SHM Aerospace Industrial Steering Committee (AISC-SHM)

8-10 Sept 2019

Brochure

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Mission

The SHM-AISC will establish an approach for the introduction and use of SHM for aerospace vehicle structures that engages with regulating and certification authorities while capturing the best practice from the global aerospace industry and its suppliers. By building consensus with all stakeholders, the AISC aims to provide definitive guidance on the means to achieve the benefits of SHM for vehicle users, operators and manufacturers.

To fulfill its mission, the SHM-AISC will convene working groups (initially with respect to commercial aviation) and involve all necessary organizations to carry out the following:

1. Review the anticipated impact of SHM on qualification and certification processes and procedures for various regulatory agencies such as the FAA and EASA.

2. Develop guidelines for use by regulatory agencies to generate new or revised certification requirements (including advisory materials).

3. Review existing scheduled/unscheduled maintenance and structural inspection practices/processes and identify opportunities for implementation of SHM.

4. Set Guidelines for developing standards for assessing the reliability and maintainability of SHM.

5. Engage technology suppliers in identifying gaps in current capability and the means to bridge them.

6. Evaluate and recommend changes to structural design practices to identify opportunities for implementation of SHM.

7. Standardize terms for SHM and initiate a "dictionary".

8. Promote utilization of SHM.

9. Promote participation of industry/government organizations.

AGENDA

SAE International AISC-SHM Technical Committee, Meeting #27

Co-sponsored by IWSHM

Chair: Clemens Bockenheimer

Vice-Chair: David Piotrowski

8-10 Sept 2019

Stanford Univ. Durand Bldg, Room 450, Room 353

(in conjunction with IWSHM 2019 & Optional FAA Reliability Session, 10 Sept, 8:30 -14:00 h)

Online Meeting Information:

Join from PC, Mac, Linux, iOS or Android: https://stanford.zoom.us/j/763400256
Dial: +1 650 724 9799 (US Toll) or +1 833 302 1536 (US Toll Free) with **Meeting ID: 763 400 256**
International numbers: https://zoom.us/u/af4CBmOwo
SIP: 763400256@zoomcrc.com

DAY 1: AISC-SHM Meeting, Stanford Univ. Meeting room: Durand Bldg, Room 450

Backup breakaway room: Durand Bldg, Room 353

1. Welcome and Introductions (8 Sept 2019, 08:30 h)

- Welcome
- Meeting Room Information
- Objectives of the meeting
- Agenda
- Review of the SAE Anti-Trust, Patent Disclosure and IP Statements
- SAE Staff report
- Standard works overview

2. Review of Minutes from Last Meeting (8 Sept 2019, 08:45 h)

- Revise if necessary the minutes for record / publication on SAE Standards Works (discussions on action in TOP 6)

3. Membership Review (8 Sept 2019, 09:00 h)

- Roster update status

4. Liaison Activities (8 Sept 2019, 09:15 h)

- IWSHM Reception (Monday, Sept 9th, 17:00 h - 19:00 h)
- IWSHM Opening Remarks, Keynotes (Tuesday, Sept 10th, 08:30 h - 10:00 h)
- Joint IWSHM / FAA Reliability Session, Tuesday, Sept 10th, 10:30 h - 12:00 h)
- Reliability Forum with lunch (Tuesday, Sept 10th, 12:30 h - 14:00 h)
- HM-1, IVHM-SG Meetings, Sept 17-19, Paris
- A4A NDT Forum, Sept 17-19, Long Beach, CA
- MRO Europe, Oct 15-17, London (Panel Presentation)

5. Coffee Break (8 Sept 2019, 09:45 h)

6. Documents Review (8 Sept 2019, 10:00 h)

- ARP6461 'Guidelines for Implementation of Structural Health Monitoring on Fixed Wing Aircraft '- 5-yearly review (sponsor: David Piotrowski)
- AIR6245 'Perspectives on Integrating Structural Health Monitoring Systems into Fixed-Wing Military Aircraft' (sponsor: Hesham Azzam)
- AIR6892 'Guidelines for Implementation of Structural Health Monitoring on Rotorcraft' (sponsor: Peter Carini)
- ARP6821'Guidance for assessing the Damage Detection Capability of Structural Health Monitoring Systems' (sponsor: Paul Swindell)

7. Other Business (8 Sept 2019, 10:15 h)

- Open action items from previous meetings
- Reliability Workshop: Debrief & Discussion (Paul Swindell)
- FAA Testing (Paul Swindell)

- Bill Meeker's work
- Draft AC 43-218 (IAHM)

8. **Lunch** (8 Sept 2019, 12:00 h) – Location: Patio outside Durand Bldg.

