An Overview of AHS International

October 21, 2014

AHS International
The Vertical Flight Technical Society

www.vtol.org
What is AHS International?

- World’s premier professional vertical flight **technical society**
- Expands **knowledge** about vertical flight technology and **promotes its application** around the world
- Advances rotorcraft **safety**
- Advocates for vertical flight **R&D funding**
- Helps **train the next generation** of vertical flight leaders
- **Benefits all helicopter operators** – commercial, private and military; manned and unmanned
About AHS

Mission

The American Helicopter Society (AHS) International is the world’s premier professional vertical flight technical society. Since its inception in 1943, AHS has provided an international forum through which to expand the body of knowledge of vertical flight. The Society is the global resource for information on vertical flight technology.

Vision

To provide global leadership for scientific, technical, educational and legislative initiatives that advance the state-of-the-art of vertical flight.
Why be a member?

- **Leadership** – AHS leads technology, safety, advocacy and other initiatives. We bring together industry, academia and government to tackle the toughest challenges.

- **Advocacy** – AHS works to affect change to benefit the industry and create recognition of the benefits of vertical flight.

- **Vertiflite** – get in-depth insight into the latest developments with the world’s leading magazine on vertical flight technology.

- **The Journal** – the world’s only vertical flight technical journal, *The Journal of the AHS* has the latest scientific findings and engineering breakthroughs.

- **Networking** – interact with some of the 1200 attendees at the Annual Forum or with small gatherings at your local Chapter meeting or Specialists’ Meetings.

- **Participation** – get involved with your local chapter, join one of our 21 different technical committees or help in many other ways!

- **Recognition** – be eligible to be recognized by your peers for outstanding contributions or nominate others through our awards program.

- **Education** – student chapters, VFF Scholarships, Human Powered Helicopter Competition, and Student Design Competition.

- **Members Only** – exclusive online content and deep discounts for AHS products, including free “Paper of the Month” and *Vertiflite*, Career Center, and much more!
Annual Forum attracts 1200 engineers, scientists and leaders from industry, academia and governments
  – Helicopter manufacturer CEOs/VPs/engineers, military leaders, researchers, etc
  – ~250 technical papers
  – ~35 panelists
  – ~65 exhibitors

Grand Awards Banquet

Short courses & industry tours

www.vtol.org/forum

71st Annual Forum is May 5-7, 2015 in Virginia Beach
## Body of Knowledge

<table>
<thead>
<tr>
<th>Publication</th>
<th>PDFs</th>
<th>Pages</th>
<th>Initial Online</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Journal of the AHS</td>
<td>1,600</td>
<td>25,000</td>
<td>2009</td>
<td>2009</td>
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<tr>
<td>Vertiflite magazine (800 issues)</td>
<td>800</td>
<td>25,000</td>
<td>Jan 2012</td>
<td>2012</td>
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<tr>
<td>AHS Forum Proceedings</td>
<td>6,000</td>
<td>75,000</td>
<td>March 2012</td>
<td>2012</td>
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<tr>
<td>Specialists Meeting proceedings</td>
<td>6,000</td>
<td>75,000</td>
<td>May 2012</td>
<td>2015</td>
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<tr>
<td><strong>Total:</strong></td>
<td></td>
<td><strong>200,000</strong></td>
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</table>
AHS Technical Committees

