forces will be focusing resources along a variety of fronts: homeland defense, irregular warfare, and preparing for potential conventional campaigns. Supporting agencies and staffs use a variety of analytical techniques, tools, and processes to investigate and help unified, joint task force and component commanders better understand the unique aspects of their campaign environments. This support to unified and joint force commanders has a direct impact on how our armed forces conduct military operations, and improve the quality of decision-making. The Working Group is interested in providing a critical forum for illuminating examples of this analytical support. The 79th MORS Symposium provides WG 10 the opportunity to review recent work that has a proximate influence on campaign analysis, look into the future and inform the direction of change, and share with the community possible directions, cautions, and other benefits of its experience. Prime candidates of interest to WG 10 are analysis, study efforts, research techniques, methodologies and models/simulations that:

- Present results of completed or in-progress warfighting analysis
- Support programming and policy decisions
- Inform the direction and scope of transforming forces

- Assist deliberate and crisis action decision-making
- Improve automated decision support tools

WG 10 earnestly solicits the opportunity to sponsor the presentation of thought-provoking papers in these areas. Final paper selection will be based on the 79th MORS Symposium theme -- Developing the Next Generation of National Security Analysts -- and their relevance to campaign analysis. Based on previous symposia, presenters should be prepared to deliver their briefings in 30 minute periods to include questions. Works-in-progress, as well as completed papers, are welcome.

WG 11 – Land and Expeditionary Warfare

Chair:

Mrs. Melissa Barrette, Scenarios and Data Directorate, TRAC-FLVN, 913-684-9280,
Melissa.barrette@us.army.mil

Co-Chairs:

Mr. Bob Steele, Wargaming and Simulations Development Directorate, TRAC-FLVN, 913-684-9263,
Robert.Steele1@us.army.mil

Mr. Robert Horton, Wargaming and Simulations Development Directorate, TRAC-FLVN, 913-684-9158,
Robert.Hortonii@us.army.mil

Advisor:

Mrs. Shaynah Clements, Wargaming and Simulations Development Directorate, TRAC-FLVN, 913-684-9171, Shaynah.clements@us.army.mil

The aging workforce in our country is being replaced by a younger generation of workers raised during a period of intense technological growth. This seems especially true for the military analytic field. Increasingly more work is being accomplished with the aid of technology as computer capacity and capability continually improves.

Concurrently, the nature of warfare is changing away from ground-on-ground, large scale army combat using heavy armored vehicles, and moving towards more asymmetric operations including irregular warfare, deployment of IEDs, and use of suicide bombers. But while there is an emergence of new enemies deploying non-standard battle tactics, we must maintain our ability to react to hostile threats from existing enemies using standard battle tactics. This leads to an increased demand for flexibility in waging both standard and non-standard warfare, in addition to ongoing stability operations.

The challenge facing the operations research community is two-fold. The first challenge is to successfully recruit the next generation of analysts with the education and skill set to continue the progress made by the current OR workforce. The second challenge is training these new analysts to meet the changing demands the irregular fight brings while continuing to build on the analytical foundation of the skilled workforce who built the OR field.

Working Group 11's topics, as they relate to all types of land based warfare, corresponds well with the theme of the 79th MORSS, "Developing the Next Generation of National Security Analysts". We are seeking presentations that address advances in military operations, operations research techniques, methodologies and models in the following areas.

- Operations in complex and urban environments/megacities.
- Operations against non-state actors in irregular warfare, and insurgencies.
- Force protection, minimization of collateral damage and avoidance of fratricide.
- Combat and stability operations involving coalition partners and host nation organizations.
- Future concepts in the analytical field as they relate to land and expeditionary warfare.

We invite all analytical agencies, services and centers of excellence to submit presentations that can enlighten our community on current studies and the future direction of land and expeditionary warfare. Efforts of interest include, but are not limited to, historical, current, and future force analysis, innovative applications of modeling and simulation, and studies that underpin the development of future warfighting concepts, to include control measures and tactics, techniques, and procedures.

WG 12 – Maritime Operations

Chair:

Mr. Richard O. Madson Jr., Lockheed Martin Corporation, 757-935-9428, rich.madson@lmco.com

Co-Chairs:

Ms. Kimberly Ten Broeck, NSWC PCD, 850-636-6040, kimberly.tenbroeck@navy.mil

Ms. Kristin M. Gooch, NSWC PCD, 850-235-5620, kristin.gooch@navy.mil

Advisor:

Mr. Thomas D. Butherus, NSWC PCD, 850-235-5663, thomas.butherus@navy.mil

The littoral regions of the world are where American influence and power have the greatest impact and are needed most often. Naval Forces will be focused on defeating anti-access capabilities in the form of small, fast surface combatants, quiet diesel submarines, and sea mines to enable control of the seas near land, and assure freedom of maneuver of joint forces from the sea base to the objective. These types of operations will require a broad spectrum of naval capabilities, which are currently characterized as (1) Sea Strike, *the projection of offensive power*; (2) Sea Shield, *the projection of defensive power*; and (3) Sea Basing, *the projection of sovereignty* to team with, and provide enhanced support for, joint forces afloat and ashore. These capabilities are integrated by an initiative to tie together naval, interagency, and national information grids to achieve unprecedented situational awareness and knowledge management, known as ForceNet.

Dominance in the littorals to project power ashore and influence the land campaign, for both the near- and long-term future, requires innovative and perhaps radical concepts for systems, tactics, support, maritime domain awareness, and force structure. It is clear that our evolving, integrated naval capability must be built wisely, with limited resources and assured effectiveness. Fresh ideas and bold new concepts, bolstered by sound analytic thought, are essential to foster the creativity and critical thinking needed.

The objective of the Maritime Operations Working Group is to promote the exchange of analytical techniques and encourage peer review of methodologies and results from research performed. This provides a means for continued growth of military operations research, and related disciplines, as applied to maritime operations with emphasis on the littoral warfare and regional sea control missions of the naval forces.

The principle focus of WG-12 will be to examine maritime operations, littoral warfare and regional sea control in contingency operations, and within the framework of interagency warfare. Our objective, in keeping with the 79th MORSS theme, “Developing the Next Generation of National Security Analysts”, will be to enhance Naval OR in this area by calling for papers that link their analytical conclusions to practical recommendations. We seek innovative presentations displaying original and focused analysis that stimulates thought, commentary, and perhaps, even controversy. Analysis presented can be work that is complete, or is “still in progress”.

WG 13 – Power Projection and Strike

Chair:

Mr. Kenneth Amster, Warfare Analysis and Integration Department, NAVAIR, 760-939-3186,
kenneth.amster@navy.mil

Co-Chairs:

Ms. Amy Howell, Lockheed Martin Corporation, 817-777-8135, amy.e.howell@lmco.com
Mr. Brian Truoang, Warfare Analysis and Integration Department, NAVAIR, brian.huoang@navy.mil
Mr. Thomas Woods, USSTRATCOM J822, 402-232-5386, WOODST@stratcom.mil

Advisor:

Mr. David Flanigan, The Johns Hopkins University Applied Physics Laboratory, 240-228-8129,
david.flanigan@jhuapl.edu

National security depends on the complementary application of diplomatic, economic, intellectual and military instruments of national power. Joint Vision 2020 and related Service doctrine documents provide a framework for the transformation of United States Armed Forces to maintain “full spectrum dominance” during military operations. Projection of power/influence, precision engagement, information superiority, and innovation are key operational capabilities that enable military forces to dominate the future battlespace and achieve national security objectives. These capabilities are equally applicable to achieving national security objectives at home as well as achieving strategic and military objectives abroad. The projection of power through presence and the ability to conduct strike warfare addresses our nation’s ability to implement policy by means of force using Carrier Strike Groups (CSG), Expeditionary Strike Groups (ESG), land and sea-based strike/attack capabilities (kinetic and non-kinetic), or combinations of joint forces. As defined in Joint Vision 2020, precision engagement is the ability of interagency forces to locate, track, and generate desired effects with decisive speed and accuracy throughout the spectrum of military operations. WG-13 seeks presentations (either completed or work in progress) that focus on the development and evaluation of concepts of operation; tactics, techniques, and procedures; systems engineering; and new technologies that support warfare derived from the following activities:

- Studies and analysis
- Test and evaluation
- Experimentation
- Advanced Concept Technology Demonstrations
- Modeling and simulation
- Training exercises

WG-13 encourages submission on a wide range of topics including:

- Command, control, and communication
- Intelligence, surveillance, and reconnaissance
- Electronic Warfare / Countermeasures
- Asymmetric threat to U.S. power projection assets and doctrine
- Information Superiority and Network Centric Operations
- Effects-based operations (kinetic and non-kinetic)
- Modeling, mission planning, execution and assessment
- Joint fire support
- Manned and unmanned system concepts to execute strike warfare and power projection missions
- Strategic attack
- Land/Sea-based strike

- Deep fires
- Precision weapon employment
- Diplomatic, Intelligence, Military and Economic (DIME) effects
- Regional influence through presence

WG 14 – Air Warfare

Chair:

Mr. Charles Sadowski, BAH, , ACC/A8SI, 216 Hunting Ave, Langley AFB, VA 23665,
757-764-1704, charles.sadowski.ctr@langley.af.mil

Co-Chairs:

Mr. Trevor Bihl, Air Force Institute of Technology, 937-255-3636, Trevor.Bihl.ctr@afit.edu,
Mr. Jeff Dubois, Wright Patterson Air Force Base, 937-255-0960, jeffrey.dubois@wpafb.af.mil
Mr. Michael Goodman, General Dynamics, 407-281-5633, Michael.Goodman@gdc4s.com
Mr. William Haas, Raytheon, 520-545-8795, william_r1_haas@raytheon.com
Mr. Dave Jones, BAH, 757-764-1703, david.jones.ctr@langley.af.mil
Mr. Chris Linhardt, INFOSCITEX, 937-255-8635, chris.linhardt@wpafb.af.mil
Mr. Paul Sheridan, CACI, 561-625-5498, psheridan@caci.com
Mr. Ralph Urch, BAH, 757-764-1740, ralph.urch.ctr@langley.af.mil

Advisor:

Dr. Branford McAllister, Jacobs, 102 West D Ave., Eglin AFB, FL 32542, 850-729-6102,
branford.mcallister@eglin.af.mil

It has become clear that when most effectively used, military power is integrated, combined, joint, and interagency. The Air Warfare Working Group is focused on one of several components of integrated military power: the employment of combat air power. Our focus includes the effective utilization of relevant sub-systems, operational employment concepts, and the integration of air assets during the conduct of joint and combined military operations that support national strategic and theater operational objectives.

