

## INFORMATION

### Venue

Parque Tecnológico São José dos Campos  
Avenida Doutor Altino Bondensan,  
500 – Distrito de Eugênio de Melo  
São José dos Campos – SP, CEP 12247-016, Brazil

### A workshop for

Specialists and executives from manufacturing and R&D departments interested in welding technologies, additive manufacturing as well as international collaboration

### Admission

The workshop languages are Portuguese and English. Admission to the event is free, but early registration is required due to limited number of participants.

### Please send your registration to

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### Contact

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## ORGANIZERS

### Fraunhofer IPK

The Fraunhofer Institute for Production Systems and Design Technology IPK is placed in Berlin, Germany. With its distinctive IT competence, it offers system solutions, individual technologies and services for digitally integrated production. Fraunhofer IPK provides comprehensive support to companies along the entire value chain: from product development, planning and control of machines and systems, including technologies for parts manufacturing, to comprehensive automation and management of factory operations. The institute also transfers production engineering solutions to areas of application outside industry, such as traffic and safety. As an institute of the Fraunhofer-Gesellschaft, IPK tailors its work to fit the needs and requirements of its customers and partners. It develops forward-looking novel solutions and modernizes, optimizes and extends existing technologies and applications. In all its endeavors, Fraunhofer IPK seeks to harmonize economic considerations with the imperatives of resource efficiency, sustainability, and environmental compatibility. Apart from contract research, the institute also conducts precompetitive research projects to develop innovative concepts for tomorrow's production, working closely with its partners to transform the basic innovations thus delivered into marketable products.

### ITA

The Technological Institute of Aeronautics (ITA) offers research and education in distinct engineering fields, including aerospace, aeronautical, civil, mechanical, computer and electronics engineering. It is located inside the Department of Aerospace Science & Technology (DCTA), which is considered one of the biggest research centers in Latin America. ITA was responsible for some major achievements in Brazil in the last 60 years, including the foundation of the Brazilian aeronautical industry (EMBRAER), the development of the Automotive Ethanol Program as well as the enhancement of the telecommunications industry (Telebrás).

### DWIH São Paulo

The German Centre for Research and Innovation – São Paulo (DWIH São Paulo) was created in 2009 by the German Federal Foreign Office (AA), in cooperation with the Ministry of Education and Research (BMBF) as part of the internationalization policy of the two ministries. The goal is to increase the visibility in Brazil of Germany as a scientific and technological center and foster synergy and exchange between German and Brazilian scientific institutions – particularly in São Paulo, the largest center of German industry outside German



Fraunhofer Institute for Production  
Systems and Design Technology IPK

18. April 2023

1st International Industry  
Workshop on Welding  
Technologies and  
Additive Manufacturing

In cooperation with



## PROGRAM

1st International Industry Workshop on Welding Technologies and Additive Manufacturing is an initiative of the Fraunhofer Institute for Production Systems and Design Technology IPK in Berlin, Germany and the German Centre for Research and Innovation (DWIH) in São Paulo as well as the Technological Institute of Aeronautics (ITA) in São José dos Campos, Brazil. This workshop aims to foster R&D partnerships and strategic cooperation between academia and industry in global markets.

The workshop intends to present the latest international technology trends for the Brazilian industry in the fields of welding technologies and additive manufacturing, and also to demonstrate practical project examples and success stories in terms of international initiatives. The main objective of this event is to promote a discussion about strategic technological topics in order to identify opportunities and trigger joint RD&I projects (Brazil-Germany). Among the speakers from both countries are representatives from industry and academia as well as specialists on funding and incentive programs for R&D activities.

We are looking forward to welcoming you at the 1st International Industry Workshop on Welding Technologies and Additive Manufacturing and to discussing business opportunities with you.

## TUESDAY, 18. APRIL 2023

### 09:00 Welcome and Introduction

Dr.-Ing. David Domingos, Fraunhofer IPK  
Prof. Dr. Anderson Correia, ITA

### 09:10 Introduction to the DWIH São Paulo

Dr. Daniela Theuer, DWIH São Paulo

### 09:20 Development of the Production Chain of Metallic Components by Additive Manufacturing – NPOP

Gustavo Reis, Fraunhofer IPK  
Dr. Mario Boccalini, IPT  
Prof. Dr. Anderson Borille, ITA

### Panel 1: Efficient Welding for Heavy Industries

Chair: Luis Albano

### 09:50 Highly Productive Laser and Arc Welding for Industrial Thick-sheet Applications

Dr.-Ing. Max Biegler, Fraunhofer IPK

### 10:10 Challenges to Increase Productivity in Heavy Industries Welding

Saul Fernando de Carvalho Filho, DELP

### 10:30 Influence of Nb on Wear Resistance of Consumables for Welding Overlay Application

Eduardo Cannizza, CBMM  
Erico França, CBMM

### 10:50 Cold Wire Laser Welding for Structural Components

Vitor Chacon Anelli, IPG Photonics

### 11:10 Questions and Discussions

11:40 [Coffee Break](#)

### Panel 2: Resilient AM Processes for Repair and Spare Parts

Chair: Prof. Dr. Anderson Borille

### 12:10 Adaptive Repair Process Chains via L-DED

Vinzenz Müller, Fraunhofer IPK

### 12:30 Wire Arc Additive Manufacturing: Opportunities and Challenges in Printing Large Components

Júlio Cezar de Alvarenga Pires, SENAI CIT

### 12:50 Steel Wires for Welding and WAAM

Jeremias Silva, Belgo Arames

### 13:10 Additive Manufacturing in High Pressure Die Casting

Marcelo Lima, STIHL

### 13:30 Questions and discussions

14:00 [Lunch Break](#)

### Panel 3: Thin Sheet Welding for Transportation

Chair: Dr. Arnaldo Camarão

### 15:00 Maximizing Productivity and Quality in Laser Welding: Cases of Successful Application

Mairon Marques, Powermig

### 15:20 Trends for Welding in Commercial Vehicles Structures

Sami Simão, Maxion Structural Components

### 15:40 Processing-induced Residual Stresses in AHSS Weld Spots

Prof. Dr. Tiago Colombo, ITA/FATEC

### 16:00 Questions and Discussions

### 16:30 Closing Words

Prof. Dr. Ronnie Rego

16:40 [End of Event](#)