

DEFENSE TECHNICAL INFORMATION CENTER

# 2012 DTIC Conference

*Connecting Lab Research with the Warfighter*

March 27-28, 2012

## Communities of Interest

27 March 2012

**Moderator: Mr. Bruce Gilbert**



# Communities of Interest

## **R. Paul Ryan**

Special Assistant for Science and Technology /

Communities of Interest

Office of the Assistant Secretary of Defense (Research  
& Engineering)

Research Directorate



# **Communities of Interest**

**Office of the Assistant Secretary of Defense,  
Research and Engineering**

**Defense Technical Information Center  
Annual Conference  
March 27, 2012**



# Strategy of the Col



The Department of Defense (DoD) has determined that collaboration is a key element to move research and innovation forward.

Communities of Interest is how DoD will collaborate

**DoD Communities of Interest** are comprised of scientists, engineers, subject matter experts (SMEs), technologists, acquisition personnel, project and program managers, and field operations personnel who **have a common interest in promoting innovative solutions to national and defense issues.**





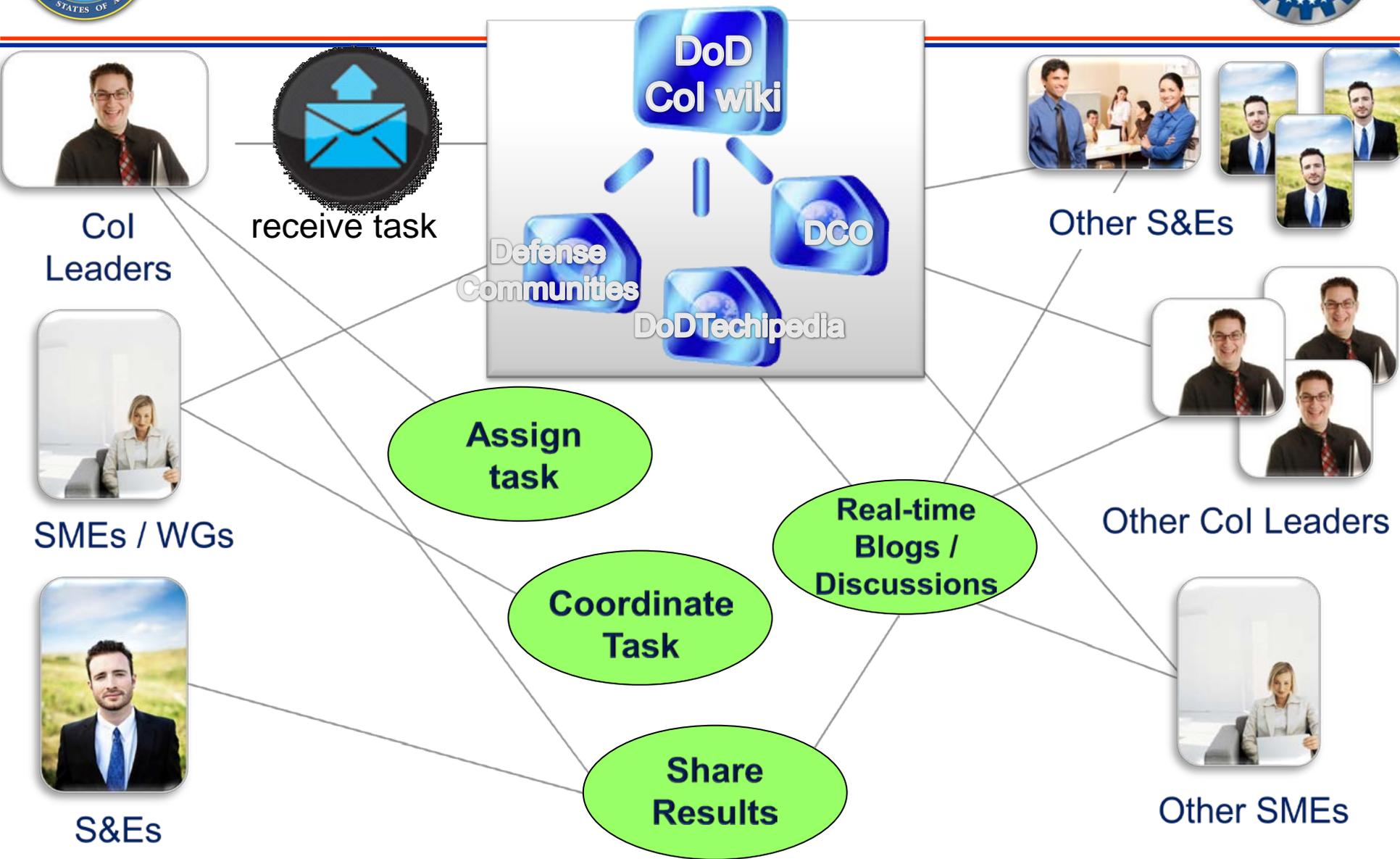
# Goals of the Col



- Foster technical discussion
- Provide a forum for sharing new ideas
- Serve as visible and enduring structures
- Facilitate rapid, technically accurate, broadly-vetted responses
- Preserve DoD S&T corporate memory
- Knowledge resource for new DoD S&Es
- Identify critical areas and opportunities



# Goal of the Col Wiki





# Goals of the Col Wiki



- **Technology based collaboration forum**
  - To support on-line discussions and dissemination of information
  - To coordinate decisions regarding DoD technology initiatives, investments, and projects
  - To outreach to S&T professionals in DoD labs and agencies





# ASD(R&E) Col Wiki Page

## ASD(R&E) Communities of Interest (Cols) Home

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Added by [Angela Davis](#), last edited by [JAMMI CASH](#) on Mar 15, 2012 ([view change](#))

TinyLink (useful for email): <https://www.dodtechipedia.mil/dodc/x/1g00>

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### Welcome to the ASD(R&E) Communities of Interest (Cols)