Combat air power is intended to achieve specific desired effects that contribute directly to the achievement of military and political outcomes and objectives. Therefore, the primary focus of this working group is on conventional combat missions intended to destroy, degrade, defeat, or disrupt enemy forces. These missions include Counter-Air (Offensive and Defensive), Counter-Land (Close Air Support and Interdiction), Counter-Sea, and Strategic Attack.

The entire air warfare domain is rapidly changing and increasingly challenging as the environment and employment concepts evolve. Specifically, some of the toughest challenges we have faced in the combat arena, providing the most fertile ground for analysis, are the following: rules of engagement, target identification, prevention of fratricide, effects-based operations, battle management, command and control, tactical control of air assets, integration of unmanned aerial systems, time-critical targeting, employment of air-delivered munitions in a net-centric environment, hard targets, moving targets, preventing collateral damage, urban targets, as well as interoperability in the joint, combined, and interagency arena.

Therefore, the emphasis of WG-14 presentations is on applications, analyses, tools, concepts, and methodologies that improve our understanding of the dynamic phenomena of air warfare and the myriad of factors that impact success. These factors include air vehicle performance, capabilities of air-delivered munitions, emerging technologies, countermeasures, concepts of employment, doctrine, tactics, techniques, procedures, rules of engagement, combat identification, threats, operating environments, proficiency, interoperability, and air operations planning.

WG-14 strives to assist in developing capabilities to cope with emerging threats, new environments, and technological breakthroughs. In keeping with the MORS Symposium theme of “Developing the Next

Generation of National Security Analysts”, this working group focuses on the use of new analytical tools, processes, applications, methodologies, and metrics. Thus, we provide a forum for discussions and presentations relating to the unique challenges faced when attempting to conceptualize, model, simulate, analyze, and experiment with the employment of combat air power and the many factors that affect success in the combat arena and improve our understanding of air warfare.

WG-14 encourages presentations on both completed work and work in progress. Final paper selection will be based on both the 79th MORS Symposium theme and the focus of this working group. Presentations will be made in individual working group, combined working group, or composite group sessions. Presenters should be prepared to deliver their briefings in 30-minute periods including questions.

WG 15 - Casualty Estimation and Force Health Protection

Chair:

Mr. James Zouris, 619-553-8389, james.zouris@med.navy.mil

Co-Chairs:

Mr. Johnny Brock, The Boeing Company, 256-726-3631, johnny.brock@tbe.com

Mr. Bruce Shahbaz, 703-571-5565, bruce.shahbaz@us.army.mil

Dr. Norman Reitter, 814-269-2507, reittern@ctc.com

Advisor:

Mr. Pat McMurry, 210-221-9210, pat.mcmurry@us.army.mil

The 79th MORS Symposium theme "Developing the Next Generation of National Security Analysts" highlights the challenge for the analyst community to grow the young analysts who will develop innovative methods and applications to provide world-class healthcare to America's globally deployed military forces.

The major thrust of this working group is the development and application of quantitative methods for estimating casualties and determining the requirements to manage the casualties in the health service support system. Casualty estimation encompasses personnel losses, such as the incidence of wounded-in-action, killed-in-action, disease and non-battle-injured, psychiatric casualties, and fratricide. Health service support includes, but is not limited to, the areas of medical treatment (to include area support); patient movement; hospitalization, to include forward resuscitative surgery; dental services; preventive medicine; veterinary services; combat and operational stress control; health service logistic support; medical laboratory services; blood collection and distribution; and command, control, communications, computers, and intelligence (C4I).

The Global War on Terrorism, transformation, and military support to civilian agencies for natural and other disaster response has created a tremendous challenge in supporting the broad range of military operations. The operational environments of interest range from stability, security, transition, and reconstruction operations to major combat operations with the use of chemical, biological, radiological, and nuclear weapons.

Working Group 15 welcomes presentations in concepts under development and research as well as proven applications and techniques from all disciplines that highlight the use of operations research methods in the subject areas listed. Past presenters have included operations research analysts, statisticians, behavioral scientists, clinical providers, medical planners, logisticians, and other scientists.

WG 16 - Strategic Deployment & Distribution

Chair:

Ms. Jodi Browell, Northrop Grumman Technical Services support to USTRANSCOM Joint Distribution Process Analysis Center (JDPAC), 618-229-1250, jodi.browell.ctr@ustranscom.mil

Co-Chairs:

Ms. Diane Breivik Allen, Northrop Grumman Technical Services support to USTRANSCOM Joint Distribution Process Analysis Center (JDPAC), 618-220-5139, Diane.Allen.ctr@ustranscom.mil

Ms. Danielle Bartolomucci, Northrop Grumman Technical Services support to USTRANSCOM Joint Distribution Process Analysis Center (JDPAC), 618-220-5150, Danielle.Bartolomucci.ctr@ustranscom.mil

Mr. Greg Carl, USTRANSCOM Joint Distribution Process Analysis Center (JDPAC), 618-220-5175, Greg.Carl@ustranscom.mil

Mr. Greg Grindey L. Lamasoft, Inc. support to USTRANSCOM Joint Distribution Process Analysis Center (JDPAC), 314-369-8811, greg@llamasoft.com

Ms. Deborah Kotulich IBM, 703-582-3423, kotulich@us.ibm.com

Mr. Tom Rehm, Support to Defense Logistics Agency Office of Operations Research and Resource Analysis (DORRA), 804-279-3665, thomas.rehm.ctr@dla.mil

Mr. Jeff Tustin BBN Technologies, 617-873-2482, jtustin@bbn.com

Advisors:

LTC Jeff Gulick, USTRANSCOM, TCJ54-S Distribution Analysis Branch, 618-229-1885, Jeffrey.Gulick@ustranscom.mil

Col Jean M. Mahan, PhD, USTRANSCOM Joint Distribution Analysis Center (JDPAC), 618-220-5118, Jean.Mahan@ustranscom.mil

Dr. James T. Moore, Air Force Institute of Technology (AFIT/ENS), 937-255-3636, x4528, james.moore@afit.edu

The focus of the Deployment and Distribution Working Group 16 is to share knowledge about modeling, simulation, and analyses (MS&A) of deployment and distribution operations. Abstracts for this working group should focus on 1) examining state-of-the-art improvements to deployment and distribution processes through modeling and/or analysis, 2) developing new modeling objects, families, and classes that represent mobility and transportation systems, and 3) sharing new or changed doctrines, concepts of operation, missions, or fundamental assumptions regarding deployment and distribution processes, and 4) describing how defense distribution systems and processes are balancing the risks involved in facing an uncertain future. We encourage presentations of works in progress as well as completed papers.

Analyses presented at this year's MORSS in WG 16 should reflect the MS&A of people, equipment, infrastructure, operations, and processes in deployment and distribution systems across full spectrum operations. Each presentation should cover some aspect of operations research analysis to include operational effectiveness, cost, risk, capability, and/or metrics useful for senior level decision making and policy guidance and of interest to the wider mobility and distribution community. In addition, this working group may cover the end-to-end analysis of deployment and distribution requirements and processes from the source through the network of strategic and theater systems to delivery of forces, equipment, and sustainment to the Joint Operating Area (JOA).

The overall goal of the Strategic Deployment and Distribution Working Group is to exchange ideas that promote operations research analyses that support senior level decision-making across a broad spectrum of deployment and distribution endeavors.

WG 17 - Logistics, Reliability, and Maintainability

Chair:

Mr. Daniel Widdis, Concurrent Technologies Corporation, 702-518-5967, widdisd@ctc.com

Co-Chairs:

Mr. David Fulk, Logistics Management Institute (LMI), 757-225-0920, dfulk@lmi.org

Mr. Bob McCormick, HQ AFMC/A9A, 937-257-6920, Bob.McCormick@wpafb.af.mil

Advisors:

Mr. Tovey Bachman, LMI, 703-917-7361, tbachman@lmi.org

Mr. Alan Johnson, AFIT/ENS, 937-255-3636, x4703, Alan.Johnson@afit.edu

The nature of warfare constantly evolves, and this challenge demands the best from analysts, whether by developing new problem-solving approaches, or by applying existing techniques and models in novel ways. Logistics, Reliability and Maintainability are key aspects of support for our national security and for that of our allies around the globe. Technological improvements increase the information available to logisticians and the need for advancements in methods of organizing, mining, and presenting that information to decision makers in a manner to permit effective actions.

Working Group 17 provides a forum for discussing a wide variety of logistics analyses, including support to deployed forces, logistics impact on readiness, supply chain management, system reliability, designing for improved system maintainability, life cycle cost and operational effectiveness, support for joint operations with U.S. allies, inter-agency support, and reverse logistics. This list is far from exhaustive; papers that seek to solve important problems in other areas of logistics are valued as well.

Especially of interest are new analytical approaches and tools for handling amorphous, hard-to-define, or long-standing problems, or applying existing techniques to solve pressing problems in novel ways. Existing analytical techniques include mathematical modeling, statistical analyses, stochastic or deterministic optimization, forecasting, and simulation. We welcome analyses or analytical tools that are completed work, particularly those with demonstrated impact, as well as “work in progress” — often the best aspect of the sessions is discussion, questions and feedback from your peers.

WG 18 - Manpower and Personnel

Chair:

Ms. Deborah K. Eames, US Army Manpower Analysis Agency, 5915 16th St, Bldg 238, Ft. Belvoir, VA 22060, 703-805-2105, Deborah.Eames@us.army.mil

Co-Chair:

Dr. Bart Bennett, RAND, 1776 Main St, Santa Monica, CA 90407, 310-393-0411 x7695, bart_bennett@rand.org

LT James McCormack, US Coast Guard, COMDT (CG-1B3), Human Systems Integration for Acquisition Division, 1900 Half St SW, Washington, DC, 202-475-5099, james.f.mccormack@uscg.mil

Ms. Deborah Ray, US Army, 5915 16th St, Bldg 238, Ft. Belvoir, VA, 703-805-2681, Deborah-Ray@us.army.mil

Advisor:

LTC Mark Gorak, Army G1: Plans and Resources, 300 Army Pentagon, Washington, DC 20310, 703-692-5839, gorakms@conus.army.mil

The individual and collective talents, skills and capabilities of the total force of active duty, reserve, civilian, contractor and interagency personnel are required to accomplish the mission and goals of our national security strategy. To succeed in an increasingly challenging environment, decision makers depend on a sophisticated human resource management system to access, recruit, train, assign, distribute, motivate, care for, evaluate, retain and separate personnel. Integral to this success is the analytical support the manpower and personnel research community brings to bear on the toughest personnel challenges facing civilian and military leaders.

