

## SUBMISSION OF PAPERS

All paper proposals must be submitted online. Please visit: [www.metec-estad2019.com](http://www.metec-estad2019.com) and go to the Call for Papers section. There you will find an easy to use online submission form. Your abstract can be a maximum of 300 words. Please note that papers will only be accepted online.

## LANGUAGE

The conference language is English.

## DEADLINE

Please submit your abstracts by 30 September 2018 at the very latest. All abstracts will be refereed by the scientific international experts. In the case of too many submissions, abstracts of equal quality will be accepted on a first come, first serve basis.

## PAPER PROPOSAL SUBMISSION

To submit an abstract, please proceed as follows:

- 1) Write your abstract (max. 300 words).
- 2) Submit your abstract online at: [www.metec-estad2019.com](http://www.metec-estad2019.com)  
> Call for Papers section (please completely fill out all fields).
- 3) Papers must be submitted in English.
- 4) All papers must focus on best practices.

## IMPORTANT DATES

30 September 2018 Abstract submission deadline.

October 2018 Scientific international experts will evaluate submitted abstracts.

30 November 2018 Paper proposers will be informed about decision of the Scientific international experts. Delivery of authors guidelines.

25 February 2019 Full paper submission deadline.

30 May 2019 PowerPoint presentation slides deadline.

24 - 29 June 2019 METEC & 4<sup>th</sup> ESTAD 2019

[www.metec-estad2019.com](http://www.metec-estad2019.com)

## HOST

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## ORGANIZATION

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## IN COOPERATION WITH

The Austrian Society for Metallurgy and Materials (ASMET), Austria  
The Swedish Steel Producers Association (Jernkontoret), Sweden  
Associazione Italiana di Metallurgia (AIM), Italy

## VENUE

CCD Congress Center Düsseldorf | DüsseldorfCongress  
Veranstaltungsgesellschaft mbH | Stockumer Kirchstraße 61  
40474 Düsseldorf | Germany | [www.duesseldorfcongress.de](http://www.duesseldorfcongress.de)  
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## TRAVEL

Düsseldorf is easily reachable by plane to Düsseldorf International Airport (DUS), railway or car. The CCD Congress Center Düsseldorf is set on the bank of the Rhine and linked to Messe Düsseldorf exhibition center.

## COMPLIANCE RULES

The Steel Institute VDEh and all cooperating organizations are committed to adhering strictly to all applicable antitrust laws. Within the context of METEC & 4<sup>th</sup> ESTAD it is strictly prohibited to discuss competitively sensitive subjects such as price-fixing agreements or agreements on quantities.

[www.metec-estad2019.com](http://www.metec-estad2019.com)



# METEC & 4<sup>TH</sup> ESTAD 2019

**DÜSSELDORF, GERMANY**  
CCD CONGRESS CENTER DÜSSELDORF  
24 – 28 JUNE 2019

## SECOND ANNOUNCEMENT & CALL FOR PAPERS

**IRONMAKING**

...accompanying  
the METEC Trade Fair.



[www.metec-estad2019.com](http://www.metec-estad2019.com)

## ABOUT ESTAD 2019

Only those who continue to develop their business remain competitive. The prerequisite for this development means being constantly informed about the latest and most sophisticated technological advances, exchanging ideas and initiating and expanding networks with clients, partners and suppliers. With the accompanying METEC conference 4th European Steel Technology and Application Days 2019 (4th ESTAD 2019) the Steel Institute VDEh offers visitors the perfect opportunity to reach these objectives. At this event you will acquire the latest information on new ideas and developments as well as on the state-of-the-art in metallurgical process technologies iron and steel production, steel materials and steel application:

### MAIN TOPICS:

#### IRONMAKING

#### STEELMAKING

#### ROLLING AND FORGING

#### STEEL MATERIALS AND THEIR APPLICATION, ADDITIVE MANUFACTURING, SURFACE TECHNOLOGIES

#### ENVIRONMENTAL AND ENERGY ASPECTS

The topics include all aspects in **Industry 4.0** (Cyber physical systems, horizontal and vertical integration, big data...)

## IRONMAKING

### Cokemaking

- Fundamentals in cokemaking
- Coal blending practise
- Latest developments in slot oven plant technology and design
- Latest developments in heat recovery oven plant technology and design
- New cokemaking technologies
- Coke oven repair techniques and life prolongation
- Measures for improving coke quality
- Measurement of wall displacement and pressure of coke oven chamber
- Coke plant operation, instrumentation and automation
- Improving productivity and safety
- Stamp charging technology
- Coke oven gas cleaning and utilization of by-products
- Graphite formation at coke ovens
- Coke quenching technologies
- Coke oven refractories

### Sintering and pelletising

- Fundamentals in sintering
- Sinter plant construction and layout
- Sinter process optimisation
- Sinter plant operation and automation
- Use of concentrates in sinter mix
- Sinter quality
- Sinter cooling
- Sinter plant waste gas cleaning
- Energy recovery and use in sinter plants
- Fundamentals in pelletising
- Pellet plant construction and layout
- Pellet plant operation and automation
- Production of acid and fluxed pellets
- Use of hematite and/or magnetite pellet feed for pellet production
- Pellet qualities
- Reduction of pellets under different conditions

### Blast furnace ironmaking

- Fundamentals in blast furnace ironmaking
- Blast furnace construction and design

- Blast furnace process optimization and automation
- Modern process control techniques
- Blast furnace relinings
- Blast furnace campaign life extension
- Blast furnace refractories and cooling
- Blast furnace charging
- Blast furnace productivity
- Blast furnace hearth management
- Hot metal and slag quality
- Coke quality requirements and reduced coke rates
- Injection of auxiliary reductants (coal, oil, gas, plastics) and oxygen
- Hot blast stoves
- New blast furnaces
- Blast furnace liquid management and casting practice
- Gas cleaning devices
- Top gas expansion and recovery turbines
- Oxygen and top gas recycling blast furnace  
Alternative blast furnace processes

### Direct reduction and smelting reduction

- Fundamentals in direct reduction and smelting reduction
- Production and use of DRI and HBI
- Gas-based DRI processes and new developments
- Hydrogen based DRI processes
- Coal-based DRI processes and new developments
- Transport and charge of hot DRI to electric arc furnaces
- Shipment of DRI and HBI
- Current status of Corex and Finex processes
- Status of Hlsarna process
- Other smelting reduction processes

### Industry 4.0 in the steel industry

- Cyber Physical Systems
- Horizontal Integration
- Vertical Integration
- End-to-end engineering
- Big Data
- Self organisation
- Material tracking, material genealogy
- Through Process Quality Control
- Predictive Maintenance
- IT- Aspects (Cyber Security, IT-Network, Standardisation, etc.)
- Application examples in steel industry