

**Registration**  
„ESD Technician Training“  
April 22 – 25, 2024 – Dresden

Ms/Mr\*:

Title:

First name\*:

Last name\*:

Company\*:

Department:

Job title:

Street\*:

Zip, City\*:

Country\*:

Phone:

Mobile:

E-mail\*:

Privacy Noticed read (please tick)\*

Date\*  Signature\*

\*Required field

**Course fee:** Euro 1750,- (plus 19% VAT)  
**Certification fee:** Euro 150,- (plus 19% VAT)

**Cancellation fees:** 10% up to 8 days before training  
30% for 7 days or less before training

**Registration:** E-mail to armin.gottschalk@esdforum.de

## ESD FORUM e.V.

### The Association

The ESD FORUM e.V. was founded as “Interessengemeinschaft Electro Static Discharge ESD e.V.” in Noerdingen on October 11, 1990. The professional voluntary association was evolving from the “Fachkreis” (founded 1989) who was exclusively addressing problems of electrostatic discharges (ESD) and threats of ESD to devices in the microelectronics. In 2003, the non-profit organization was renamed to “ESD FORUM e.V.”

The purpose of the association is to foster science and research by investigating the impact of electrostatic in microelectronic. The results shall be disseminated to the general public.

Members of the association are from academia and research institutes and from industry. The ESD FORUM e.V. is listed in the registry of non-commercial associations in Augsburg under VR 50810.

The ESD FORUM e.V. hosts regularly conferences such as the ESD-Forum (every other year), workshops, and trainings. Since 2015, more than 300 ESD Technicians have been certified according to IEC 61340-5-1 with IEC TR 61340-5-4 and ANSI/ESD S20.20 with ANSI/ESD TR53 by the ESD FORUM e.V.

The Steering Committee of the ESD FORUM e.V. discusses together with industry experts current topics related to ESD and publishes guidelines.

### Contact:

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86720 Noerdingen

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**ESD FORUM e.V.**



**Professional Training  
and  
Certification**

**ESD Technician**  
according to DIN EN 61340-5-1  
with DIN IEC/TR 61340-5-4  
and  
ANSI/ESD S20.20  
with ANSI/ESD TR53

**April 22 – 25, 2024**  
NH Collection Dresden Altmarkt  
Dresden City Centre  
01067 Dresden

## Motivation

Electrostatic discharges (ESD) are severe threats during processing, manufacturing, handling, and transport of electronic components. Not only integrated circuits (ICs) are ESD-sensitive items, but also printed circuit boards assemblies or open electronic systems such as open control units.

Electronic components, modules, and systems are present in an increasing number of sensitive applications. With decreasing feature size and, therefore, increasingly sensitive devices, those ESD-sensitive devices cannot be handled without aligned external and internal ESD protection measures. Implementation of appropriate ESD control and protection measures are a must for all electronic manufacturing facilities.

ESD risk assessment, the use of appropriate ESD control elements, the implementation of a robust ESD control concept, and regular compliance verification of the ESD control measures are mandatory for electronic manufacturing facilities in order to avoid damages due to ESD. ESD control must be considered not only during processing and assembly, but also during test, shipping and transport, and service.

## ESD Technician

The ESD Technician supports the ESD Coordinator and implements the defined ESD protective measures. He reports to the ESD Coordinator. The main tasks and responsibilities of the ESD Technician are:

- Verification of the ESD protective measures in an ESD Protected Area
- ESD training of employees working in an EPA
- Implementation of EPAs according to the guidelines of the ESD Coordinator

After the training, the trainee is capable to perform compliance verification measurements of the ESD protection items according to international standards and assess the results.

## Training

- Training and Certification as "ESD Technician" by the ESD FORUM e.V.
- Instructors with vast experience in the field of electrostatic discharges through many years of professional work and contributions to national and international standardization committees:
  - Dipl.-Phys. Reinhold Gärtner (Infineon Technologies)
  - Dipl.-Ing. Armin Gottschalk (IQZG)
  - Dr. Wolfgang Stadler (Intel Corp.)
- Practical hands-on sessions on state-of-the-art measurement equipment
- Application of the latest
  - IEC 61340-5-1 with IEC/TR 61340-5-4
  - ANSI/ESD S20.20 with ESDA TR53 and other ESD control standards
- Discussion of case studies
- Language of instruction, slides, and exam: English

## Prerequisite

- Basic knowledge of engineering/natural science
- Basic knowledge of ESD and common measurement techniques

## Benefit

- Avoid ESD losses in production, in field, in service, ...
- ESD robust devices and production
- Reduce failure analysis costs
- Reducing costs caused by inappropriate handling
- Minimize costs and efforts for repairs within the warranty
- Continuous improvement