In keeping with the theme of the 79th MORSS, "Developing the Next Generation of National Security Analysts" the Manpower and Personnel working group seeks to embrace new technologies and research ideas, from both traditional and non-traditional sources of manpower and personnel analysis. We hope to encourage the involvement of new communities in this important analytical area to boost the existing analytical power of the field. We are seeking individuals who have innovatively addressed these challenges to share high quality presentations that describe their work or work-in-progress. Presentations should be rigorous in content and address one or more of the following: requirements determination, manpower planning, recruiting, screening and personnel selection, measurement of personnel readiness, attrition, retention, compensation, compensation reform, assignments and distribution, performance evaluation, and other manpower and personnel issues. To generate discussion and share ideas, presenters seeking input on work-in-progress, techniques currently under development, and completed analyses/papers are encouraged to submit abstracts to the working group chair/co-chairs or to the MORS office.

WG 19 – Readiness

Chair:

COL Scott Schutzmeister, Center for Army Analysis, 703-806-5499, scott.schutzmeister@us.army.mil

Co-Chairs:

Ms. Maria K. Hughes, Office of the Under Secretary of Defense (Readiness) Readiness Programming and Assessment, 703-693-5586, maria.hughes@osd.mil

Mr. F. Michael Slay, LMI, 703-617-7362, mslay@lmi.org

Advisors:

Dr. Joseph F. Adams, Institute for Defense Analyses, 703-845-2148, jadams@ida.org

Mr. Joseph J. Angello, Jr., OUSD (Readiness), Director, Readiness Programming and Assessment

As the Department of Defense continues its transformation to meet global challenges that confront the nation in the 21st Century, readiness takes on the new complexity of considering the capabilities of interagency and coalition partners, private and non-governmental organizations, and state and local authorities. Traditional readiness constructs must be rethought in order to provide efficient, cost effective, agile and dynamic organizations with expanded mission capabilities, including traditional and non-traditional roles both at home and abroad. Terminology such as rotational readiness, expeditionary forces, language and cultural capabilities, multiple service/component solutions, mission capability assessments, full spectrum operations, irregular warfare, and Stability, Security, Transition, and Reconstruction Operations (SSTRO), dominate Department discussions for the foreseeable future. Therefore, what tools can be used to assess and manage organizations and individuals for the missions we face? Can we involve and assess interagency and coalition partner capabilities? How do we engage all of these diverse entities in order to synergistically leverage collective readiness capabilities? What type of readiness analyst needs to be developed for the 21st Century? This Working Group focuses on readiness capability assessment tools to help answer the "ready for what" question. It also focuses on organizations/force management/force generation, and all relevant materiel, training, and personnel readiness issues. We consider analytic techniques and tools that allow for real improvements in how we plan, manage, and assess the readiness of our organizations to meet real world missions. Papers on a wide range of subjects are welcomed.

WG 20 - Analytical Support to Training

Chair:

Ms. Maria Minchew, Dynamics Research Corporation, 813-828-5966, mminchew@drc.com

Co-Chairs:

Mr. Kevin Pilgrim, The Boeing Company, 407-243-3785, Boeing, kevin.h.pilgrim@boeing.com

Mr. Mark Gerner, CALIBRE Corporation, mark.gerner.calibre@ocar.army.pentagon.mil

Advisor:

Mr. John Kearley, Dynamics Research Corporation, 757-348-1222, jkearley@drc.com

The theme for the 79th MORSS is: “Developing the Next Generation of National Security Analysts.” As the Armed Forces of the United States transforms to meet the challenges of the 21st Century, they work toward a common frame of reference for joint force concepts, capabilities, and requirements. Evolving trends within the military environment highlight the importance of continuing to evolve training programs to meet our security challenges and develop, sustain, and assess this challenge from a joint perspective in order to meet operational readiness requirements to respond to the security challenges faced in the long war. *Department of Defense (DOD) Directive 1322.18, Subject: Military Training* provides policy and guidance for the training of DOD personnel and the DOD components to support the operational needs of the Combatant Commanders. Training is a key element of readiness and national security. Readiness is “the ability of U.S. military forces to fight and meet the demands of the national military strategy.” Readiness is the synthesis of unit readiness, derived from the ability of a unit to deliver the outputs for which it was designed and joint readiness, the combatant commander’s ability to integrate and synchronize ready combat and support forces to execute the assigned mission. Continued budgetary pressures demand we use the most effective and cost efficient methods of training to attain the necessary readiness to support Combatant Commanders’ mission requirements and capabilities. Our ability to develop and use new analytical processes, frameworks, metrics, and tools, as well as new ways to use the old methodologies, to help solve the problems facing commanders and the training communities, is an important aspect to improving force readiness and contributing to our national security analyst needs. We must ensure we develop methodologies to measure, quantify, and assess improvements in training and how well that training meets the commanders’ needs and our national security goals.

The 79th MORS Symposium offers an opportunity to review recent work, training concepts and new training developments that address national security issues. We seek analytical presentations addressing any of the mission priorities and concerns outlined above. Both completed work and works-in-progress are welcome.

WG 21 - Experimentation

Chair:

Mr. Scott Hamilton, Booz Allen Hamilton, 757-836-5855, hamilton_scott@bah.com

Co-Chair:

Mr. Gary Williams, Lockheed Martin Center for Innovation, 757-935-9539, gary.e.williams@lmco.com

Advisor:

Mr. Steve Notarnicola, Lockheed Martin Center for Innovation, 757-935-9503,
steve.notarnicola@lmco.com

The Experimentation Working Group provides an opportunity for military, government and civilian operations research analysts to examine topics, methodologies, analyses, and innovations pertinent to all aspects of designing, planning, executing, analyzing and reporting the results of experimentation supporting the Department of Defense (DOD) and other government departments and agencies such as the Department of Homeland Security (DHS). As we address the theme for this year's symposium, "Developing the Next Generation of National Security Analysts", Working Group 21 emphasizes rigor in analytical processes and experimentation efforts that drive innovation in this important area. We welcome all completed or in-progress studies and topics that affect any facet of experimentation, such as:

- Designing credible experiments with limited resources
- Developing coherent strategies for campaigns of experimentation
- Developing meaningful Measures of Merit (MOMs)
- Accounting for small sample sizes
- Combining experiments and training exercises or field tests
- Addressing challenges with training participants
- Integrating simulation into experiments
- Reconciling data collection and player participation
- Analyzing results in a timely manner
- Addressing continually evolving experimental objectives
- Effectively sharing results and lessons learned

Working Group 21 also sponsors the MORS Experimentation Community of Practice (COP), a group that meets throughout the year to continue discussing experimentation issues and achieve consistency across government, industry and academia.

WG 22 - Measures of Merit

Chair:

Ms. Donna Cote, TRADOC Analysis Center, 913-684-9250, donna.m.cote@us.army.mil

Co-Chairs:

Mr. Kerry Lenninger, TRADOC Analysis Center, 913-684-9157, kerry.lenninger@us.army.mil

Mr. Ben Anderson, TRADOC Analysis Center, 913-684-7563, ben.a.anderson@us.army.mil

Mr. Jaime McLellan, TRADOC Analysis Center, 913-684-9292, jaime.mclellan@us.army.mil

Advisor:

Ms. Bonnie McIlrath, TRADOC Analysis Center, 913-684-7566, bonnie.j.mcilrath@us.army.mil

Operations Research is a field that includes various tested and true methods for conducting analysis, as well as methods that are still being explored and discovered. One feature that all methods share, however, is their reliance on quantifiable measures to gauge outcomes. Operations Research within the military and national security communities is no different.

We are a nation poised against global enemies that dynamically adapt to strike at U.S. military forces and our Homeland where and when we least expect. Concurrently, our military forces are transforming to best defeat this enemy in the modern operational environment. We must challenge the traditional Measures of Merit (MOMs) used to measure success, and develop new MOMs to help us understand the enemy and environment. While the U.S. continues to transform its forces to meet current and future needs, the analytic challenge is to develop appropriate measures that will assist decision makers and reduce the risks that U.S. military forces face in conflict.

The focus of WG 22 is integral to the theme for this year's Symposium, "Developing the Next Generation of National Security Analysts." WG 22 solicits papers that successfully use measures of merit to identify, define, and reduce the risks that our military and national security forces are facing, or will face, along with processes to ensure that the transformation of our military forces will enable the U.S. to continue to shape the international environment. Papers should focus on, but are not limited to, the development and use of MOMs for problems being addressed within the following focus areas:

- Conducting operations in urban and restrictive environments.
- Human Factors / social sciences
- Methods of limiting or reducing collateral damage
- Joint Force effectiveness and force allocation processes
- Intelligence, Surveillance, and Reconnaissance, and Situational Awareness
- Battle Command

Both completed work and works-in-progress are welcome.

WG 23 - Test and Evaluation

Chair:

LTC Glenn Nocerito, DUSA-TE, Senior Operations Research Analyst, glenn.nocerito@us.army.mil

Co-chairs:

Dr. Jeanne Hartzell, USMC Operational Test and Evaluation Activity, Jeanne.hartzell@usmc.mil

Ms. Swala Burns, USMC Operational Test and Evaluation Activity, swala.burns@usmc.mil

Ms. Brittney Cates, USMC Operational Test and Evaluation Activity, Brittney.cates@usmc.mil

Advisor:

Mrs. Shannon Krammes, USMC Operational Test and Evaluation Activity, Shannon.krammes@usmc.mil

Test and Evaluation (T&E) is a dynamic and challenging field. Made up of military, government, and civilian organizations, T&E provides the information necessary for decision makers to make complex decisions with regard to military systems.

The T&E Working Group provides a forum for operations research analysts to examine topics, methodologies, analyses, and innovations pertinent to all aspects of planning, designing, executing, and reporting formal T&E in the Department of Defense (DoD) and other government departments and agencies, as well as industry. Organizations struggling with experimentation implementation issues have been building their own repertoire and standards in experimentation improvements and innovations and there have been various levels of success in applying operations research tools and techniques to T&E.

