



GOTHENBURG  
11<sup>TH</sup> - 14<sup>TH</sup> JUNE

# Tuesday 11 June

- CAN in Space Workshop 2019 -

17:30

17:30 - 19:30

## Welcome Reception & Registration Open

18:00 Radisson BLU Scandinavia,  
Gothenburg, Sweden

Spend time with your fellow participants!  
Light refreshments will be served. Then enjoy  
the restaurants of Gothenburg

18:30

19:00

19:30

# Wednesday 12 June

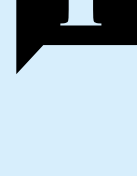
- CAN in Space Workshop 2019 -

07:30

## Registration open

7:30 - 8:30

Radisson BLU Scandinavia,  
Gothenburg, Sweden



08:00

08:30

## Conference Opening

8:30 - 9:15

Chair: Gianluca Furano - ESA

Sandi Habinc  
- Cobham Gaisler

Gianluca Furano  
- European Space Agency

09:15

## Invited Talk

9:15 - 10:00

The Simple Onweb Controller  
Area Network (SOCAN) bus

Mathieu Patte - Airbus Onweb Satellites



10:00

Break



10:30

10:30 - 12:30

## CAN applications in space industry

Chair: Torbjörn Hult - Ruag

A quick overview of use of CAN bus  
at Airbus Defence and Space

Jean Dalenq - Airbus Defence and Space

Telemetries / telecommands handling  
with CAN bus: practical applications

Thierry van Humbeeck - Thales Alenia Space

Equipment with CAN-TM/TC Interface  
for Flexible Payloads on modern  
Telecom Satellites

Jens Freese - Tesat Spacecom

Triton-2: The ESAIL mission CANopen  
high-performance platform

Miroslav Brada - LuxSpace

12:30

Lunch



13:00

13:30

13:30 - 15:00

## CAN higher-layer protocols

Chair: Oscar Mansilla - Renesas

### Invited Talk

Next CAN generation protocols  
including higher-layer protocols such as  
CANopen FD

Holger Zeltwanger - CiA - CAN in Automation

CAN-TS protocol for memory constrained  
embedded application

Dejan Gačnik - Skylabs

Onboard processing of high rate sensor  
data using CANopen protocol

Pablo Ghiglino - Klepsydra

15:00

Break



15:30

15:30 - 17:00

Chair: Fredrik Johansson - Cobham Gaisler

CANopen library demonstration  
on SAMV71 MCU

Michał Mosdorf - N7 Space

Proposed changes to the  
ECSS-E-ST-50-15C standard

Torbjörn Hult - RUAG Space Sweden

Full verification of an ECSS-E-ST-50-15C  
implementation based on an open-source  
CANopen software stack

Gianluca Furano - European Space Agency

17:00

## Welcome to Gothenburg!

Lord Mayor of Gothenburg

17:00 - 17:15

17:15

17:15 - 19:00

## Lord Mayor reception

Reception hosted by the City of Gothenburg  
at the Radisson BLU Scandinavia

17:30

Enjoy refreshments offered by the City and the  
Lord Mayor of Gothenburg.

18:00

18:30

19:00

# Thursday 13 June

- CAN in Space Workshop 2019 -

08:00

## Registration open

8:00 - 8:30

Radisson BLU Scandinavia,  
Gothenburg, Sweden



08:30

8:30 - 10:00

## CAN applications in space industry

Chair: Sandi Habinc - Cobham Gaisler

### Invited Talks



CAN-bus usage in High resolution  
Earth Observation missions

Ahmed Salem Belal  
- Mohammed Bin Rashid Space Centre

New Space era with  
Controller Area Network bus

Dejan Gacnik - SkyLabs

CAN-bus usage in OHB satellites

Holger Michel - OHB System AG Bremen

10:00

Break



10:30

10:30 - 12:30

### Invited Talks



Chair: Jean Dalenq - Airbus

The bird camera that flew to the Moon

Elsa Modin - Hasselblad Foundation

CAN/CANopen implementation on  
small satellite platform

Alessandro Avanzi - SITAEL

Compact Reconfigurable Avionics  
- Reconfigurable Data Handling Core

Arne Samuelsson - Cobham Gaisler

Implementation of CAN-bus in high  
reliability LEON3FT platforms for low cost  
NewSpace systems

Stefan Strålsjö - AAC Microtec

12:30

Lunch



13:00

13:30

13:30 - 15:00

## CAN implementations

Chair: Alessandro Avanzi - Sitael

How to improve quality in the  
CAN physical layer

Kent Lennartsson - Kvaser

GRCANFD: CAN-FD controller with  
DMA engine and AHB or AXI interface

Joaquin España Navarro - Cobham Gaisler

CAN XL

Kent Lennartsson - Kvaser

15:00

Break



15:30

15:30 - 17:00

## Microcontrollers with embedded CAN support

Chair: Dejan Gacnik - SkyLabs

GR716 Microcontroller for Embedded  
Space Applications

Fredrik Johansson - Cobham Gaisler

Microchip ARM CAN Solutions for Space

Eric Tinlot - Microchip Technology Nantes

Microcontrollers with embedded  
CAN support

Armand Dilworth  
- Cobham Advanced Electronic Solutions

17:00

17:30

17:30 - ...

## Bus transfer at 17:30

Radisson BLU Scandinavia

Meet in the Radisson Lobby for a 15 minute  
bus ride to the River Restaurant.

## Gala Dinner

The River Restaurant

The River Restaurant is situated on the water  
with beautiful views! The buses will take you  
back to the Radisson.

# Friday 14 June

- CAN in Space Workshop 2019 -

08:00

## Registration open

8:00 - 8:30

Radisson BLU Scandinavia,  
Gothenburg, Sweden



08:30

## CAN device design

8:30 - 10:00

*Chair: Gianluca Furano - ESA*

**CAN-bus usage for small-satellite  
propulsion systems**

*Housseem Laroussi - ThrustMe*

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**An Overview of Intersil CAN Transceivers  
and SET Performance of Intersil CAN  
Transceivers in a Two Node CAN Bus System**  
*Allan Robinson - Renesas Electronics Corporation*

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**CAN Bus based Constellation Interface Unit**  
*Ari Aho - RUAG Space Finland*

10:00

**Break**



10:30

## CAN system design

10:30 - 12:00

*Chair: Armand Dilworth - Cobham*

**Integrated Design Environment for CAN  
Networks in Space Applications – IDE4CAN**  
*Sławomir Stankiewicz - AVL Software & Functions*

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**TSM3 - emulating the CAN interface of the  
GR716 microcontroller**

*Julius Barendt - Cobham Gaisler*

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**Reliable Cable Network**

*Volodymyr Burkhay - Space IC*

12:00

**- The End of CAN in Space 2019 -**