

# In-Space Non-Destructive Inspection Technology Workshop

## Preliminary Agenda (as of Feb 21, 2012)

[http://www.nasa.gov/offices/nesc/workshops/in\\_space\\_non\\_destructive.html](http://www.nasa.gov/offices/nesc/workshops/in_space_non_destructive.html)

**Feb 29<sup>th</sup>:** 7:00-8:00am Check-in

### **Session 1: Alamo Ballroom**

- 1-1: 8:00-8:15am: Welcome/Logistics/Vision: - NASA/LaRC/Bill Prosser - JSC/George Studor
- 1-2: 8:15-8:30am: In-Space NDE Activities and Past Success Stories - NASA/NDE TDT/Bill Prosser
- 1-3: 8:30-9:00am: In-Space Inspection Technology Needs/Vision - NASA/JSC/George Studor
- 1-4: 9:00-9:15am: SBIR/STTR Relevant Subtopics and Award Summaries - NASA/LaRC Eric Burke
- 1-5: 9:15-10:00am: MMOD Risk/Ext Inspection Needs for Re-entry TPS - NASA/JSC/Rollins/Christiansen

**Break:** 10:00-10:15am

### **Session 2: Alamo Ballroom**

- 2-1: 10:15-10:40am: Oil & Gas Inspection Needs - BP Technology/NDE - David Lafferty
- 2-2: 10:40-11:00am: Oil & Gas Inspection Needs - Shell Technologies/NDE - Sergio Kapusta
- 2-3: 11:00-11:30am: Phoenix Mission Inspection Needs - BAA highlights - DARPA/Peter Will
- 2-4: 11:30-12:00am: Security Inspection Needs - DTRA/Robert Woods & TSA/Nicholas Santoro

**Lunch** 12:15pm - 12:45pm: Surgical Snake Robots & Tech - Carnegie Mellon/Howie Choset

### **Session 3:**

	<b>3A</b>	<b>3B</b>	<b>3C</b>
	<u>Alamo Ballroom East end</u>	<u>Alamo Ballroom West end</u>	<u>San Jacinto Room</u>
	Miniature 3D Penetrating Imagers	Misc Inspection Technologies	Technologies for Flexible, Controllable Inspection
3-1: 12:45-1:10pm	mm wave SAF Video MO S&T/Reza Zoughi	Direct Stress of Windows Stress Photonics/Lesniak	Stereo Videoscope Xigen/Jason Geng
3-2: 1:10-1:35pm	24-60 GHz Walleye/Dave Hollbrook	Sensing w/Magnetic Waves Gen Magnetic Sci/John Menner	Carbon NT Wire/Applications MinnesotaWire/T. Kukowski
3-3: 1:35-2:00pm	Hand-held T-Hz Picometrix/Dave Zimdars	M-Wave Inspection Exel Orbital/Kevin McGushion	Biomemetic/Ionic Polymer Tech for Snake Robots UMaine/Moshen Shahinpoor
3-4: 2:00-2:25pm	Backscatter Xray Aribex/Arturo Reyes	Gecko-foot Inspection Robots NASA/JPL/Aaron Parness	Tendrill/Continuous Robots Clemson/ Ian Walker

3-5: 2:25-2:55pm Imagery Noise Reduction    Micro-Robotic Inspectors    Highspeed F.O. Strain for Shape  
 VJ Tech/ N. Shashishekar                    SRI/Ron Pelrine                    NASA/DFRC/Patrick Chan

**Break:** 2:55-3:05pm

**Session 4:**

	<b>4A</b>	<b>4B</b>	<b>4C</b>
	<u>Alamo Ballroom East end</u>	<u>Alamo Ballroom West end</u>	<u>San Jacinto Room</u>
	Miniature 3D Penetrating Imagers	Mini Free-Flying Inspection Satellites	Controllable Snake-arm Inspection Systems
4-1: 3:05-3:30pm	Backscatter Xray AS&E/Lou Wainwright	Mini-Aercam JSC/ER/Steven Fredrickson	Snake-robots/following S/W OCRobotics/Rob Buckingham
4-2: 3:30-4:00pm	Backscatter X-Ray NuSAFE/Dan Shedlock	SPHERES ARC/Mark Micire	3D Videoscope - next steps Olympus/Frank LeFleur
4-3: 4:00-4:30pm	3D Backscatter Xray POC/Victor Grubsky	Aerocube4 Aerospace Corp/Dave Hinkley	Snake Robot Inspection SRI/Ron Pelrine
4-4: 4:30-5:00pm	3D BX-ray & Adv DR GE/Rebecca Rudolph	ISS/Spacecraft Insp F.Flyer JSC/ES/George Studor	

**Dinner - Encourage small groups to meet together - End Users and Technology Providers**

**March 1:**

**Session 5: Alamo Ball Room                    End-User Needs Presentations**

- 5-1: 8:00-8:30am    Aircraft Inspection needs                    - Boeing Mfg/Assembly Technology/Jim Buttrick
- 5-2: 8:30-9:00am    Backscatter Xray for Aircraft                    - Boeing/NDE/Gary Georgeson
- 5-3: 9:00-9:30am    USAF Aircraft Inspection Needs                    - AFRL/ WPAFB /NDE/Stephan Russ
- 5-4: 9:30-10:00am    Inflatable Habitat Inspection needs                    - JSC/Inflatable Tech/Gerard Valle

**Break:** 10:00-10:15am

**Session 6: Alamo Ball Room                    End-User Needs Presentations**

- 6-1: 10:15-10:40am    Comp Pressure Vessel/Rocket Propulsion Inspections                    -WSTF/ Regor Saulsberry
- 6-2: 10:40-11:05am    Under-water Inspection Mini-ROV Tech Needs                    - Astrotechnology/Dave Brower
- 6-3: 11:05-11:30am    Spacecraft Prelaunch/Turnaround NDE Needs                    - KSC/NEL - Rick Russell
- 6-4: 11:30-12:00am    Automotive Manufacturing NDE Inspection Needs                    - USCAR/NDE - Leo Lev

**Lunch:** 12:15-1:00pm Application needs for fully articulating borescope inspections in power generation and industrial markets - GE/M&C/Joshua Scott

**Session 7:**

1:00pm - 3:15pm Scheduled One-On-Ones with End Users at their tables - sign up during workshop  
(approximately 15 minutes per session)

**Break** 3:15-3:30pm

**Session 8:**

8-1: 3:30-4:30pm Forward Planning Discussion Groups - Sign up beforehand please

8-2: 4:30-5:00pm Reports from Forward Planning Groups by designated lead

Closing: 5:00pm Closing Remarks - Comments from Participants