The T&E Working Group will bring together Service, government, academic, and industry testers to share lessons learned in order to improve experimentation strategies and methods. Possible topics for presentations include:

- designing credible tests with limited resources
- developing coherent strategies for multiple successive experiments
- developing meaningful Measures of Effectiveness (MOEs)
- use of small sample sizes
- advantages of different test designs
- use of inexact technology surrogates
- overlaying experiments on training exercises or field tests
- difficulties in training participants, and problems with integrating simulation into experiments
- impact of data collection on player participation
- timeliness of analysis
- impact of continually evolving experimental objectives
- implementation and sharing of results/lessons learned
- implementation of Design of Experiments (DOE)

The T&E Working Group will solicit input and discussion from the analysts who are involved in the planning, design, execution, and analyses of T&E. To understand and improve the entire process, participants from throughout the entire T&E community will be included. This community includes the organization leaders who develop and approve T&E programs and budgets, service and government staff agencies who are customers of T&E results, members of the acquisition community who participate with experimental hardware or software, combat developers who provide experimental concepts and scenarios, service operational testers and modelers who use T&E data, and service operational forces who support T&E as participants.

This year's symposium is titled "Developing the Next Generation of National Security Analysts." As such, in reviewing abstracts for prospective presentations, special consideration will be given to

presentations given by junior analysts and presentations that emphasize how junior analysts are being developed to handle the various challenges of T&E. WG-23 encourages presentations on both completed work and work in progress.

WG 24 – Analysis of Alternatives (AoA)

Chair:

Ms. Anna Rae Castillo, Office of Aerospace Studies, anna.castillo@kirtland.af.mil

Co-Chair:

Mr. Marcos Ortiz, Office of Aerospace Studies, marcos.ortiz@kirtland.af.mil

Advisor:

Mr. Joe Auletta, Office of Aerospace Studies, joseph.auletta@kirtland.af.mil

The Analysis of Alternatives (AoA) is the analytic bridge between the Joint Capabilities Integration and Development System (JCIDS) and the DoD acquisition process. AoAs provide key support and critical data to decision-makers responsible for the expenditure of billions of US tax dollars. The primary focus of an AoA is to evaluate life cycle cost and operational effectiveness as they relate to identified defense capability shortfalls and gaps. An AoA is expected to illuminate capability advantages and disadvantages of each alternative; consider joint operational plans; examine sufficient feasible alternatives; document and analyze key assumptions, variables and sensitivities; as well as assess technology risk and maturity. Risk has become an increasingly important AoA consideration. During execution, AoAs serve as an educational forum for complex and often unique issues as they demand communication and understanding amongst decision makers, stakeholders, and study staff members at all levels.

Recent emphasis by OSD and JCS has highlighted several analytic challenges that future AoAs need to come to terms with. Specifically, expanding the breadth of the analysis, and improving the analytic insights in areas which have traditionally been “too hard to analyze”. There is also a need to consider all alternatives in relation to the Joint Environment, including stakeholders outside of DoD.

The theme for the 79th MORSS is: “Developing the Next Generation of National Security Analysts.” WG-24 strives to examine the intricacies of the AoA, materiel and non-materiel approaches to filling gaps and shortfalls, and the capability gap identification processes for producing decision quality analysis. Priority will be given to presentations on lessons-learned regarding study challenges (scope, depth, breadth, etc.) and methodologies utilized to overcome them. WG-24 is also focused on AoA preparatory work (including Capability Based Assessments (CBA) and pre-Materiel Development Decisions (MDD) analyses). Priority will be given to papers that present details of the analytical processes utilized that allowed for a broad range of analysis within constrained timeframes.

WG 25 – Cost Analysis

Chair:

Mr. Terry Mitchell, Lockheed Martin IS&GS – Defense, 720-479-3043, terry.mitchell@lmco.com

Co-Chairs:

Dr. William H Jarvis, NASA, Independent Program Assessment Office,
202-358-3771, wjarvis@hq.nasa.gov

Mr. Bruce Riggins, The Boeing Company, 714-896-4527, bruce.riggins@boeing.com

Dr. Leopoldo E. Soto Arriagada, CAN, 703-824-2391, sotoarl@cna.org

Mr. John Wallace, AFCAA/FMY, 703-692-6002, john.wallace@pentagon.af.mil

Advisor:

Mr. Daniel Dassow, The Boeing Company, 314-234-9098, daniel.d.dassow@boeing.com

The next generation of national security analysts will succeed based on a keen understanding of the evolving DOD environment. Political, budgetary and security realities require increasing scrutiny of costs, and management of risks, for development, procurement, and operation of weapon and support systems. The next generation of national security analysts need to be made aware that to successfully compete for limited departmental funds, system evaluations must include significant analysis of projected business cases for all program phases. Detailed affordability, risk, and capability assessments, always vital for sound decisions, are now absolute requirements. These assessments will have ever more far-reaching impact on decisions made during development, procurement and operations. Providing realistic total ownership cost (TOC) estimates for all phases of proposed systems, early enough in the design process to support trade-off decisions affecting life cycle costs and system effectiveness, presents a significant OR challenge. WG 25 will focus on these issues as part of the overall MORS effort to inform and educate the next generation of national security analysts.

System effectiveness, or mission capability, is a function of design, supportability, and technology; answering the question, “What is the cost of that capability?” is not easy. The question takes on additional importance given the growing complexity of today’s systems, and the increasingly rapid pace of technological change. Given the new DOD focus on affordability, defined by Ashton Carter (Undersecretary of Defense Acquisition, Technology, and Logistics) as “cost effective capability,” we must develop methods of analysis that blend traditional OA techniques with those of cost analysis. Such methods are required to assess the true cost of capability in ways that make sense both to the warfighter and the budget office.

WG 25 seeks presentations that address these important concerns. All submissions or proposals relating to military economic analysis, the cost of capability, and related disciplines are welcome. Preference will be given to study results that incorporate creative uses of OR tools to develop improved cost estimates and analysis to support better decisions. Effective methods for presenting the results of complex operational analysis in a clear, concise manner are always of interest. WG 25 also solicits topics suitable for a panel discussion format, and recommendations of subject matter experts willing to participate in such discussions. Specific topics of interest include those that highlight OR contributions to expanding Cost Analysis scope and accuracy, such as:

- Cost and capability impact of technology insertion
- Projecting and managing costs for evolving threats, including terrorism
- Optimizing the management and replacement of aging infrastructure
- Portfolio analysis and decision support frameworks
- Costs and benefits of developing open standards and open architectures

- Costs and benefits associated with interagency operations, systems of systems, and network centric operations
- Maintenance and intellectual property issues of historical cost databases
- Streamlining the acquisition process

Presentations may be work completed or work-in-progress. One session will be devoted to a senior level review and critique of a cost analysis. Volunteers from the OR and Cost Analysis communities are sought for a senior roundtable discussion of critical cost analysis issues and how OR can be better integrated into cost analysis. All OR professionals and cost analysts with innovative methods for analyzing and managing cost and risks are welcome.

WG 26 – Decision Analysis

Chair:

Mr. Ronald “Fred” Woodaman, Innovative Decisions, Inc.; 540-538-6568,
rwoodaman@innovativedecisions.com

Co-Chairs:

Mr. Russell Mosier, Innovative Decisions, Inc.; 703-635-3043, rbmosier@innovativedecisions.com

Mr. Raymond Harris, TASC, Inc., 703-633-8300 x4779, Raymond.harris@tasc.com

Ms. Jeannine Mantz, Air Force Cost Analysis Agency, 703-604-0457, jeannine.mantz@pentagon.af.mil

Capt. Jeremy Jordan, USAF, Air Force Institute of Technology, 937-255-3636, jeremy.jordan@afit.edu

Advisor:

Mr. John R. Tindle, TASC, Inc.; 719-622-5205, john.tindle@tasc.com

Decision Analysis as a discipline provides operations researchers with philosophy, theory, and methodology to address challenging, complex decision situations in a formal manner. It encompasses many procedures, methods, and tools that enable the analyst to model and evaluate the important aspects of a decision, with the goal of aiding the decision maker in making the best-informed decision possible in the allotted time. Within WG26, emphasis has been placed on two general categories of practice: 1) the assessment of decision maker's preferences in the evaluation of alternatives; and 2) the incorporation of uncertainty about the outcomes and about the information used in the decision. Additionally, decision analysis methods are being incorporated as components of multi-disciplined approaches, combining techniques such as mathematical programming, simulation, Bayesian networks, and machine learning, to support applications such as automated command and control systems, fault detection, and resource allocation.

The theme for this year's symposium is “Developing the Next Generation of National Security Analysts”. WG 26 invites papers, especially from young analysts, describing completed work or work in progress that describe innovative methods, models, and case studies in the use of Decision Analysis for national security and homeland defense analyses. WG 26 receives many more papers than the available number of time slots. To improve chances of being selected, we urge prospective authors to emphasize the decision analysis aspects of their work in their abstract submission. We look forward to hearing from you!

WG 27 – Modeling and Simulation

Chair:

Mr. David Gibbons, Marine Corps Operations Analysis Division, 703-432-8365, david.gibbons@usmc.mil

Co-chairs:

Mr. Danny Champion, TRAC WSMR, 575-678-2763, danny.c.champion@us.army.mil

Mrs. Elizabeth Skaer Shaw, Marine Corps Operations Analysis Division, 703-784-6043,
elizabeth.skaer@usmc.mil

Mr. Ted Roofner, Marine Corps Operations Analysis Division, 703-784-0435, ted.roofner@usmc.mil

Mr. Oren Hunsaker, TRADOC Analysis Center, 913-684-9159, oren.hunsaker@us.army.mil

Mr. Jon Peoble, Raytheon Missile Systems, 520-545-7841, jon.e.peoble@raytheon.com

Mr. Adam Martin, Army G-8 Warfighting Analysis Division, 703-602-3248,
adam.robert.martin@us.army.mil

Capt. Jeremy D Jordan Air Force Institute of Technology, 937-255-3636 x4512

Advisor:

Mr. Jeff Tkacheff, Marine Corps Operations Analysis Division, 703-784-0429, jeffrey.tkacheff@usmc.mil

Modeling and Simulation encompass a broad range of techniques commonly employed by the military operations research community, thus WG 27 is well suited to support this year's theme "Developing the Next Generation of National Security Analysts." WG 27 presentations should highlight the application of the various disciplines that come into play such as: computer programming in building simulations, statistical analysis in analyzing the output data, subject matter expertise in assessing the degree of realism and verification and validation techniques. Special emphasis should be placed on recent work that provides quantitative results to decision-makers and work that demonstrates the use of innovative techniques to tackle today's tough problems in supporting our National Security interests. Our goal is to present a diverse mix of interesting analyses that cover a variety of operational issues and analytic techniques across the full spectrum of modeling and simulation. We seek papers that discuss the application of sound Operations Research techniques from the joint strategic level down to system engineering level issues.