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The DoD Communities of Interest (Cols) are a key part of the [Reliance 21 and Science and Technology EXCOM construct](#). The basic intent of the Cols is to foster, facilitate, and streamline cooperation and coordination among DoD S&T scientists and engineers who are widely dispersed geographically and organizationally.

The goal for each of the Cols is to form networks that enable participants to share information, share research and development costs and risks, and expand community boundaries nationally and internationally to speed up innovation and invention and cope with uncertainty factors. The Cols are comprised of scientists, engineers, technology executives, acquisition staff, and operators with common technology interests. The Cols are established to: (1) foster technical discussion among subject matter experts, (2) coordinate and plan adhoc and routine activities, and (3) facilitate rapid, technically accurate, broadly-vetted responses to queries from DoD leadership and Congress.

The Cols include 90-95% of the \$12B science and technology budget and most of the over 108,000 scientists and engineers in DoD, see [Defense Laboratory Enterprise Demographics Report](#). As such, each Col could potentially include thousands of scientists and engineers.

Senior level scientists and engineers and Service Executives have developed many years of contacts and have acquired broad institutional knowledge. New scientists and



# Communities of Interest (Cols)



## List of ASD(R&E) Communities of Interest:

Each of the Cols has a Leader, a Steering Committee of SES-level persons, a Working Group, at least one dedicated subject matter expert (SME) to facilitate discussion and share information, and at least one dedicated IT POC (gardener) to provide support in using the wiki technology.

- [Advanced Electronics](#)
- [Air Platforms](#)
- [Autonomy](#)
- [Command and Control \(C2\) and other Information Systems \(IS\)](#)
- [Cyber Security](#)
- [Energy and Power Technology](#)
- [Human Systems](#)
- [Materials & Processes](#)
- [Networks](#)
- [Sensors and Processing](#)
- [Weapons Technology](#)

### **i** Invite a Colleague:

[Click Here for a list of Current Participants](#)

*You can invite a colleague to participate in the Communities of Interest by emailing them the following link:*

<https://www.dodtechipedia.mil/dodc/x/1g00>.



