



## **WP18@EUROCORR 2018**

### **Minutes of the WP18 session at Eurocorr2018 (Krakow, September 9-13 2018)**

The historical city of Krakow in southern Poland hosted Eurocorr2018. Delegates could enjoy not only the high scientific quality and the perfect organization but also the beautiful city that was even more enjoyable thank to a week of warm and sunny weather.

This year the WP18 presence at Eurocorr limited to the regular Tribocorrosion session that, although smaller with respect to Eurocorr2017 (which was held in conjunction with the 20<sup>th</sup> International Corrosion Congress) was of a as good quality. This session included 15 oral and 3 poster presentations (last year in Prague there were 20 oral and 7 poster presentations). Note that this year two speakers could not join because of purely administrative issues (in case someone experiences such troubles, please let me know). As in the past years I was personally impressed by the extremely high scientific quality of the presentations and of the following discussions that were held in a very constructive and participative way. I particularly enjoyed the active involvement of young scientists. The vibrant atmosphere established so far at our WP18 sessions is a must in order to keep them attractive for motivated people whether experienced or beginners in the field.

The scientific program was this year structured in there main directions. The first session was focussed on experimental techniques. Noteworthy were the presentations of a combined AFM and three-electrode electrochemical setup allowing for the synchronized measurement of the current response from a local depassivation event and of a tribometer dedicated to the in-situ observation of galvanic coupling phenomena during tribocorrosion. An original electrochemical set-up destined to assess tribocorrosion severity in metallic meshes was also presented. Test methodologies were also described to assess the tribocorrosion behaviour of nitride coatings, of electrodeposited Zn alloy coatings.

Tribocorrosion modelling was the topic addressed by four talks coming from different groups. Interestingly very different approaches were taken ranging form numerical modelling describing the dynamics of tribocorrosion to mass flow balances for the description of tribocorrosion situations characterised by thick third body build-up (typically high temperature tribocorrosion). An interesting novel approach based on computational thermodynamics to design novel tribocorrosion alloys was also presented.

As usual, papers dedicated to the biomedical field constituted the bulk of the session. Those papers described the tribocorrosion studies of a variety of materials (CoCrMo alloys, titanium alloys, stainless steel and ceramics) and coatings (PVD, carburized layers, duplex surface treatments).

This year too, we could enjoy a very diverse and high quality session that was followed by 20 to 40 delegates. I would like to express my gratitude to the oral paper and poster presenters as well as the whole audience for the stimulating atmosphere characterising WP18@Eurocorr2018.

Stefano Mischler

Chair of WP18 Tribocorrosion

European Federation of Corrosion

[http://efcweb.org/WP+Tribo\\_Corrosion-p-104114.html](http://efcweb.org/WP+Tribo_Corrosion-p-104114.html)