WG 28 – Operational Environments

Chair:

Dr. Sean O'Brien, Army Research Laboratory (ARL), 575-678-1570, sean.g.obrien@us.army.mil

Co-Chairs:

Dr. Joyce Nagle, US Army Corps of Engineers, Joyce.A.Nagle@erdc.usace.army.mil

Mr. Stephen Quigley, Air Force Research Laboratories, Stephen.Quigley@hanscom.af.mil

Ms. Victoria Moore, US Army Corps of Engineers, vickey.d.davis@usace.army.mil

Mr. Jeffery Burkhalter, US Army Corps of Engineers, jeffrey.a.burkhalter@usace.army.mil

Advisor:

Dr. Richard ("Rick") Shirkey, Army Research Laboratory (ARL), 575-678-5470,

richard.shirkey@us.army.mil

The Operational Environments Working Group (WG 28) provides a forum for discussions of the environment's role in the full spectrum of military and national security operations from warfighting to non-adversarial crisis response (e.g., humanitarian assistance/disaster relief). The focus of WG 28 is the synergistic interaction of weather (atmosphere, ocean, space and terrain), human-constructed (physical infrastructure) and abstract (political, social, cultural, and economic) factors as they impact military, national and homeland security operations. In keeping with Joint Vision 2020's purpose, WG 28 solicits thought-provoking presentations of studies, research and development, and experiments that describe in broad terms the human talent and operational capabilities that will be required for the joint force to succeed across the full range of military operations. These presentations are intended to offer insights into the challenges and opportunities that will confront the next generation of national security analysts from the environmental perspective.

WG 29 - Computational Advances in Operations Research

Chair:

Dr. Mitchell Kerman, Lockheed Martin MS2, 609-326-5156, mitchell.c.kerman@lmco.com

Co-Chairs:

Mr. Jeffery Dixon, The Johns Hopkins University Applied Physics Laboratory
240-228-3153 (Washington), 443-778-3153 (Baltimore), jeffery.dixon@jhuapl.edu

Ms. Mary McDonald, Naval Postgraduate School, 703-634-9024, mlmcdona@nps.edu

Ms. Meredith Schutt, Lockheed Martin Center for Innovation, 757-935-9355, meredith.schutt@lmco.com

Mr. Trey Vecera, The Johns Hopkins University Applied Physics Lab, 443-778-0536,
trey.vecera@jhuapl.edu

Advisor:

Mr. Otis Brooks, The Johns Hopkins University Applied Physics Lab, 240-228-5842,
otis.brooks@jhuapl.edu

The theme for the 79th MORSS, "Developing the Next Generation of National Security Analysts," accentuates the need to enliven the educational and instructional base of OR to stimulate interest and growth in this field to address the critical challenges facing our national security, both at home and abroad. The complexity of these challenges requires innovative computational techniques to address the multiple domains represented by the well-known DIME/PMESII (Diplomatic, Informational, Military, and Economic / Political, Military, Economic, Social, Infrastructure, and Information) framework. Working Group (WG) 29, Computational Advances in Operations Research, is focused on new and innovative computational capabilities and methodologies that can improve the ability of analysts to provide expanded assessments and recommendations to decision makers. WG 29 will focus on improving the computing infrastructure, by capturing enhanced development and utilization of techniques and innovative thinking, which will equip decision makers with new ways to handle the myriad complex decisions confronting them on a daily basis. WG 29 seeks presentations that delve into advances, concepts, methodologies, and techniques that support analysis of the complex, multi-dimensional, multi-domain problems facing today's analysts.

The following are illustrative of computational advances: support to Enterprise-level information analysis in an operational sense; advances in distributed interactive simulations, federations, and architectures; federation middleware; optimal model fidelity in federations; rapid scenario generation techniques to support broad exploratory analysis; parallel computing, including parallel algorithms and programming methods that enable parallel computing systems; databases and their manipulation; high-dimensional data mining/analysis; modeling of terrain, weather, and other environmental effects pertinent to simulations; data fusion; graphical user interfaces, iconic languages and related human-machine interface issues; modeling advancements in areas such as virtual reality processes and systems; and complex adaptive systems, artificial intelligence, and machine learning techniques as they pertain to Operations Research.

The above may benefit the following applications: modeling and analysis of counter-proliferation, counter-terrorism, and counter-insurgency related scenarios, including information warfare; combat survivability analysis; modeling, simulation, and analysis of C4ISR systems; modeling stability operations; consequence management and humanitarian assistance/disaster relief; course of action analysis, especially considering effects on non-combatants; mission area analysis; mission needs analysis; embedded training (transition from mission planning and rehearsal tools to real C4I system integration); management and analysis of large datasets; and stochastic search and optimization. WG 29 is interested

in concepts under development and research, as well as proven applications and techniques utilized in emerging areas of interest.

WG 30 – Wargaming

Chair:

Mr. Rich Phares, Booz-Allen Hamilton, 703-377-5118, rich.phares@gmail.com

Co-chair:

Mr. Kyle Kliewer, Lockheed Martin Corp., 407-356-9821, kyle.kliewer@lmco.com

Advisor:

Mr. Michael W. Garrambone, Senior Military Operations Research Analyst, General Dynamic, mike.garrambone@gd-ais.com

Wargames are used as one means of supporting senior Department of Defense and national security decision makers. Wargaming is also found in training curricula in military school houses, in businesses, and in university courses. Most wargames are structured to address specific issues, such as current or future National Security challenges. Their outcomes tend to be of the qualitative nature, but still of substantial interest to Defense leadership. There is an intense interest to apply quantitative tools to these games, so that analytical techniques can then be applied. In a MORS Special Meeting in October 2007, issues concerning wargame design, structure, data, information, and metrics; why and how modeling and simulation could be used in support of a wargame; and the integration of wargame results with external quantitative analyses were discussed and debated. During the June 2010 Symposium, the Working Group examined quantitative outputs from several different game designs.

Wargames are attractive to decision makers because they physically interact with others who have a vested interest in the issues at hand. The narratives derived from a game are sometimes more important than the raw data. Relating these narratives to quantitative analysis is a challenge, but that may reap immense benefits to the users of wargames.

The emphasis of Working Group 30 presentations is on game design and structure, information used in and data collected from different games, tools used to present information to players and to capture data, use of models and simulations to supplement game play, and techniques, methodologies, or processes that provided for the use of external quantitative analyses after the game was completed. Factors that may be considered could be the type of game, number of players, use of groups, use of a control cell, any technologies used in the game, data collection techniques, in game analysis methodologies, or any post game analysis methodologies. An emphasis for the 2011 symposium will be on teaching new analysts these in-game or post-game methodologies.

WG 30 is interested in ways to improve gaming, to include immersion of the players into the game environment, the ability to rapidly adjudicate player actions, and the design of games to adapt to examination of new topics (new threats, environments, technologies) as they occur. This WG encourages the development of ways to provide quantitative analysis of a generally non-quantitative proceeding. The WG is looking for innovative ideas that will spawn discourse and invite game designers to include “hooks” for those ideas in their game structure that will in turn provide decision makers with more data to consider post game. WG 30 encourages presentations on both completed work and work in progress.

WG 31 – Information and Cyber Operations

Chair:

Dr. Michael Atamian, Metron, Inc; 858-792-8904, atamian@ca.metsci.com

Co-Chairs:

Ms. Erika Banks, STRATCOM (BAH), 402-232-0299, banksens@stratcom.mil

COL John Diaz, USA, 937-255-7584, john.diaz@usar.army.mil

Ms. Christie Hochstein, 443-479-9916, cmhochs@nsa.gov

Lt Col Stephen Katz, USAF SPACECOM, 719-554-8535, stephen.katz@us.af.mil

Mr. Brian Lenane, SRA International, 703-284-6662, brian_lenane@sra.com

Mr. Tuyen V. Tran, NGC, 410-993-2943, tuyen.tran@ngc.com

Advisor:

Mr. Jim McMullin, USA CAA, 703-806-5384, james.mcmullin@us.army.mil

Information and Cyber Operations is a broad field, requiring a wide range of disciplines to support its analytical, operational, planning, testing, training, and experimentation applications. From social network analysis to digital signal processing, from individual bits to transnational populations, information and cyber operations require an interdisciplinary approach to both define and solve its tough problems. Of crucial importance is the ability to demonstrate the impact of information and cyber operations capabilities during peace, crisis, war, or operations other than war. Working Group (WG) 31 seeks to showcase analyses and associated papers that provide insight into these important areas, regardless of the technique or capability used. We seek analyses demonstrating the impact of information and cyber operations and information strategies upon adversary, friendly, and neutral organizations. Results of actual analyses and exercises represent the WG's primary focus, but actionable decision support techniques applied to information and cyber operations are also welcome.

WG 31 will use as one starting point the Department of Defense (DoD) definition of Information Operations (IO) as defined by DoD Directive O-3600.01 (August 14, 2006): "Information Operations (IO)." The integrated employment of the core capabilities of Electronic Warfare (EW), Computer Network Operations (CNO), Psychological Operations (PSYOP), Military Deception (MILDEC), and Operations Security (OPSEC), in concert with specified supporting and related capabilities, to influence, disrupt, corrupt, or usurp adversarial human and automated decision making while protecting our own." The WG also recognizes that information and cyber operations efforts must also be globally integrated with actions taken by other instruments of national power, and as such must also consider Interagency, non-governmental, and Coalition partners, as well as potential opponent and neutrals across the full spectrum of conflict. Moreover, the heavy reliance upon information technologies and ensuing global integration has increased the importance of information and information superiority to the point that information technologies and information are becoming a critical objective for future conflicts.

WG 31 encourages submission of presentations relevant to the information and cyber operations areas outlined below. The submission may be finished work, work in progress, or ideas and concepts.

- Activities and analyses that demonstrate the integration of capabilities at the strategic, operational, and tactical levels of war to produce effective United States Government (USG) responses
- Real-world applications of IO tools, techniques, and simulations;
- Multidisciplinary approaches to defining and solving information and cyber operations problems
- Analyses of network operations that demonstrate the impact of information attack, defense, exploitation and assurance as well as on attack detection, and/or restoration across the spectrum of conflict

- Studies using tools applied to any of the core competencies described above
- Studies that examine the effects of attack, defense, and influence operations on friendly, adversarial, and/or neutral organizations
- Studies that provide insight into the use of offensive, defensive, and local and global influence information strategies during conflict and stability operations, and their resulting successes and failures
- Studies that deal with the interaction of information and cyber operations in dealing with the terrorist threat
- Symposia, games, exercises, experiments or acquisition testing that involved information and cyber operations, emphasizing the vulnerabilities of information-dependent organizations
- Analyses of historical examples of successful and unsuccessful information and cyber operations.