9. **Document Session - ARP6821'Guidance for assessing the Damage Detection Capability of Structural Health Monitoring Systems' – Part 1 (sponsor: Paul Swindell)**
(8 Sept 2019, 13:00 h)

10. **Session – 'SHM Gap Analysis' (sponsor: Matthias Buderath)**
(8 Sept 2019, 15:00 h)

11. **Adjourn** (8 Sept 2019, 17:00 h)

12. **AISC-SHM Social Dinner** (8 Sept, 18:00 h – 21:00 h) – Location: Nola Restaurant (535 Ramona St., Palo Alto)

DAY 2: AISC-SHM Meeting, Stanford Univ. Meeting room: Durand Bldg, Room 450

Backup breakaway room: Durand Bldg, Room 353

13. **Info Session – Real-time Condition-based Maintenance for Adaptive Aircraft Planning (ReMAP) (sponsor: Dimitrios Zarouchas)** (9 Sept 2019, 08:30 h)

14. **Document Session - AIR6892 'Guidelines for Implementation of Structural Health Monitoring on Rotorcraft' (sponsor: Peter Carini)**
(9 Sept 2019, 9:15 h)

15. **Break** (9 Sept 2019, 10:00 h)

16. **Document Session - ARP6821'Guidance for assessing the Damage Detection Capability of Structural Health Monitoring Systems' – Part 2 (sponsor: Paul Swindell)**
(9 Sept 2019, 10:15 h)

17. **Box lunch** (9 Sept 2019, 12:00 h) Location: Durand Bldg. Room 450

18. **Document Session - ARP6461 'Guidelines for Implementation of Structural Health Monitoring on Fixed Wing Aircraft '- 5-yearly review (sponsor: David Piotrowski)** (9 Sept 2019, 13:00 h)

19. **Review Session – Draft AC 43-218 = Operational Authorization of Integrated Aircraft Health Management Systems (IAHMS) (David Piotrowski)** (9 Sept 2019, 13:45 h)

20. **Break** (9 Sept 2019, 14:30 h)

21. **New Business** (9 Sept 2019, 14:30 h)

- Proposal for New Document – Maintenance Credits (Piotrowski)

22. **Next Meetings** (9 Sept 2019, 15:00 h)

- Spring 2020 Meeting (MHI Tokyo, dates TBC)
- Fall 2020 Meeting (Host, venue and dates TBC)

23. **Final Discussion, Summary, Round Table** (9 Sept 2019, 15:15 h)

24. **Adjourn** (9 Sept 2019, 16:00 h)

25. **Reception** (9 Sept 2019, 17:00)
    Location: Stanford Alumni Center
    Time: 17:00 - 19:00

Note: Duration of document review sessions are flexible

DAY 3: In conjunction with IWSHM & FAA Reliability Workshop:

- **IWSHM – Stanford Univ. Hewlett Bldg. 200** (10 Sept 2019, 8:20-10:00)
    - Opening Remarks – Dr. Fu-Kuo Chang
    - Keynote #1 – David Piotrowski
    - Keynote #2 – Michael Gorelik
    - Keynote #3 – Dr. Bill Meeker

- **FAA Reliability Workshop** (10 Sept, 10:30 h–12:10 h, location: Hewlett 201)
    - Moderators: Paul Swindell & Holger Speckmann

- **Reliability Forum with Lunch** (10 Sept, 12:10 h -13:40 h, location: 320-220)

IMPORTANT NOTE: Please be sure to provide the minutes and all attachments to the minutes in electronic format to SAE Staff.

