Special Issue of Wear on Contact Mechanics 2018

This Special Issue of Wear contains a selection of papers presented at the 11th International Conference on Contact Mechanics and Wear of Rail/Wheels Systems, CM2018. The conference was held on 24-27 September, 2018 in Delft and was organized by the Section of Railway Engineering of the Delft University of Technology (TU Delft), Delft, The Netherlands.

For the 2018 edition of the conference, we received 216 abstract submissions. Based on the review process conducted by the International Committee and with the support of additional reviewers, 160 abstracts were accepted. The conference featured six keynotes, three parallel sessions (112 oral presentations) and one poster session (48 poster presentations). During CM2018, two special sessions were organized to remember the contributions of Prof. K.L. Johnson (who passed away in 2015) and Prof. J.J. Kalker (who passed away in 2006). The conference was attended by 213 delegates, coming from universities, research institutes, infrastructure managers, train operators, maintenance providers, rolling stock manufacturing companies and consultancies from 18 different countries.

The presentations of CM2018 (for which presenters gave a written consent) were video recorded. They can be seen in the YouTube channel “CM2018 – TU Delft” at https://www.youtube.com/channel/UCCv7Rs8W9Gda6MGr49Wtjwg.

This special issue contains papers selected from the conference that are of interest to the readership of the journal Wear. Two other special issues of CM2018 were organized by Prof. Stefano Bruni in the Journal of Rail and Rapid Transit, and by Prof. Roger Lewis in the journal Tribology: Materials, Surfaces and Interfaces. For the special issue of CM2018 in the journal Wear, 63 selected papers were submitted. After reviewing, 48 papers were finally published. The papers cover topics of interest for the community of contact mechanics of the rail/wheel systems. Among others, the topics included are contact models, wear, friction, adhesion, interface management, rolling contact fatigue, wheel polygonization and rail materials. We would like to express our appreciation to authors and to the reviewers that made possible this special issue. Also to the editors of Wear and support staff.

The scale of interest in solving the challenges of the rail/wheel interface is demonstrated by the conference and the depth of technical complexity by the papers published. Great progress has been made but as we approach 200 years since the modern railway first began operation this interface remains central to the engineering, safety, and economic operation of railways worldwide. The next conference, the 12th International Conference on Contact Mechanics and Wear of Rail/Wheels Systems, will be organized in Melbourne, Australia, in 2021.
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