Papers that describe development of information and cyber operations analysis tools, techniques, measures of effectiveness, damage indicators and damage assessment methods—or the refinement of existing ones—are welcome. We look forward to hearing from you!

WG 32 - Special Operations & Irregular Warfare

Chair:

LTC Joseph Cruse, US Army TRADOC Analysis Center
joseph.cruse@us.army.mil

Co-chairs:

Mr. Tim Hope, thope@wbbinc.com
Mr. Bill Inserra, william.inserra@usmc.mil
Mr. Cortez Stephens, USMC Capability Development Command, cortez.stephens@usmc.mil
LTC Paul Ewing, Naval Postgraduate School, plowing@nps.edu

Advisor:

Mr. Bill Krondak, US Army TRADOC Analysis Center, william.krondak@us.army.mil

The challenges posed by transnational terrorists and the focus on irregular threats from Defense Strategy create an Irregular Warfare environment that highlights the importance of Special Operations mission areas. These mission areas are not well covered by other, more traditionally oriented Working Groups within MORS. Yet they can benefit richly from the analytical community in the areas of strategic decision making and policy determination, mission planning tools and analytical aids, simulations and analysis of the wide variety of operational environments, and by systemic collection and dissemination of data and lessons learned from previous operations. Irregular warfare is a warfighting philosophy that seeks to achieve strategic objectives primarily by nontraditional, indirect, or asymmetric means. Irregular warfare may include the following operations: military information support operations (formerly psychological operations), information operations, counter proliferation of WMD, counterterrorism, counterinsurgency, intelligence activities, computer network operations, foreign internal defense, and stability operations, among others. Although irregular warfare continues to be a core competency of Special Operations Forces, many organizations in the Department of Defense as well as other government departments and agencies contribute capabilities (indirectly or directly) to irregular warfare operations. These capabilities include contributions from the social science disciplines, as well as traditional military operations research practitioners. Working Group 32 (WG 32) seeks to provide a forum for all contributors to irregular warfare and in particular seeks participation of the next generation of analysts who will have to inform decisions related to special operations and irregular warfare. The conduct of operations such as peacekeeping and peace enforcement missions, disaster relief and humanitarian assistance are also characterized by relatively small scale operations, very focused and specific missions, and a lack of conventional mission effectiveness criteria. WG 32 brings these communities together not because they are the same, but because they share similar characteristics to the analytical community. The skills of the analytical community assist operational personnel in dealing with the risk and uncertainty of diverse missions and functions, allocation of critical resources, and formulation and evaluation of policy and strategy decisions that affect current and future obligations of special operations forces. From operational assessment functions of key lines of operation in the prosecution of irregular warfare and special operations to decision analysis applications aiding in resource investment and application, the WG 32 venue welcomes a breadth of presentations of work that span analysis addressing issues supporting critical decisions faced by operators and analysts when dealing within these domains.

WG 33 – Social Science Methods and Applications

Chair:

Ms. Karen Grattan, Group W Inc., 703-477-7555, karen.grattan@groupw.com

Co-Chairs:

Dr. Allison Abbe, U.S. Army Research Institute, 703-602-7918, allison.abbe@us.army.mil

Dr. Kim Cragin, RAND, 703-413-1100, x5666, kim_cragin@rand.org

Ms. Elizabeth Lyon, U.S. Army Corps of Engineers

703-428-7877, elizabeth.a.lyon@usace.mil

Dr. Danielle Miller, 703-699-1714, danielle.miller@osd.mil

Dr. Mike North, Argonne National Laboratory, 630-400-6313, north@anl.gov

Dr. Mark Waltensperger, Lockheed Martin Corporation, 407-356-2528, george.waltensperger@lmco.com

Advisor:

Dr. Yuna Wong, Marine Corps Combat Development Command, 703-784-6019, yuna.wong@usmc.mil

Working Group 33 is an interdisciplinary community of practice interested in the application of social science theory and method to defense and national security challenges. With the release of the 2010 Quadrennial Defense Review and the 2010 National Security Strategy, WG 33 aims to interpret and tackle the concerns and opportunities set for the in those strategic documents with the application of social science. Specifically WG 33 aims to lead in sound analysis, rigorous study and effective practice in support of the Chairman's priorities including:

- Understanding, assessing and planning for security environments that remain complex, dynamic and uncertain,
- Identifying and projecting the time, place and nature of future challenges,
- Identifying warfighter requirements for new or improved capabilities and capacities, especially in areas of civil affairs, language and culture, information and communications, intelligence, etc.,
- Understanding of the roles, missions and authorities of other USG agencies and minimizing friction and duplicative efforts in interagency operations,
- Building capacity of international partners to deter and prevent conflict, and enhancing interoperability during combined security and stability operations

WG 33 welcomes submissions from a variety of fields, and will especially welcome those that span traditional disciplines including: demography, geography, conflict analysis, cultural studies, organizational sciences, political economy, discursive psychology, communications, to name just a few. WG 33 is looking for methodological work that will advance the community's analytic capabilities for the complex and uncertain operating environments faced today. Further, because operations research occupies an interesting place at the boundaries of the conduct of operations and the development of strategy and policy, we are interested in work that looks both directions (i.e. work that informs policy and strategy as well as work that informs and assesses operations.)

Submissions must display the sound application of social science methodology; mastery of relevant or analogous social science theory and literature where applicable; and be relevant to defense or national security analysis, training, education, or decision-making at the tactical, operational, or strategic level. The following are research areas that illustrate topics of interest to WG 33, but social science-driven research in emerging areas not mentioned are certainly welcome.

1. Organizational innovation and evaluation in interagency cooperation and effectiveness,
2. Building partner capacity including influencing partners and cultural communication supporting sustained/persistent engagement,
3. Problem structuring methods and "soft" operations research methods,

4. Analysis of operations across the planning-execution-assessment continuum, and
 5. Novel application of social science methods to defense and security issues set forth above.
- Presentations may be finished work, work in progress, or ideas and concepts.

WG 34 – Computational Social Sciences

Chair:

Dr. Lisa Costa, The MITRE Corporation, 813-340-7511, lahc@mitre.org

Co-Chairs:

CDR Dylan Schmorrow, MSC, USN, Office of the Director, Defense Research and Engineering,
dylan.schmorrow@osd.mil

Dr. Debbie Duong, Augustine Consulting, Inc., 831-656-7574, dvduong@nps.edu

Mr. Paul Works, TRADOC Analysis Center (TRAC), 913-684-5233, paul.works@us.army.mil

Advisor:

Mr. Michael W. Garrambone, General Dynamics, 937-476-2516, mike.garrambone@gd-ais.com

In support of the 79th MORSS theme of “Developing the Next Generation of National Security Analysts” this Focus Session will examine the role of computational social sciences (CSS) in support of operational analysis. This focus session places emphasis on understanding how social science theories are implemented into computational models to understand and predict the structure, interconnections, dependencies, behavior, and trends associated with groups and actors. This may include social behavior from the micro to the macro levels that are collected from sources with painstakingly precise fidelity to those with vastly varying confidence factors.

At all levels of national security operations there is a need to understand and predict the motivations and influences underlying adversarial, non-adversarial, and unaligned behaviors, how these behaviors vary cross-culturally, and those human behaviors that extend across cultural boundaries. An understanding of these motivations and influences will be gleaned from inter- and multi-disciplinary advances that draw on approaches and methods from a wide range of social and human/behavioral sciences and are implemented in useful and accurate computational models. The melding of different types of socio-cultural interactions in terms of genre, modality, expressive richness, media, persistence, audience, latency, reliability, language, and context provide a canvas for provocative research and new understanding of the potential value proposition for such information in military operations. Further, the availability of both very large data sets of human social interaction, and the informatics to process these interactions in novel ways, challenge us to develop automation to accommodate this volume, apply confidence levels to data and sources, and develop computational models that can accommodate such data volumes.

This session solicits papers detailing the research, development, and national security transition of technologies in the CSS domain as applied to the broad conference theme. Selected papers shall address one or more of the following topics:

- Integrating hybrid CSS approaches for cultural understanding and/or modeling based on varying data quantity, fidelity, and confidence levels
- Addressing data and data processing tools to support CSS data collection, processing, and modeling to include model validation and verification
- Analyzing social networks, their inter- and intra-network relationships, and their integration with other types of networks, to include logistic, financial, physical process, etc;
- Visualizing data, tool, and model output;
- Developing course of action (COA) and decision analytics that incorporate human socio-cultural and/or behavioral factors;

- Forecasting human terrain such as sentiment or affinity analysis, geophysical analysis based on human social cultural behaviors, and assessment of micro and macro level conditions that support or inhibit behaviors
- Training using CSS models and tools and mission rehearsal using human socio-cultural factors and models).

While strictly research focused papers are solicited, preference will be given to papers that clearly identify how CSS research and technologies have been or are being applied to national security domains or operations; or propose how emerging CSS research and technologies can fit current or emerging national security challenges.

DWG 1 – Human Behavior and Performance

Chair:

Mr. Kirk Michealson, Lockheed Martin Human Performance Engineering Group,
407-306-2833, kirk.a.michealson@lmco.com

Co-Chairs:

Mr. Rafael Matos, WBB Consulting, Inc., 703- 448-6081 x 108, rmatos@wbbinc.com
CAPT Shawn Callahan, OPNAV(N14), 703-614-4088, shawn.callahan@navy.mil
LTC William (Bill) Emge, TRADOC G-3/5/7, Ft. Monroe, 757-788-5655, william.emge@us.army.mil
Dr. Mark Waltensperger, Lockheed Martin Missiles & Fire Control, 407-356-2528,
George.waltensperger@lmco.com

Ms. Christina Shapiro, AMSAA, 410-278-2164, christina.shapiro@us.army.mil
Ms. Kathi MacLeod, Air Force Research Laboratory, 210-536-1279, kathi-ann.macleod@brooks.af.mil
Dr. Nita Lewis Shattuck, Naval Postgraduate School, 831-656-2281, nlmiller@nps.edu

Advisor:

Mr. Eugene Visco, FS, Lockheed Martin Missiles & Fire Control, 407-356-4591, eugene.visco@lmco.com

Traditionally, national security operations research has used conventional operations research techniques, where the system being analyzed is under control and results can be determined precisely. However, because the most important part of any system is the human operator, it is crucial that today's analysts incorporate human behavior and human performance variability into their analyses.

