

**EDITORIAL**

**Roger Bustamante · Ramón Frederick · Luis Dorfmann**

## **Foreword to the special issue for the 14th Pan-American Congress of Applied Mechanics**

Received: 6 November 2015 / Published online: 22 December 2015  
© Springer-Verlag Wien 2015

The science of mechanics has many applications, and its impact on the well-being of the human race cannot be overemphasized. Besides the obvious fields of solid and fluid mechanics, it had profound influences on the development of other areas such as mathematics, computational and biomedical sciences.

Mechanics is a multidisciplinary area of research, and therefore the interaction and collaboration of investigators is crucially important for technological developments and future innovations. Recently, to complement established fields of mechanics, coupled fields and multi-physics problems have become of great interest. In spite of the tremendous progress made, there are still many unanswered questions.

In the Americas collaborations are supported, achieved and continuously promoted by organizing the Pan-American Congress of Applied Mechanics, which originally was hosted every two years. From 2014 onward this event is held annually in different countries in North, Latin and Central America.

In this volume we present a selection of the papers by authors who attended the XIV Pan-American Congress of Applied Mechanics. This congress was organized by the Department of Mechanical Engineering of the University of Chile and held in Santiago, Chile, from March 24 to 28, 2014. The variety of topics presented in this volume demonstrate the broad interests of the participants and show the elegance and beauty of mechanics as one of the oldest and most important branches of natural philosophy and science.

---

R. Bustamante (✉) · R. Frederick  
Departamento de Ingeniería Mecánica, Universidad de Chile, Beauchef 851, Santiago Centro, Santiago, Chile  
E-mail: rogbusta@ing.uchile.cl  
Fax: +56-2-26896057

L. Dorfmann  
Department of Civil and Environmental Engineering, Tufts University, Medford, MA 02155, USA