# Background & Historical Content



## Col Background Information

### Col Kick-off Meeting - 24 Jul 2009

The Communities of Interest held a kick off meeting Friday, 24 July 2009. The keynote address was delivered by the Assistant Secretary of Defense, Research and Engineering (ASD(R&E)), Mr. Zachary Lemnios.

#### *Kick Off Documents:*

- [Agenda](#)
- [Col Kick Off Attendee List](#)

#### *Presentations:*

- [ASD\(R&E\). Mr. Zachary Lemnios Keynote Address](#)
- [Dr. Andre van Tilborg Presentation \*Communities of Interest Motivation and Background\*](#)
- [Dr. Don Reago Presentation \*Sensors Community of Practice\*](#)
- [Dr. Syed Shah Presentation \*Networks Community of Practice\*](#)
- [Mr. Christopher Thomas, DTIC CTO, Presentation \*DoDTechipedia\*](#)

## Col Process

#### *Col Motivation & Purpose:*

- Foster technical discussion, discovery, debate, coordination, planning, and assessments by subject matter experts
- Provide a forum for sharing new ideas, technical directions and technology opportunities, jointly planning programs, influencing EXCOM budget plans, measuring technical progress, and reporting on technology state of health
- Serve as visible and enduring structures to integrate technology efforts throughout the large, widely dispersed, sometimes fragmented DoD S&T enterprise
- Facilitate rapid, technically accurate, broadly-vetted responses to queries from DoD leadership and Congress
- Provide DoD S&T corporate understanding and memory, and a place for a new staff to get up to speed quickly
- Timely identify critical areas and opportunities

#### *Products & Outcomes from Each Col:*

- On-going identification of top emerging research challenges and objectives to share with EXCOM
- Annual assessment of technology area state of health
- Recommendations to EXCOM for stand-up of Technology Focus Teams to examine key topics, identify break-through research opportunities, and formulate joint plans
- Establishment and operation of a Web-based Col collaboration mechanism, e.g., using DoDTechipedia
- Coordinated decisions regarding agency technology initiatives, investments, and projects
- Outreach to relevant staff in DoD labs and agencies to engage in a high proportion of Col



# RSS Feeds and Blogs Featured



## Blogs

### EETimes

#### [SemiNews](#)



[DESIGN West preview: Radio show marks the rise of MEMS](#)

[XMOS adds analog to processor for audio apps](#)

[Materials science pioneer honored](#)

[U.S. levies low tariffs on China solar panels](#)

[ACE: Top exec finalists stood apart from crowded field](#)

### Advanced Electronics Blog:

#### Blog posts

 [Advanced Electronics - Link of the Week](#) created by [JAMMI CASH](#)

[Advanced Electronics Blogs](#) Sep 30, 2011

[Create New Blog:](#)



# Calendar Feature

## Col Calendar & Upcoming Events

**GOMACTech 2012:**  
 Las Vegas, NV  
 March 19-22, 2012, 8:00am - 6:00pm

[GOMACTech 2012 Conference Link](#)



← Week 12 2012 →

Today | [Calendar icons]

Mon, Mar 19	Tue, Mar 20	Wed, Mar 21	Thu, Mar 22	Fri, Mar 23	Sat, Mar 24	Sun, Mar 25
All day IEEE Int'l Conf on Microelectronic San Diego, CA. March 19-22, 2012	All day IEEE Int'l Conf on Microelectronic San Diego, CA. March 19-22, 2012	All day IEEE Int'l Conf on Microelectronic San Diego, CA. March 19-22, 2012	All day IEEE Int'l Conf on Microelectronic San Diego, CA. March 19-22, 2012			
8:00 AM GOMACTech 2012 Las Vegas, NV. March 19-22, 2012						
1:00 PM GOMACTech AE Col Tutorial Las Vegas, NV						

### Calendars

Advanced Electronics Col  
Calendar

[Add a calendar](#)

[Calendar Help](#)

Click on an event in the  
calendar to see its details here.