Human behavior forms the nucleus of national security effectiveness. Regardless of technological advances, the participants in the national security environment are and always will be a complex system composed of human and technical elements that must work together. Cognitive demands will grow despite requirements to the contrary. On the modern battlefield, individuals must perform the primary tasks of movement, target acquisition and engagement, and communication. Technology will confuse as often as it will support the warrior. Transformed services will force everybody – even the most junior – to think. We need to avoid the adverse impact that technology insertion and mission change can have on humans and their performance. Enhanced human behavior and performance is part of the integrated solution to the mission problem.

Representing and incorporating these factors adequately into models, simulations, and studies are sizeable challenges. Because of the extreme variability of the individual's behavior and performance on the modern battlefield, engineers and analysts may not be able to perform standard parametric or non-parametric analyses of the available data and must develop new tools to assist them.

For the 79th MORSS, the Human Behavior and Performance (HB&P) Distributed Working Group is soliciting papers covering the following topics:

- What are the second-order effects of designing systems with high cognitive requirements for servicemen and servicewomen? Can we recruit/train/retain such individuals?
- Can training systems be developed that detect student-specific deficits so instructors may target training to individual needs? What are the individual differences in human performance? What about training effectiveness and human behavior?
- How do we effectively develop Human-in-the-Loop Experiments, Tests and Wargames, and obtain data on human performance as a variable of interest? How do we design surveys? Do we know how to conduct trained human observation? How can this data be better correlated with the more traditional "hard" data points we tend to collect (time to kill, time to detect, etc)?

- What are the factors that shape the decision process when it comes to personal choice? What set of incentives influences this decision making behavior and how might it be potentially shaped? What are the social components that affect decisions and communication and “stickiness” of those decisions? How does cognitive psychology fit in decision analysis?
- Are there models and simulations to analyze human abilities, cognitive and behavior, human decisions, and human group decisions to help servicemen and women perform better? If so, how have they been used in practice?
- Can we create a human-centered approach in the design, acquisition, testing, and operation of human-machine interfaces? What about human considerations as the top priority in systems design/acquisition to reduce life cycle costs and optimize system performance?

The HB&P Distributed Working Group Leadership is working with other Working Groups to discuss these topics by developing potential joint sessions with Manpower & Personnel (WG 18), Analytical Support to Training (WG 20), Experimentation (WG 21), Test & Evaluation (WG 23), Decision Analysis (WG 26), and Wargaming (WG 30), as well as its own HB&P Session on Human System Integration.

The Human Behavior and Performance Distributed Working Group Leadership encourage you to submit presentations and papers relevant to the areas outlined above. The submission may be finished work, work in progress, or ideas and concepts. We look forward to hearing from you!

DWG 2 – Unmanned Systems

Chair:

Mr. Scott R. Swinsick, Operations Analysis, Global Strike, The Boeing Company, 480-891-8429,
scott.swinsick@boeing.com

Co-Chairs:

Mr. Darryl Ahner, TRADOC Analysis Center Monterey, 831-656-7574, darryl.ahner@us.army.mil

Ms. Joyce Nagle, U.S. Army Engineer Research and Development Center,
601-646-4161, joyce.a.nagle@us.army.mil

Mr. Tom Wettergren, Naval Undersea Warfare Center, 401-832-1559,
wettergrenta@npt.nuwc.navy.mil

Mr. Russ Gottfried, Lockheed Martin Space Systems Company, 408-742-3121, Russell.gottfried@lmco.com

Advisor:

Mr. Roger Chapman Burk, United States Military Academy, 703-244-2954, roger.burk@usma.edu

Unmanned Systems technology and operations are changing faster than analysts can adapt. New unmanned aerial systems (UAS), unmanned ground vehicles (UGV), and unmanned underwater vehicles (UUV) are being designed, produced, and deployed with great frequency. UAS have flown more hours in Operation Iraqi Freedom and Operation Enduring Freedom than either OH-58D Kiowa Reconnaissance Helicopters or AH-64D Apache Attack Helicopters. UGVs are being used extensively in Military Operations on Urban Terrain. UUVs received recent publicity in the capping of British Petroleum's Deep Water Horizon oil rig in the Gulf Oil Spill crisis. Whether it's fighting the ongoing Global War on Terror or providing Disaster Relief, unmanned systems are finding greater and greater use in critical missions across the globe. It is these new technologies and our changing landscape that requires the development of the next generation of National Security Analysts.

This rapid evolution in Unmanned Systems requires new analysts to monitor technological developments, to gather data from ongoing operations, and to capture what has been learned through operational failures and successes. These developments and emerging missions are leading edge ideas and require a new level of critical thinking in Operations Research and Systems Analysis. Unmanned systems, today, are an integral part of military, security, and commercial operations.

DWG-2 is seeking papers addressing all aspects of air, ground, above water, and underwater unmanned systems. By sharing our ongoing work, we can become better analysts. The following areas promise to be especially important to future security, and will be of particular interest this year:

- Leading analytical approaches for UASs with long endurance (days) and extremely long endurance (weeks or more), both aerodynamic and aerostatic, for global response, maritime patrol, area surveillance, and other missions
- Cooperation between manned and unmanned vehicles
- Assessment of available and planned C4ISR systems and their ability to support missions that unmanned systems will be expected to execute
- "Swarm" control of unmanned vehicles: controlling a group as a single unit or giving the group a general task with individual vehicles autonomously determining how to cooperate
- Optimal unit assignment of unmanned systems, both in numbers and echelon
- Employment of unmanned ground vehicles and very small unmanned aerial vehicles in urban combat, particularly in security and clearing operations
- Weaponization of unmanned systems
- Use of unmanned systems for detection of improvised explosive devices (IEDs), mine detection and clearance, border patrol, harbor security, and communications relay

- Flexible operation of unmanned air vehicles in civil airspace, including “see and avoid” capabilities for avoiding other air traffic
- Cost and operational effectiveness analysis due to the employment of unmanned systems

The Unmanned Systems Distributed Working Group Leadership is cooperating with other Working Groups to discuss these topics by developing potential joint sessions. These other working groups include: Chemical, Biological, Radiological, and Nuclear (CBRN) Defense (WG 2), Battle Management Command and Control (BMC2)(WG 6), ISR and Intelligence (WG 7), Land and Expeditionary Warfare (WG 11), Maritime Operations (WG 12), Air Warfare (WG 14), Logistics, Reliability, and Maintainability (WG 17), Manpower and Personnel (WG 18), Experimentation (WG 21), Measures of Merit (WG 22), Test & Evaluation (WG 23), Analysis of Alternatives (WG 24), Cost Analysis (WG 25), Modeling and Simulation (WG 27), Operational Environments (WG 28), and Special Operations and Irregular Warfare (WG 32).

In keeping with the dynamic nature of the unmanned system community and the theme of this year’s symposium, Developing the Next Generation of National Security Analysts, DWG-2 welcomes papers describing ongoing analyses, data collection, problem formulation, metric definition, operational experience, and cost effectiveness and mission effectiveness analyses. The submission may be finished work, work in progress, or ideas and concepts. We look forward to hearing from you!

FS 1 – National Security Risk Management

Chair

Dr. Steve Bennett, Deputy Director, DHS Risk Management and Analysis Directorate, 202-343 1740,
steve.bennett@dhs.gov

Co-Chairs:

Dr. Isaac Maya, Research Director, Center for Risk and Economic Analysis of Terrorism Events (CREATE)
University of Southern California, 213-740 3863, imaya@usc.edu

Dr. Joseph DiRenzo, Director, Operations Analysis U.S. Coast Guard Atlantic Area
757-398 6695, joseph.direnzo@uscg.mil

Advisor:

Dr. Arch Turner, Deputy Director, Operations Analysis Division, DHS S&T,
202-254- 6628, arch.turner@dhs.gov

Events such as the 911 terrorist attacks, the recent U.S. financial collapse and the BP Gulf of Mexico oil spill highlight the need for improvements in our ability to identify, assess, and effectively manage risk in many diverse domains. Perhaps nowhere are the challenges of risk management more complex than in U.S. National Security. The U.S. Departments of Defense (DOD) and Homeland Security (DHS) face unusually difficult risk management challenges due in large measure to the uncertain and dynamic nature of today's international geopolitical environment, the proliferation of lethal advanced technology, and the diverse array of hazards and threats which they can combine to present.

DHS' recent first-ever Quadrennial Homeland Security Review (QHSR) noted that "ultimately, homeland security is about effectively managing risks to the Nation's security". Similarly, the National Defense Strategy (2008) acknowledges that "implementing the National Defense Strategy and its objectives requires balancing risks and understanding the choices those risks imply". Neither department has nearly the resources it would like to comfortably address all the hazards and risks facing our country. Furthermore, elimination of risk is an unobtainable goal regardless of the resources that might be dedicated to achieving it. As both the National and Homeland Defense Strategies make quite clear, we must learn to accept and live with some risk. The challenge facing the leadership of these important national security organizations is to focus their resources on those risks that present the greatest danger to our society and way of life. The importance of getting these decisions "right" is only heightened by the reality that both departments face significant budget pressure due to current U.S. economic conditions.

This working group will address a variety of complex challenges facing national security leaders responsible for making risk-informed defense and homeland security resource allocations that make our nation safer and more secure. Speakers from the DOD, DHS, from across the defense and homeland security communities and academia will present working group participants with valuable insights into current risk management issues they face such as assessing terrorism threat, dealing with uncertainty in threat, vulnerability and consequence assessment, balancing risk across a range of threats and hazards, understanding and communicating "acceptable risk", and operationalizing the concepts of deterrence and resilience and their role in national security risk management. The goal of the working group is to capitalize on the collective experience and expertise of the working group to identify new national security risk management ideas and approaches.

FS 2 – Red and Blue Teaming

Chair:

Dr. David Alderson, Operations Research Department, Naval Postgraduate School, 831-656-1814,
dlalders@nps.edu

Co-Chairs:

Mr. Jack Keane, FS, Precision Engagement Systems Branch, Johns Hopkins University Applied Physics
Laboratory, 240-228-8886, jack.keane@jhuapl.edu

Advisor:

Dr. Gerald Brown, Operations Research Department, Naval Postgraduate School,
831-656-2140, gbrown@nps.edu

Military Operations Research has a long history of success in figuring out how to make the “best” use of scarce resources in a variety of problem domains. Traditionally, the emphasis has been on achieving maximum “performance” or minimum “cost” in a specified environment, with uncertainty playing either an implicit or explicit role in the modeling and analysis process. The resulting optimal solutions tend to be efficient and lean, with the caveat that a lack of excess resources often makes them fragile to unexpected disruptions.

