

2019

# *CiA seminars*

*CAN- and CANopen-related educational training*



*CiA seminars*

*CiA special seminars*

*CiA in-house seminars and webinars*

[www.can-cia.org](http://www.can-cia.org)

CAN in Automation (CiA) offers CAN and CANopen seminars. These seminars address development engineers, system integrators, as well as decision-makers who want to learn more about the Classical CAN and the CAN FD protocol respectively about the higher layer protocol CANopen. Since 2019, CiA offers exclusively CAN FD and CANopen FD seminars, in which the new FD-functionality is discussed in depth. All CiA seminars are device- and manufacturer-independent.

**Further details with regard to content, location, language, and registration are provided on [www.can-cia.org](http://www.can-cia.org).**

### ***CAN for newcomers***

In this seminar you learn how CAN works, which possibilities it offers, and in which markets CAN is used. The seminar explains CAN as it is specified in the updated ISO 11898 standard series. This comprises the Classical CAN, the CAN FD protocol, as well as the CAN physical layer standards.

*Content:* Classical CAN, CAN FD, Classical CAN design recommendations

### ***CAN FD***

The seminar focuses on the improved CAN FD protocol, as specified in ISO 11898-1:2015. You learn the details of the CAN FD protocols and the differences to Classical CAN. Additionally, the seminar discusses further relevant aspects with regard to CAN FD device design, system design, as well as diagnostics. Furthermore you get an overview on the impacts of CAN FD on CAN-based higher layer protocols.

*Content:* CAN FD details, CAN FD availability, CAN FD system design and diagnostic aspects

### ***CANopen***

In this CANopen seminar you learn the basic principles of CANopen, as specified in CiA 301. This enables you to select the right CANopen device for your applications, to integrate devices in a proper control application, or to design the intended CANopen device behavior. In addition, you get an overview on CANopen application fields as well as a base for assessing the effort of introducing CANopen in your projects.

*Content:* CANopen device architecture, CANopen services and protocols, CANopen device profiles, Layer Setting Services (LSS), gateways



### ***CANopen FD***

This seminar explains in detail the CANopen FD protocol as specified in CiA 1301. You get familiar with the embedded network design options provided by CANopen FD. Additionally, you learn that most of already available Classic CANopen knowledge is applicable in CANopen FD networking, as well.

*Content:* CANopen FD services and protocols, similarities and differences to Classic CANopen, CANopen FD design options

**CiA e.V. appreciates to welcome its members. CiA members participate the CANopen FD seminar free-of-charge.**



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## CiA special seminars

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These seminars address at development engineers, system integrators, and decision makers, who want to learn more about the usage of CANopen in special application fields. An insight to Classical CAN and CANopen basics is always included.

### ***CANopen safety (EN 50325-5)***

In this seminar you get an insight to system design by considering functional safety. In addition to an introduction to functional safety in principle, you learn how to communicate safety-relevant data by means of the CANopen safety protocol.

*Content:* Basics of functional safety, CANopen safety protocol

### ***CANopen for subsea applications***

In this seminar you learn the specifics of using CANopen in subsea applications (CiA 443). The seminar explains all CANopen features that are used by the CANopen device profile for SIFS level 2 devices (CiA 443) as well as the functionality of sensors and actuators.

*Content:* CANopen device profile CiA 443, fault-tolerant CAN (ISO11898-3), additional CANopen functions