- Acoustics
- Advanced Vertical Flight
- Aerodynamics
- Aircraft Design
- Avionics & Systems
- Crash Safety
- Crew Stations & Human Factors
- Dynamics
- Handling Qualities
- Health & Usage Monitoring Systems (HUMS)
- History
- Manufacturing Technology
- Modeling & Simulation
- Operations
- Product Systems Technology
- Propulsion
- Safety
- Structures & Materials
- System Engineering Tools & Processes
- Test & Evaluation
- Unmanned VTOL Aircraft
<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Location</th>
</tr>
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<tbody>
<tr>
<td>Jan 22-24, 2014</td>
<td>Aeromechanics</td>
<td>San Francisco, CA</td>
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<tr>
<td>Feb 17-19, 2014</td>
<td>Handling Qualities</td>
<td>Huntsville, AL</td>
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<tr>
<td>May 20-22, 2014</td>
<td>Forum 70</td>
<td>Montreal, Canada</td>
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<tr>
<td>June 25-26, 2014</td>
<td>China Civil Helicopter Summit *</td>
<td>Beijing</td>
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<tr>
<td>Aug 26-27, 2014</td>
<td>Transformative VL Workshop</td>
<td>Arlington, VA</td>
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<tr>
<td>Aug 27-28, 2014</td>
<td>RDT&amp;E</td>
<td>Patuxent River, MD</td>
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<tr>
<td>Sep 2-5, 2014</td>
<td>European Rotorcraft Forum *</td>
<td>Southampton, UK</td>
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<tr>
<td>Oct 21, 2014</td>
<td>Civil VTOL UAS Workshop</td>
<td>College Park, MD</td>
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<tr>
<td>Oct 28, 2014</td>
<td>HELMOT (Military Ops Tech)</td>
<td>Ft Eustis, VA</td>
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<tr>
<td>Dec 18-19, 2014</td>
<td>Australian Pacific</td>
<td>Melbourne</td>
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<tr>
<td>Jan 20-22, 2015</td>
<td>Unmanned Rotorcraft</td>
<td>Chandler, AZ</td>
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<tr>
<td>Feb 9-11, 2015</td>
<td>Airworthiness, CBM, HUMS</td>
<td>Huntsville, AL</td>
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<tr>
<td>May 4-7, 2015</td>
<td>Forum 71</td>
<td>Virginia Beach, VA</td>
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* co-sponsors
Transformative Vertical Flight Concepts Joint Workshop

Workshop

T echnical Specialist Meeting

unSAE

SAE

International

Unmanned Rotorcraft Systems

Phoenix, AZ

Washington, DC

VTOL UAS Symposium and Workshop

21 October 2014

Civil Certification Markets Electric Distributed Propulsion

VTOL

Platform Technology

Manned aircraft

Unmanned Rotorcraft Systems

January 2015

UAS / UAV

UAS Airspace Integration

Networked sensor integration

Command-and-control

Ad hoc network enabled systems

NCO-related analysis, modeling, and simulation

Information Sharing across operational field of use UAS control/interoperability (ground & aerial systems)

An exploration of the technical and regulatory challenges of integrating VTOL UAS in national airspace for precision delivery and survey tasks

Technical Specialist Meeting

Phoenix, AZ

August 2014

21 October 2014
2014 Student Design Competition:
X-VTOL based on DARPA VTOL X-Plane

Georgia Tech (1st Grad)

Politecnico di Milano (2nd Grad)

St. Louis Univ. (1st Undergrad)

Rensselaer Polytechnic Institute (3rd Grad)

Georgia Tech (2nd Undergrad)
2015 Student Design Competition: Small VTOL UAS for Package Delivery

- “Distributed Logistics in an Urban Setting Using Small Unmanned Aerial Vehicles”
- 32nd Annual Competition
- $12,000 in prizes
- RFP and details at www.vtol.org/sdc
3rd Annual Micro Air Vehicle (MAV) Student Challenge

- Forum 71, May 4 @ Virginia Beach
- Open to universities and high schools
- $10,000 in prizes

Autonomous prize is still unwon!

- Autonomous target acquisition, landing and return

RFP and details at www.vtol.org/mav

January 20-22, 2015 in Chandler, Arizona
– Sponsored by the AHS Arizona Chapter and Unmanned VTOL Technical Committee

Details at www.vtol.org/unmanned
Join AHS International!

- The world's only international technical society for those working on vertical flight technology
  - Since 1943, we’ve led technology, safety, advocacy and other initiatives and been the primary forum for interchange of information on vertical flight technology

- We bring together industry, academia & governments to tackle the toughest challenges in vertical flight
  - UAS Workshop, Unmanned Technical Committee, Unmanned Conference, VTOL UAS Delivery Design Competition, MAV Student Challenge, etc.
  - We advocate for “Strict, enforceable rules that allow the sensible operations of drones” (www.vtol.org/advocacy)

- We are the global resource for information on vertical flight technology

- Go to www.vtol.org to find out more or to join today!