# Taxonomy

## Advanced Electronics Col Thrust Areas:

### Electronic Materials

- Materials Characterization
- Materials for Electro-Optics
- Materials for Flexible Electronics and Displays
- Materials for Microelectronics and RF Components
- Materials for Power Electronics
- Materials Synthesis

### Electronics Integration Technologies

- Design
- Heterogeneous Integration
- Packaging, Interconnect and Assembly
- Power
- Reliability

### Electro-Optics

- Display Components
- Focal Plane Arrays
- Lasers
- Photonics

### Microelectronics & Nanoelectronics

- Analog Devices
- Custom Manufacturing
- Emerging Architectures
- Emerging Digital Technologies
- Expanded Performance Processes, Devices, Circuits
- Mainstream Silicon Technology
- MEMS & NEMS Technology

### RF Components (sensors related)

- Antenna Support
- Frequency Control
- Power Amplifiers
- Solid State
- Vacuum Electronics

#### **i** Invite a Colleague:

**[Click Here for a list of Current Participants](#)**

*You can invite a colleague to participate in the Communities of Interest by emailing them the following link:*

<https://www.dodtechipedia.mil/dodc/x/1g00>



# Membership Information Area



## Membership Information

### *Steering Group Chair/Col Lead:*

Dr. Paul Amirtharaj, Army, 301-394-0940, [paul.amirtharaj@us.army.mil](mailto:paul.amirtharaj@us.army.mil)

### *Working Group Chair:*

Dr. Romeo del Rosario, Army, 301-394-3562, [romeo@arl.army.mil](mailto:romeo@arl.army.mil)

### *Col Subject Matter Expert:*

Dr. Romeo del Rosario, Army, 301-394-3562, [romeo@arl.army.mil](mailto:romeo@arl.army.mil)

### *Col Wiki Administrator:*

Ms. Jammi Cash, OASD(R&E), 703-930-4862, [jammi.cash.ctr@osd.mil](mailto:jammi.cash.ctr@osd.mil)

### *Steering Group:*

- **Hank Barcikowski**, MDA (Primary), 256-450-1831, [henry\\_barcikowski@mda.mil](mailto:henry_barcikowski@mda.mil)
- **Richard Buchter**, MDA (Alt.), 703-882-6106, [richard.buchter.ctr@mda.mil](mailto:richard.buchter.ctr@mda.mil)

- **Dr. Preston Grounds**, Navy, 703-696-0331, [chip\\_grounds@navy.mil](mailto:chip_grounds@navy.mil)
- **Dr. David Jerome**, Air Force, 937-255-2620, [david.jerome@wpafb.af.mil](mailto:david.jerome@wpafb.af.mil)

### *Working Group:*

- **Mr. Christopher Bozada**, Air Force, 937-255-4557, [christopher.bozada@wpafb.af.mil](mailto:christopher.bozada@wpafb.af.mil)
- **Dr. Daniel Green**, Navy, 703-696-4220, [daniel.green@navy.mil](mailto:daniel.green@navy.mil)
- **Dr. Ken Jones**, Army, 301-394-2005, [kajones@arl.army.mil](mailto:kajones@arl.army.mil)

- **Dr. Harvey Newman**, Navy, 202-767-3008, [harvey.newman@nrl.navy.mil](mailto:harvey.newman@nrl.navy.mil)
- **Dr Ron Polcawich**, Army, 301-394-1275, [rpolcawich@arl.army.mil](mailto:rpolcawich@arl.army.mil)
- **Mr. Michael Wood**, Navy, 619-553-3914, [mike.wood@navy.mil](mailto:mike.wood@navy.mil)

### *Col Participants:*

- **Dr. Gregory Creech**, Integrated Microsystems, Air Force, 937-255-4831, [gregory.creech@wpafb.af.mil](mailto:gregory.creech@wpafb.af.mil)
- **Dr. John (Jack) Ebel**, Electronics Devices (including MEMS), Air Force, 937-904-9087, [john.ebel@wpafb.af.mil](mailto:john.ebel@wpafb.af.mil)
- **Dr. Daniel Green**, Electronic Materials and Devices, Navy, 703-696-4220, [daniel.green@navy.mil](mailto:daniel.green@navy.mil)
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- **Dr. John Meloling**, Antennas and RF Apertures/Components, Navy, 619-553-2134, [john.meloling@navy.mil](mailto:john.meloling@navy.mil)
- **Dr. Ron Polcawich**, MEMS, Army, 301-394-1275, [rpolcawich@arl.army.mil](mailto:rpolcawich@arl.army.mil)
- **Dr. Boris Tomasic**, Electronics and Electromagnetic Radiation, Air Force, 781-377-2055, [boris.tomasic@hanscom.af.mil](mailto:boris.tomasic@hanscom.af.mil)