## Contents of Training

### Day 1 – afternoon (start 13:30)

1. Introduction: physical and electro-technical basics of electrostatics
2. Introduction: "What is ESD?"
3. Basics of ESD protection
4. ESD Control Program I: EPA requirements

### Day 2

5. ESD Control Program II: Personnel grounding
6. ESD Control Program III: Packaging
7. ESD Control Program IV: Organization
8. Compliance verification of ESD protective measures according to IEC 61340-5-1 and ANSI/ESD S20.20 with ESDA TR53
9. Introduction to measurement techniques

### Day 3

10. Hands-on: The trainees perform measurements and compliance verifications in ESD protected areas under guidance of the trainers:
  - Resistance measurements
  - Electrostatic fields and charging
  - Personnel grounding



11. Concluding discussion and Q&A with attendees

### Day 4 – morning (end ~13:00)

Exam (in English language)

- Theory
- Practical

# Privacy Notice (English)

# Datenschutzerklärung

## Preamble

The ESD FORUM e.V. takes the protection of your personal data very seriously. We treat your personal data confidential and according to statutory data protection rules as well as this privacy notice.

Please note, data transfers via internet (e.g., submission of this form via email) may be subject to security vulnerabilities. It is not possible to completely protect this data against unauthorized access by third parties.

If we receive an email from you, we assume that we are entitled to reply to it by email, otherwise you must expressly specify a different form of communication.

## Application Form

When submitting an application to this course, the information entered into this form is stored by us in order to process your request and possible follow-up questions. We do not pass this information without your consent to third parties.

You may cancel your application free of charge up to 20 days before the scheduled date of the training by sending your written cancellation notice or an email to our contact address.

## Right to Information, Rectification, Restriction of Processing and Erasure

You have the right to obtain information free of charge about your stored personal data, their sources, recipients and the purpose of processing as well as the right to rectification, restriction of processing and erasure of these data at any time.

You can contact us anytime at our contact address if you have questions on these topics or other questions on personal data.

## Right to Lodge a Complaint

You have the right to lodge a complaint anytime with the supervisory authority:

Der Bayerische Landesbeauftragte fuer den Datenschutz  
Postfach 22 12 19  
80502 Muenchen  
Tel.: 089 212672-0  
Fax: 089 212672-50  
E-Mail: poststelle@datenschutz-bayern.de

## Präambel

Der ESD FORUM e.V. nimmt den Schutz Ihrer persönlichen Daten sehr ernst. Wir behandeln Ihre personenbezogenen Daten vertraulich und entsprechend der gesetzlichen Datenschutzzvorschriften sowie dieser Datenschutzerklärung.

Bitte beachten Sie, dass Datenübertragung im Internet (z.B. bei der Übermittlung des Anmeldeformulars per E-Mail) Sicherheitslücken aufweisen kann. Ein lückenloser Schutz der Daten vor dem Zugriff durch Dritte ist nicht möglich.

Sollten wir eine E-Mail von Ihnen erhalten, so gehen wir davon aus, dass wir zu einer Beantwortung per E-Mail berechtigt sind. Ansonsten müssen Sie ausdrücklich auf eine andere Art der Kommunikation verweisen.

## Anmeldeformular

Wenn Sie sich zu dem Kurs anmelden, werden Ihre Angaben aus diesem Formular zwecks Bearbeitung der Anfrage und für den Fall von Anschlussfragen bei uns gespeichert. Diese Daten geben wir nicht ohne Ihre Einwilligung weiter.

Sie können Ihre Anmeldung bis 20 Tage vor Beginn der Veranstaltung kostenlos stornieren, indem Sie Ihre Stornierung schriftlich oder per E-Mail an unsere Kontaktadresse schicken.

## Recht auf Auskunft, Berichtigung, Verarbeitungs-einschränkung, Löschung

Sie haben jederzeit das Recht auf unentgeltliche Auskunft über Ihre gespeicherten personenbezogenen Daten, deren Herkunft und Empfänger und den Zweck der Datenverarbeitung sowie ein Recht auf Berichtigung, Einschränkung der Verarbeitung oder Löschung dieser Daten.

Hierzu sowie zu weiteren Fragen zum Thema personenbezogene Daten können Sie sich jederzeit unter unserer Kontaktadresse an uns wenden.

## Recht auf Beschwerde bei der Aufsichtsbehörde

Sie haben jederzeit das Recht auf Beschwerde bei der zuständigen Aufsichtsbehörde:

Der Bayerische Landesbeauftragte für den Datenschutz  
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80502 München  
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Fax: 089 212672-50  
E-Mail: poststelle@datenschutz-bayern.de