

The logo for INCOSE, featuring the word "INCOSE" in a bold, sans-serif font. The letters are white with a blue, grid-like pattern behind them, and the entire logo is set against a dark blue, rounded rectangular background.

# **Human-Systems Integration Working Group**

International Workshop

October 4-5, 2016

Florida Institute of Technology

# Observations

- Human-Systems Integration (HSI) is a growing practice derived from Human-Centered Design (HCD) and Systems Engineering (SE).
- HSI puts people at the center of the design and development processes of complex systems. It is a humanistic approach that provides methods and tools for reducing the cost of system life cycles.
- HSI uses human-in-the-loop simulations in early design phases, as well as agile development and usability/ usefulness testing to help reduce surprises at the time of deployment.
- This requires both creative/design thinking, and constant activity observation and analysis to discover emergent properties of the complex systems being developed.

# Our mission...

- The mission of INCOSE HSI Working Group (HSIWG) is to develop **recommendations, guidelines and standards** for improving HCD and SE. Human-centered designers are HSI architects. They work in concert with other SE engineers and managers to improve understanding and provide guidance in the design and development of **complex life-critical systems**.
- HSIWG's role is to further develop an understanding of organization design and management that can support HCD, as well as of modeling and simulation, advanced interaction media, complexity analysis, and cognitive engineering...
- This first HSI workshop gathers worldwide specialists to share and discuss what HSI is about and plan for further HSI developments within INCOSE and beyond.

# Agenda

## Tuesday: Experiences Collection and Analysis

|            |       |  |
|------------|-------|--|
| Morning:   | 08:30 | Registration                                   |
|            | 09:00 | Problem statement                              |
|            | 09:30 | NASA JSC experience                            |
|            | 10:30 | Break  |
|            | 11:00 | MOD contribution                               |
|            | 12:00 | Lunch  |
| Afternoon: | 13:30 | NASA KSC contribution                          |
|            | 14:30 | DOD contribution                               |
|            | 14:45 | SHCDIA-FIT contribution                        |
|            | 15:45 | Break  |
|            | 16:15 | Analysis of HSI write-up (SE-Handbook & SEBoK) |
|            | 17:00 | End discussions for the first day              |
|            | 18:00 | Dinner (for registered participants)           |

# Agenda (cont.)

## Wednesday: Ideation Solutions & Recommendations

- Morning:
- 09:00 Creativity: generation of possible solutions (several viewpoints)
  - 10:00 Rationalization: recommendations for SEBoK and SE-Handbook
  - 12:00 Adjourn
- Afternoon: Cancelled due to emergency (Hurricane Matthew)