



PROGRAMME

21 - 22

November 2018

Charleroi, Belgium

Digital Twin technology in the steel industry: from concept to operational benefits

“Digital Twinning” technology plays a key role in the progressive Digitalisation of the Process Industry for increasing its competitiveness and sustainability.

However, what is behind it? How we should consider it? What will be the benefit when using this approach?

Digital Twin technology in the steel industry: from concept to operational benefits

During the workshop, exciting presentations and round-table discussions will cover the **theoretical background** of Digital Twins, showing **industrial applications and R&D projects** on the topic of **Digital Twins** that are relevant to the **steel sector** as well as **other industries**.

The workshop will be held in English language at **Quai 10, Quai Arthur Rimbaud, 10** in **Charleroi** (BE) on **November 21th & 22nd, 2018**.

Registration is required to Ms. Delphine Snaet of ESTEP (D.Snaet@estep.eu).

Participation fee is 200 €.

It will include workshop proceedings, common dinner and coffee breaks.

Payment instructions:

Payment by bank transfer to the following coordinates:

IBAN **BE37 0018 4414 7428** – CODE BIC: **GEBABEBB**

Communication: **DT WS** followed by **your name and organisation**

For further information and contacts:

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November 21

TIME	PRESENTER	TITLE
13:00		Registration
14:00	Peters K. Pietrosanti C. ESTEP	Welcome and introduction to the Workshop
14:20	Martin H. EC - DG RTD	Technological trends on Industry 4.0: the point of view of the European Commission
14:40	Prof. Sol E-J.	Keynote lecture n° 1
15:10		Working session 1
15:10	Neuer M. BFI	On the concept of digital twins: technological background, communication and examples, including problems where no other effective solution exists - Introduction into DT
15:30	Delsing J. Luleå UV	Design methods of DTs and their implementation
15:50	Entrialgo A. ArcelorMittal	Perspective of applications of digital twins in real industry
16:10		Panel discussion
16:40		Coffee break
17:10		Working session 2
17:10	Mouton S. CETIC	Implementation of Digital Twins in railways and chemical industry: a feedback from use cases
17:30	Weinzierl K. Primetals	Digital Twin for cyber-physical system of power cooling
17:50	Wolff A. BFI	Interrelation between agent technology and decentral model predictive control (Wolff A.) - Theoretical aspects
18:10		Panel discussion
18:30		Wrap up day 1
18:45		End of the 1 st day
20:00		Dinner

November 22

TIME	PRESENTER	TITLE
8:30	Prof. Peters H.	Keynote lecture n° 2
9:00		Working session 3
9:05	Cameron D.B. Sirius Centre, Univ. of Oslo	Scalable, useful and maintainable DT: cross-sector experience from the oil and gas sector
9:25	Polo A. Danieli Automation	Application of Digital Twinning in the melting shop - experiences
9:45	Kuiper G. TataSteel Europe	Prediction is key
10:05	Runkana V. Tata Consultancy Services	Engineering analytics and digital twins for monitoring, diagnosis, optimisation and control
10:25	Murri M. RINA - CSM	Digital Twins for the prediction of the product mechanical properties in HSM
10:45		Panel discussion
11:20		Coffee break
11:50		Working session 4
11:50	Colla V. Scuola Superiore S.Anna	Digital Twins for validation of new technologies and operative practices for reduction of environmental footprint of the steel production cycle
12:10	Parisini T. Imperial College UK	Digital Twins and virtual commissioning: the case of cold rolling
12:30	Matino I. Scuola Superiore S.Anna	Machine learning-based approaches to holistic design of Digital Twins
12:50	Ortega F. Universidad de Oviedo	Digital twins for the reduction of losses in coil yards
13:10		Panel discussion
13:30		Wrap up workshop
14:00		End of the workshop



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