# Briefings & Meeting Minutes



## Briefings & Meeting Minutes

[Click to Add Attachments](#)

Energy and Power Technology Roadmap

Date	Briefings	Meeting Minutes / Supporting Documentation
	<a href="#">Dr. John Pazik Presentation <i>Energy &amp; Power Community of Interest</i></a>	
01/11/2012	Surface Navy Symposium: <a href="#">PMS320 Electric Ships Office Overview</a> <a href="#">Alternative Fuels Testing</a>	
12/19/2011	<a href="#">EPCOI telecon minutes 19DEC2011.docx</a>	<a href="#">EPCOI telecon minutes</a>
7/13/2011		<a href="#">Col Meeting Agenda (7/13/2011)</a> <a href="#">Col Meeting Minutes (7/13/2011)</a>
6/28/2011		<a href="#">Energy &amp; Power Technology Col Discussion Meeting Minutes</a>
4/29/2011	<a href="#">04_29_11_Lithium_Summit.ppt</a>	<a href="#">Summit II Minutes as of 24 May rev 4.doc</a> <a href="#">Summit Presentations at DTIC.DOCX</a>

## Energy and Power Technology Col Charter

- [Current Energy and Power Technology Col Charter](#)



# Hub for Professional Links



## Related Links

### ASD(R&E) Communities of Interest (Cols)

- [Networks Col](#)
- [Sensors and Processing Col](#)
- [Cyber Security Col](#)
- [Advanced Electronics Col](#)
- [Weapons Technology Col](#)
- [Energy and Power Technology Col](#)
- [Command and Control \(C2\) and other Information Systems \(IS\) Col](#)
- [Materials & Processes Col](#)
- [Human Systems Col](#)
- [Autonomy Col](#)
- [Air Platforms Col](#)

\* [Other](#)

### Weapons Col Subareas

- [Directed Energy](#)
- [Kinetic Weapons](#)

- [DoD and Military Electronic Journals](#)
- [Directed Energy Professional Society \(DEPS\)](#)
- [DTIC Journal Articles and Conference Proceedings](#)
- [Jane's Military Communications\(JMC\)](#)
- [National Defense Industrial Association \(NDIA\)](#)
  - [NDIA Strike, Land Attack, and Air Defense Division \(SLAAD\)](#)
- [North Atlantic Treaty Organization \(NATO\)](#)
  - [NATO Research and Technology Organization \(RTO\)](#)
  - [NATO RTO Applied Vehicle Technology \(AVT\)](#)
  - [NATO RTO Information Systems Technology \(IST\)](#)
  - [NATO RTO System Analysis & Studies \(SAS\)](#)
  - [NATO RTO System Concepts & Integration \(SCI\)](#)
  - [NATO RTO Sensors & Electronics Technology \(SET\)](#)

- [Precision Strike Association \(PSA\)](#)
- [S&T News](#)
- [Weapon Systems Technology Information Analysis Center \(WSTIAC\)](#)



# Col Wiki Discussion Area



## Related Discussion

### Discussions ([Hide Discussions](#))

Beginning Discussion on Improving the functionality of this site:

1. once you start a post, you have 15 minutes to complete it (before the site times out)

 Posted by [Romeo Delrosario](#) at [Aug 26, 2011 14:00](#) | [Edit](#) | [Delete](#) | [Reply To This](#)

One suggestion on the Thrust Areas.

Power Amplifiers are a critical component for many systems and they are an active area of research and development. May be we should add "Power Amplifiers" as a separate item. It can be under "RF Components", I guess.

