



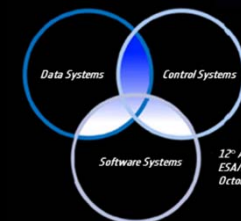
Welcome to ADCSS 2018

Joachim Fuchs - Head of Software Systems Division (TEC-SW)
Ali Zadeh - Head of Data Systems & Microelectronics Division (TEC-ED)
Alain Benoit - Head of GNC, AOCS & Pointing Division (TEC-SA)

Monique Daniel – Administrative Assistant (TEC-SA)
Davide Oddenino- AOCS & Pointing Systems Section (TEC-SAA)

16-18 October 2018
ESA/ESTEC

ESA Workshop on
Avionics
Data
Control
Software
Systems



12th ADCSS
ESA/ESTEC
October 16-18, 2018

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European Space Agency

Welcome to the 12th ADCSS workshop

- Organized every year since 2007 by 3 Divisions from the Systems Department (TEC-S) and the Electrical Engineering Department (TEC-E) of ESA/ESTEC:
 - The Data Systems & Microelectronics Division (TEC-ED)
 - The Software Systems Division (TEC-SW)
 - The GNC, AOCS & Pointing Division (TEC-SA)
 - new name of the Control Systems Division (TEC-EC) after its transfer from TEC-E to TEC-S
- The ADCSS programme is prepared in coordination with the SAVOIR Advisory Group
 - ESA, industry, national delegations
- Initial motivation for an Avionics workshop
 - “To provide an opportunity for a multi-disciplinary review of not only common avionics systems issues, but also techniques and technologies, and facilitate the consolidation of related R&D roadmaps.” (1st ADCSS workshop)
- Format
 - Thematic sessions with position papers (generally invited) and round tables
 - Plenary sessions and exhibitors in order to foster a common language and better understanding between the various actors and domains of expertise:
 - Data Systems/Microelectronics, Software Systems, GNC/AOCS experts
 - Primes, HW suppliers, SW companies, national agencies
 - Since 2010, the ADCSS workshop is open to non ESA member states, to promote European developments worldwide and presentations are not anymore protected by a password

ADCSS 2018



12th ESA Workshop on Avionics, Data, Control and Software Systems (ADCSS2018)

16-18 October 2018
ESA/ESTEC
Europe/Amsterdam timezone

ADCSS2018

- Scope & Topics
 - PYTHON Application Form
- Programme
- Exhibition
- Registration
- Accommodation
- Venue & Practical Information
- Future Events (Mailing List)

For support please contact:
Ms. Monique Hansen-Daniel or Mr. Davide Oddenino

✉ asg@esa.int
☎ 0031 715 65 3711 / 4367

The 12th ESA Workshop on Avionics, Data, Control and Software Systems (ADCSS) covers topics related to avionics for space applications, in the form of a set of round tables. The workshop acts as a forum for the presentation of position papers followed by discussion and interaction between ESA and Industry and between participants. Each theme part of ADCSS workshops will be first introduced and then expanded by presentations on related developments from technical and programmatic points of view. A round table discussion may follow, concluded by a synthesis outlining further actions and roadmaps for potential inclusion into ESA's technology R&D plans.

Attendance to the workshop is free of charge. Registration is required via this website not later than October 14th, 2018.

All material presented at the workshop must, before submission, be cleared of any restrictions preventing it from being published on the ADCSS website.

🕒 **Starts** 16 Oct 2018, 08:00
Ends 18 Oct 2018, 17:50
Europe/Amsterdam

👤 Alain Benoit
Ali Zadeh
Joachim Fuchs

📍 ESA/ESTEC
Tennis Hall (Escape Building)
Keplerlaan 1
2201 AZ Noordwijk
The Netherlands

📎 [PYTHON Session_ADCSS2018_Applicatio...](#)

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Avionics topics 2007-2018



- Looking back on some past ADCSS sessions:

Space Avionics Open Interface ARchitectures (SAVOIR Day since 2010)	Harness Reduction (2017)
Avionics technology trends (2015)	Compact Onboard Computer Architectures (2016)
Failure Detection Isolation and Recovery (2015, 2011)	IPR / Software Licensing / Governance (2014)
Systems/Software Co-Engineering Methods and Tools (2014)	CAN Bus in Space (2013)
Avionics Miniaturisation (2011)	Processing needs for advanced GNC Systems (2013)
What role should ESA take in the development of Nanosats? (2010)	Formal Methods in Software Engineering (2010)
Avionics Reference Architectures (2007)	Views on getting a Standard OBC and RTU Specification (2010)

