

### Target Group:

Occupational health and safety managers and experts, Designers of control systems, machine/production line builders, robot system designers and any kind of engineers. Test and certification bodies concerned about the risks associated with machines.

### Participation:

Participation fee: R\$ 120,00  
Languages: English/Portuguese

### Registration at:

Contact ABIMAQ for registration

### Place of the seminar:

ABIMAQ – Associação Brasileira da Indústria de Máquinas e Equipamentos. Joinville.  
(Sede regional de Santa Catarina)  
Av. Aluisio Pires Condeixa, 2550 - Bairro Saguauçu - CEP: 89221-750 - Joinville - SC

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### Organized by:

ABIMAQ - Associação Brasileira da Indústria de Máquinas e Equipamentos.

### Sponsored by:



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# SICK

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This seminar has been prepared by two international prevention sections of the **ISSA**, and the **DKE**.

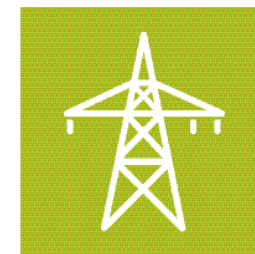
**DKE** is the German Commission for Electrical, Electronic & Information Technologies of **DIN** and **VDE**. It is responsible for the development and adoption of standards and safety specifications in these areas.

The **ISSA** was founded in 1927 with its headquarters in Geneva. Today it is active in 158 countries with 330 member institutions worldwide.

The **Section on Machine and System Safety** is committed to improving safety and health at work in the field of machine and system safety.

The mission of the **Section for Electricity, Gas and Water** is the protection of workers against electrical accidents and occupational diseases due to electricity and ionizing radiation.

[www.issa.int](http://www.issa.int)



## Seminar

# Functional Safety and Validation

## 21-22 March 2019

## Joinville

## About this Seminar:

The objective of the seminar is to give an overview about some international standards for machinery safety and their application. These standards provide manufacturers of machines the basic technical rules for the design of safe machinery. The seminar is intended to transmit the participants the basic knowledge of these standards and their use in the industrial area. The seminar also shows practical application examples. The speakers give information as experts involved in the standardization machinery safety.

## Moderator:

- Klaus-Dieter Becker, German Social Accident Insurance Institution for the energy, textile, electrical and media sectors BGETEM, Cologne (D)

## Speakers:

- Klaus-Dieter Becker, BGETEM, Cologne (D)
- Marcio Damelio, ANBT, (BR)
- Otto Görnemann, Sick AG, Waldkirch (D)
- Jens Juehling, Head of the BGETEM`s prevention department, Cologne (D)
- Hildeberto Nobre. Department of Labour Inspector. Coordinator of NR12
- Fabio Pera, Italian National Institute for Insurance against Accidents at Work (INAIL), Rome (IT)
- Thomas Pilz, Pilz GmbH, Ostfildern (D)
- Florian Spiteller, German Commission for Electrical, Electronic & Information Technologies (DKE), Frankfurt/M (D)
- Dietrich Warmbier, ROSS Controls, Troy, MI (USA)

## Program

### Monday - 18<sup>th</sup> March 2019

|       |   |                     |
|-------|---|---------------------|
| 08:30 | Registration  | ABIMAQ              |
| 09:00 | Welcome Address<br><b>João Carlos Marchesan</b><br>Presidente da ABIMAQ<br><b>Ronaldo Nogueira</b><br>Ministro de Estado do Trabalho<br><b>Klaus-Dieter Becker</b><br>BGETEM, Germany |                     |
| 09:30 | IEC 60204-1 Electrical equipment of machinery   | Jens Jühling        |
| 10:15 | ISO 13849-1 „Safety-related part of control systems; Part 1: General principles for design“   | Klaus-Dieter Becker |
| 11:30 | Coffee break  |                     |
| 12:00 | Emergency-stop (ISO 13850) Two-hand-control devices (ISO 13851)   | Otto Görnemann      |
| 13:00 | Brunch  |                     |
| 14:00 | Fluid power safety (Hydraulics / Pneumatics)  | Dietrich Warmbier   |
| 15:00 | Coffee Break  |                     |
| 15:30 | Avoidance of unexpected start. Lock-out – Tag-out (LOTO)  | Thomas Pilz         |
| 16:30 | Discussion and conclusion   |                     |
| 17:00 | End of the seminars first day   |                     |

## Program

### Tuesday - 19<sup>th</sup> March 2019

|       |   |                   |
|-------|---|-------------------|
| 08:30 | Cyber security in Industrial Automation – Standards & pragmatic approach                            | Florian Spiteller |
| 09:15 | Status of Brazilian Machinery Safety Standards  | Marcio Damelio    |
| 10:00 | Coffee Break  |                   |
| 10:30 | Practical application of machinery safety standards. Example: Industrial robot systems. ISO 10218-2 | Otto Görnemann    |
| 11:15 | Example how to apply ISO 13849-1, -2 (SISTEMA) including validation                                 | Fabio Pera        |
| 12:15 | The future of NR12 and NT's   | Hildeberto Nobre  |
| 12:45 | Final discussion and conclusion   | K.D. Becker       |
| 13:15 | Brunch & Networking   |                   |
| 14:30 | End of the seminar  |                   |