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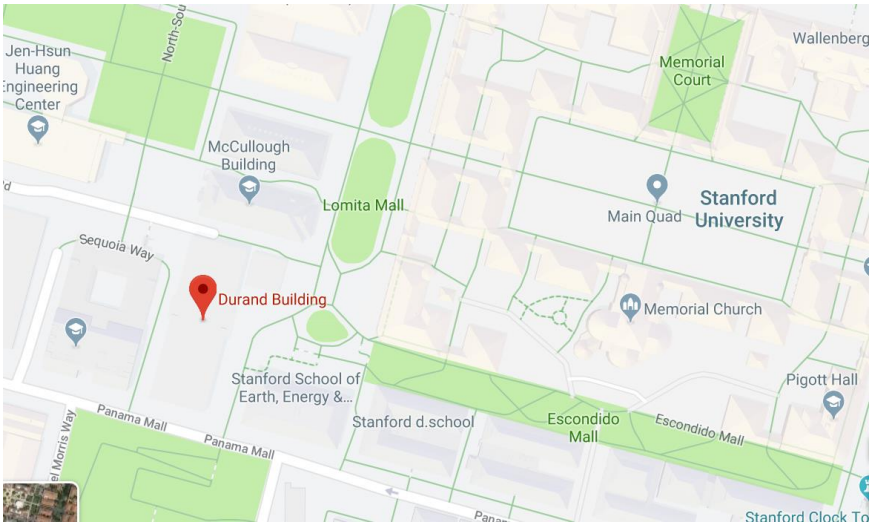
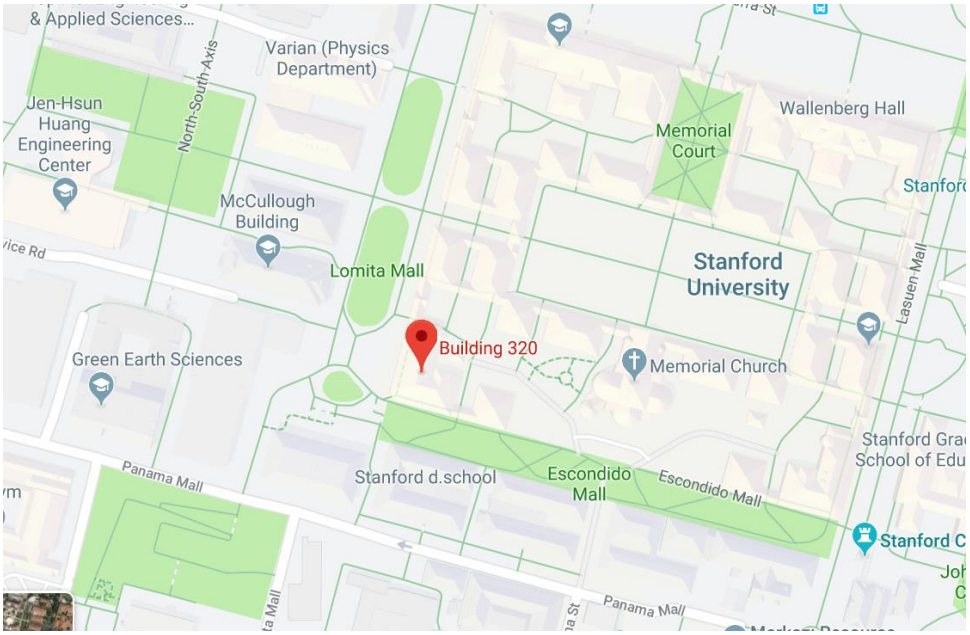
Location

The AISC meeting location is at Durand Building (Room 450 or Room 353, please see the agenda page for details) inside Stanford Campus!



Durand Building, Stanford

The Reliability Forum with lunch on Sept. 10 is at 320-220:



Building 320, Stanford

Stanford University and Palo Alto

Parking

Parking place: Roble Field Garage. Free Parking on Sunday. Weekday parking information can be found here using this link: https://transportation.stanford.edu/parking/purchase-a-parking-permit/visitors