Also, it seems that there is a typo on the page. Thrust area labelled "MENS & NEMS Technology" probably should be called "MEMS & NEMS Technology"

Thanks,

Tony Ivanov

 Posted by [Tony Ivanov](#) at [Sep 13, 2011 09:43](#) | [Edit](#) | [Delete](#) | [Reply To This](#)

Good Afternoon,

Thank you very much for your input, the typo has been corrected.

Defer to Dr. del Rosario, SME for RF Components, regarding additional sub-thrust areas. I'm happy to add a new page and wiki markup as appropriate.

 Posted by [JAMMI CASH](#) at [Sep 15, 2011 15:39](#) | [Edit](#) | [Delete](#) | [Reply To This](#)



# Communities of Interest



Cols	Col Leads	Organization
Advanced Electronics	Dr. Paul Amirtharaj	Army
Air Platforms	Dr. James Kenyon	OSD
Autonomy	Dr. Morley Stone	Air Force
Command and Control and other Information Systems	Dr. Wen Masters, Mr. Rob Wolborsky	Navy
Cyber Security	Dr. Davy Belk	Air Force
Energy and Power Technology	Dr. John Pazik	Navy
Human Systems	Mr. Jack Blackhurst	Air Force
Materials & Processes	Dr. Jeff Zabinski	Army
Networks	Dr. Davy Belk	Air Force
Sensors and Processing	Dr. Don Reago	Army
Weapons Technology	Dr. Spiro Lekoudis	OSD



# Summary of Cols Activities



Cols	Thrust Areas	SME	Calendar Entry	Calendar Activity	Wiki Activity	IT POC
Advanced Electronics	5	Dr. Romeo del Rosario	X	High	High	Jammi Cash
Air Platforms	6	TBD	X	High	Low	Cheryl Casteel
Energy and Power Technology	6	CDR Brian Jones	X	High	High	Jammi Cash
Human Systems	6	Mr. Ronald Julian	X	High	High	Kevin Wooden
Materials & Processes	9	Mr. Warren Johnson	X	High	Low	Jammi Cash
Sensors and Processing	4	TBD	X	Low	Low	Kevin Wooden
Weapons Technology	2	Dr. Mostafiz Chowdhury	X	High	High	Cheryl Casteel
Autonomy	4	LtCol Laura Barnes	X	Low	High	Jammi Cash
Command and Control and other Information Systems	TBD	Mr. John Howard	X	Low	Low	Jammi Cash
Cyber Security	6	Mr. Chet Maciag	X	Low	High	Andy Jeselson
Networks	8	Mr. David Climek	X	Low	Low	Andy Jeselson



# Successful Wiki Attributes



Cols	Thrust Areas /Sub Thrusts	Calendar	Doc. /PPT	Blog /RSS Feed	Discussion Section	Hub for Prof. Links	Leaders Identified	Members Identified	Charter	PSC Roadmap
Advanced Electronics	5/27	x	x	x	x	x	SG, WG	177	x	
Air Platforms	6	x	x	x	x	x	SG	7	x	
Energy and Power Technology	6	x	x	x	x	x	SG, WG	13	x	
Human Systems	6	x	x	x	x	x	SG, WG	562	x	x
Materials & Processes	9	x	x	x	x	x	SG	117	x	
Sensors and Processing	4	x	x	x	x	x	SG	11	x	
Weapons Technology	2/11	x	x	x	x	x	SG	102	x	
Autonomy	4	x	x	x	x		SG	11	x	x
C2 and other IS	TBD	x		x	x		SG, WG	17	x	x
Cyber Security	6	x		x	x		SG	89	x	x
Networks	8	x		x	x		SG	99	x	



# Contacts

- For additional information about the ASD(R&E) Communities of Interests (Cols) Wiki, please send email to:
  - [dodcoi@osd.mil](mailto:dodcoi@osd.mil)
- ASD(R&E) Cols Home page URL:
  - <https://www.dodtechipedia.mil/dodc/x/1g00>
- For questions about the Col Program, please contact Mr. Paul Ryan at [paul.ryan@osd.mil](mailto:paul.ryan@osd.mil).



# Contact Information

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