The natural disasters, technological failures, and deliberate attacks of the last decade have been grim reminders of these fragilities, and they have challenged decision-makers at all levels of government, industry, and the military to rethink how we conceive, prepare for, and respond to “worst-case scenarios.”

At the same time, military planners have a long history in the use of “red teaming” to find system vulnerabilities and “blue teaming” to mitigate them. While often achieved through simulated and/or role-playing exercises, Military Operations Researchers are finding novel ways to integrate these strategic interactions into their analysis, sometimes leading to novel models and/or mathematics. In some cases, this type of planning goes by the title of “mission assurance,” while in others it is called “resilience.”

In line with the 79th MORSS theme of “Developing the Next Generation of National Security Analysts,” this Focus Session examines recent developments in the techniques and application of Red-Blue Teaming for national security problems. We believe that there is a significant and diverse community of practitioners who have interest and need for these techniques.

The objectives of this Focus Session are two-fold: (1) to present some of the latest modeling and analysis in the application of “red teaming” to military problems, and (2) to reach out to practitioners who are already using red teaming concepts to address military, national security, and private sector problems.

We will achieve this by holding approximately three (3) 90-minute special sessions, each one led by a carefully selected individual who will present and/or facilitate a discussion about red-teaming and its use in a particular scenario. We have identified the following themed sessions:

- *Open Source Intelligence (OSINT) Analysis*: CAPT Jeff Kline, USN (Ret.), NPS, will talk about NPS red cells and their use of “analogous red teaming” in studying system vulnerability
- *Mathematics of Red-Blue Teams*: Dr. Matthew Carlyle, NPS, will discuss the latest mathematical red-teaming models, specifically “attacker-defender models” and their application to problems in military planning, project management, base security, and infrastructure defense.
- *Application Diversity*: Finally, we will have a panel discussion session on the use of red teams across a diversity of domains. We anticipate including the following panelists:
 - John Schuster, JHUAPL, will talk about a recent ASW red-cell study

- a member of the Defense Science Board to discuss their recent study on adaptability
- a member of the ISR team at APL to discuss the role of blue and red cell teaming in the ISR and Targeting realms
- A researcher from Livermore and/or Sandia national labs to talk about the use of red-teams for vulnerability analysis

79th MORSS Special Sessions

As with past symposia, the 79th MORSS will include a series of Special Sessions covering a variety of topics of interest to the MORS community. Starting with the 79th MORSS, two significant changes will occur with the Special Sessions program. The first change is that Special Sessions will begin on Monday, June 20, 2011. The second change is that they will occur throughout the Symposium instead of being reserved for a single late afternoon timeslot. Currently included in the 79th agenda will be Special Sessions for: Sponsors Hot Topics, individual Sponsor topics, the Strategist's Corner, MORS Heritage Session, Deployed Analysts, and others. If you are interested in submitting a topic, please contact Donald Timian, Special Sessions Chair at 703-681-2745 or via email at Donald.Timian@us.army.mil.

79th MORSS Poster Session: Excellence in Analysis!

The 79th MORSS provides a great opportunity to see great analysis. During the 79th MORSS at the Naval Postgraduate School, we plan to continue the successful Poster Session during the ever-popular MORS Membership Reception Monday evening and Welcome Mixer Tuesday evening. To add even more intellectual hors d'oeuvres to these events, we expect to offer presenters a "poster paper" to showcase their work either in addition to, or in place of, the usual working group presentations. We hope that the poster session will provide wider audiences for presenters sharing their projects. We will also display your poster throughout the 79th MORSS in a commons area. By displaying posters at the Reception and Mixer, and in the commons area we will provide additional opportunities for learning, collaboration and peer review. Simply submit your abstract online through the 79th MORSS website. Be sure to select "Poster" on the abstract submission page. If you have ideas, questions or offerings, please contact the Poster/Demo Coordinator, Dan Dassow via email at daniel.d.dassow@boeing.com.

79th MORSS Demo Sessions: Flaunt Your Toolkit!

Have an intriguing model or application? As usual, we are offering presenters the chance to demonstrate software, simulations, databases and other tools at the Naval Postgraduate School venue in Monterey. If you have a tool you have either developed or can showcase an interesting application in an otherwise available tool, we invite you to demonstrate it to the MORS community! While many demos have historically been simulations, we would like to widen the search with your interesting applications of spreadsheets, modeling environments, and data collection and analysis technologies. This is also a great opportunity to supplement your working group presentation with a demonstration of your analysis tools. We are hoping to make demonstrations available in common areas for attendees to stop by at their leisure to admire your handiwork. Plans are still being developed, but look for more details on the MORS website, in the Phalanx, and in future Symposium announcements. Simply submit your abstract online through the 79th MORSS website. Be sure to select "Demo" on the abstract submission page. If you have ideas, questions or offerings, please contact the Poster/Demo coordinator, Dan Dassow via email at daniel.d.dassow@boeing.com.

79th MORSS Tutorial Sessions Call for Abstracts

Abstracts are requested for the 79th MORSS Tutorial Sessions. In accordance with the 79th's theme "Developing the Next Generation of National Security Analysts" we are looking for tutorial presentations which provide instruction on topics relevant to the MORS Sponsor services. As in past years, the 79th Tutorial Sessions will include presentations covering the biographical OR historical figures, military wargaming, modeling and simulation, OR applications, mathematical and statistical techniques, and analyst practices and ethnics. Interested in submitting a topic or an abstract? Please contact Lisa Kaiser, Tutorial Chair via email at lisa.m.kaiser@us.army.mil.

Upcoming MORS Meetings

Maritime Domain Awareness II (Classified)

2–5 May 2011

Anti-Submarine Warfare (ASW) Training Center
San Diego, CA

79th MORS Symposium

(Classified - US Only)

“Developing the Next Generation of National Security Analysts”

20–23 June 2011

Naval Post Graduate School
Monterey, CA



David Rist Prize

2011 CALL FOR ENTRIES

David Rist Prize: The Rist Prize recognizes the practical benefit sound operations research can have on “real life” decision making and seeks the best implemented military operations research study from those submitted in response to this 2011 Rist Prize Call for Entries. This call solicits abstracts with letters of endorsement for *implemented* recommendations from studies or other operations research-based efforts, e.g., analyses, methodology improvements, that influenced major decisions or practices. Entries for individuals or teams submitted in response to this call will be eligible for consideration for the Rist Prize. There are two cash prizes that may be awarded: \$3,000.00 for first place (i.e. Rist Prize winner) and \$1,000.00 for honorable mention. To be considered:

- ❖ An unclassified abstract and letter of endorsement for the *implemented* recommendations from the study must be submitted to the MORS office and postmarked no later than **Monday, 7 February 2011**.
- ❖ The abstract cannot be longer than 3 pages (8.5” by 11”, single sided, 10 point type minimum, .75” margins all around minimum).
- ❖ The letter of endorsement must be signed by an official at a Flag/General officer, Government SES, or company VP level (or equivalent) from the organization using the results of the analysis. The letter of endorsement must address at a minimum:
 - ❖ *The importance of the problem*
 - ❖ *The contribution of the insight or solution*
 - ❖ *The impact of the result of the analysis*

Please send the unclassified abstracts and a letter of endorsement to **79MORSS@mors.org**, include a complete MORS Abstract Disclosure Form 109 A/B. All forms and instructions are located on the website, click on the Rist Prize link at www.mors.org.

From those entries submitted, the judges will select 3-5 finalists on or about **Friday, 25 February 2011**.

If selected as a finalist:

- ❖ A mentor will be assigned by MORS.
- ❖ An annotated briefing must be prepared and submitted no later than **Thursday, 28 April 2011**. All presentations will require a Disclosure Form 712 A/B. Classified submission information and a MORS Presentation Disclosure Form 712 A/B are available online.
- ❖ The finalists will be invited to present their briefing on the **Monday** prior to the 79th MORSS (**20 June 2011**, at the Symposium in Monterey, CA). Each finalist will be allotted one (1) hour to present – which includes time for questions and answers. This session will be open to all MORSS attendees. During this session judges will ask questions as appropriate. Following this session, the judges will select the Rist Prize winner and the honorable mention.

The Rist Prize winner and honorable mention will be announced at the 79th MORS Symposium plenary session on the morning of **Tuesday, 21 June 2011**.

Rist Prize Criteria

To be eligible, an individual or team must submit a presentation that at a minimum meets the following criteria:

- ❖ Be an original and self-contained contribution to systems analysis or operations research that has been implemented.
- ❖ Provide recognizable new insight into the problem or its solution.
- ❖ Have an impact on major decisions.
- ❖ Be used by a client organization and have letter(s) of endorsement from a GO/SES/Executive in the client organization so stating. Client organizations are defined as a Government agency or Laboratories, Industry activity, Academic Institution, or other user of the results of operations research.

Eligible study presentations are judged according to the following criteria:

Professional Quality

- Problem definition
- Citation of related work
- Description of approach
- Statement of assumptions
- Explanation of methodology
- Analysis of data and sources
- Sensitivity of analyses (where appropriate)
- Logical development of analysis and conclusions
- Summary of presentation and results

Contribution to Military Operations Research and Major Decisions

- Importance of problem
- Contribution to insight or solution of the problem
- Power of generality of the result
- Originality and innovation
- Contribution of the study to the decision

Symposium Caveats

- ◆ The Military Operations Research Society does not make or advocate official policy. Matters discussed or statements made during the symposium are the sole responsibility of participants involved.
- ◆ All attendees and participants are expected to submit requisite attendance forms and to pay the normal registration fees unless specifically waived by the MORSS President.
- ◆ Acceptance of an invitation to present a paper in a session at MORSS implies an obligation by the speaker to attend the symposium, and to submit a MORSS Disclosure Form #712A/B before the deadline.
- ◆ Security clearances must be sent in writing using MORSS Security Form #226A/B. MORSS does not accept phoned-in clearances.

The Society retains all rights regarding final decision on the content of all publications of the 79th MORSS.

Approved:



Mr. Herbert S. Cupo
Contracting Officer's Representative



Mr. Terry McKearney
President