- In 2016, a three-fold TRP activity was initiated by TEC-SW, TEC-ED and TEC-SA:
The “Compact Reconfigurable Avionics” is a set of 3 activities that, although issued as three different ITTs, shall be considered jointly, having the technical focus for each activity respectively in Software, Data Handling and AOCS:
 - Model Based Avionics Design
 - Compact Reconfigurable Data Handling Core
 - Smart AOCS&GNC ElementsCompetence Domain
- Competence Domain CD03 was created in 2016, encompassing also TT&C:
 - Avionic Architecture + DHS + On Board SW + FDIR + GNC & AOCS + TT&C

ADCSS 2018: our sessions



	Tuesday 16/10	Wednesday 17/10	Thursday 18/10
08:00	Registration	Registration	Registration
09:00	Welcome & Logistics Alain Benoit - Davide Oddenino	Command & Control Interfaces Status quo and medium/long term evolution Ali Zadeh Giorgio Magistrati	MicroSat & NanoSat AOCS & GNC Avionics Architecture Bénédicte Girouart Davide Oddenino
09:30	SAVOIR Jean Loup Terraillon		
	11:00 Coffee Break	11:15 Coffee Break	11:00 Coffee Break
~11:30	11:30 SAVOIR Jean Loup Terraillon	11:40 Primes views and round table Wahida Gasti	11:30 Cont'd with GNC Alexander Cropp
	13:00 Lunch Break (main canteen)	13:00 Lunch Break (main canteen)	12:30 Lunch Break (main canteen)
14:00 (except Thursday)	SAVOIR Jean-Loup Terraillon	PYTHON (Put Your Thesis ON) Bénédicte Girouart	13:30 Electronic Data Sheets (EDS) Marek Prochazka
	15:45 Coffee Break	15:30 Coffee Break	15:00 Coffee Break
~16:00	16:05 Compact Reconfigurable Avionics and Reprogrammable FPGA's Jean Loup Terraillon	15:50 Interactive Session Joachim Fuchs Digital Engineering Autonomy and Operations COTS Avionics Security	15:20 Electronic Data Sheets (EDS) Marek Prochazka
17:35	Tool vendors/exhibitors flash		16:35 Closing Address Ali Zadeh
18:00	Social Event - cocktail		17:00 End of ADCSS 2018



ADCSS 2018: our exhibition



- The exhibition will open today at 14:00 and remains till Thursday at 15:00
- On Wednesday and Thursday, the exhibition will open at 08:30



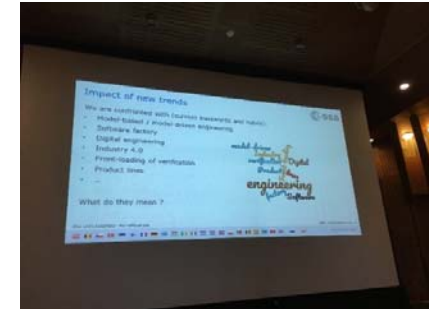
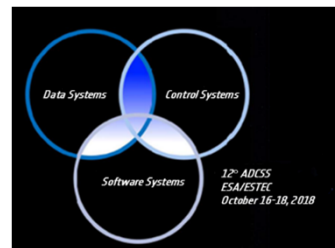
Special thanks



- We appreciate a lot your regular or first participation to ADCSS. Thanks a lot.
 - around 200 registrations this year
 - Special thanks to those who have come a long way
- Special thanks to all presenters and exhibitors
 - and in particular to the PhD students who answered positively to our new initiative
- Many thanks to the sessions conveners
 - who selected representative papers and will coordinate the sessions
- And a big thank to the organisers who coordinated the workshop preparation, managed all logistics details enabling a no-fee conference and who will take care of us during these three days:
 - Davide Oddenino (AOCS & Control Systems Section -TEC-SAA)
 - Monique Daniel (Administrative Assistant - TEC-SA)
 - Kathleen Gerlo (Administrative Assistant - TEC-SW)
 - Milena van Schendel (Administrative Assistant - TEC-ED)



Let's declare the ADCSS 2018 open !



We wish you a fruitful workshop!

Let's share our avionics talents to be able to compete in a challenging New Space environment ...



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European Space Agency