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## CiA seminar schedule

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<b>Topic</b>	<b>Date*</b>	<b>Language</b>	<b>Location*</b>
CAN for newcomers	2019-03-26	German	Nuremberg, DE
CANopen	2019-03-27	German	Nuremberg, DE
CAN for newcomers	2019-05-14	German	Nuremberg, DE
CANopen	2019-05-15	German	Nuremberg, DE
CANopen subsea (CiA 443)	2019-05-22	English	Oslo, NO
CAN FD	2019-06-04	German	Nuremberg, DE
CANopen FD	2019-06-05	German	Nuremberg, DE
CAN for newcomers	2019-07-02	German	Nuremberg, DE
CANopen	2019-07-03	German	Nuremberg, DE
CAN for newcomers	2019-10-08	German	Nuremberg, DE
CANopen	2019-10-09	German	Nuremberg, DE
CAN FD	2019-10-22	English	Frankfurt/Main, DE
CANopen FD	2019-10-23	English	Frankfurt/Main, DE
CANopen safety	2019-11-13	German	Nuremberg, DE
CAN for newcomers	2019-12-04	German	Nuremberg, DE
CANopen	2019-12-05	German	Nuremberg, DE

\* Subject may change without notice.

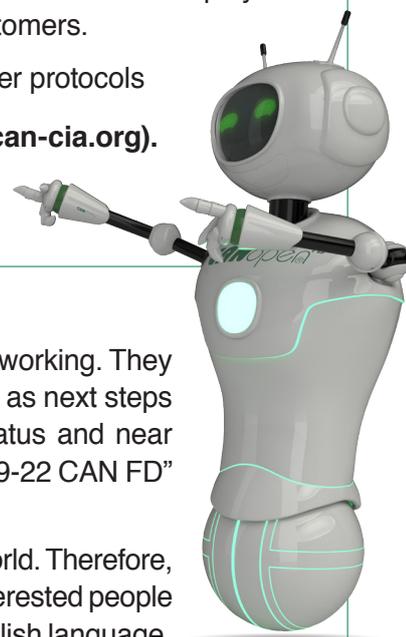
**Further details about content, location, registration, and pricing are provided on [www.can-cia.org](http://www.can-cia.org). For requests please contact CiA office ([events@can-cia.org](mailto:events@can-cia.org)). For additional topics or dates, please consider our in-house seminars.**

## CiA in-house seminars

During CiA in-house seminars we train attendees in CAN and CANopen in an either technical- or marketing-oriented way. The agenda of an in-house seminar is tailored to your company's needs and is available in English, German, or Russian language. It is up to the customer to arrange the audience with employees exclusively or with invited guests such as representatives from suppliers or customers.

*Content:* CAN application fields, physical- and data link layer options, higher-layer protocols

**Further details are provided on [www.can-cia.org](http://www.can-cia.org) or on request ([events@can-cia.org](mailto:events@can-cia.org)).**



## CiA webinars

CiA webinars provide latest technical as well as market trends in CAN-based networking. They discuss the current status that is achieved in CAN FD-based networking as well as next steps with regard to market penetration and technical development. Additionally, status and near future of CAN FD-based higher layer protocols such as CANopen FD and "J1939-22 CAN FD" are presented.

These webinars are intended for CAN users or decision makers from all over the world. Therefore, they are scheduled in three different time zones (CET, CST, JST) thus enabling interested people to attend the webinar at a convenient local time. The CiA webinars are held in English language.

## CiA webinar schedule

Topic*	Date	Berlin (CET)	Chicago (CST)	Tokyo (JST)
Future of CAN FD	2019-01-24	08:00	01:00	16:00
Future of CAN FD cyber security handling	2019-02-20	18:00	11:00	02:00**
Future of CANopen FD	2019-03-28	08:00	02:00	16:00
CiA 447 car add-on modules	2019-04-25	18:00	11:00	01:00**
Future of J1939 based on CAN FD	2019-05-23	08:00	01:00	15:00
CANopen & IoT	2019-06-06	18:00	11:00	01:00**
Future of CAN FD cyber security handling	2019-07-04	08:00	01:00	15:00
Future of CAN FD	2019-08-22	18:00	11:00	01:00**
CiA 447 car add-on modules	2019-09-26	08:00	01:00	15:00
Future of CANopen FD	2019-10-17	18:00	11:00	01:00**
CANopen & IoT	2019-11-21	08:00	01:00	16:00
Future of J1939 based on CAN FD	2019-12-12	18:00	11:00	02:00**

\* Subject may change without notice. \*\* Next day morning time

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