

# **ICoM&EIA 2014**

## **International Conference on Mathematics, Engineering and Industrial Applications 2014**

**Bridging Mathematics and Engineering  
in the Future**

**28 – 30 May 2014  
The Gurney Resort Hotel  
and Residences,  
Penang, Malaysia**

**Organized by:  
Institut Matematik Kejuruteraan,  
Universiti Malaysia Perlis**

# Table of Contents

<b>Message from Vice Chancellor UniMAP</b>	<b>3</b>
<b>Message from Dean of IMK</b>	<b>4</b>
<b>Message from The Chairperson ICoMEIA 2014</b>	<b>5</b>
<b>Conference Committee</b>	<b>6</b>
<b>Tentative ICoMEIA 2014</b>	<b>9</b>
<b>Keynotes</b>	<b>12</b>
<b>Abstracts</b>	<b>15</b>
<b>Sponsors</b>	<b>280</b>

# A Few Remarks on Relative Ergodic Properties of $C^*$ -Dynamical Systems

Rocco Duvenhage\* and Farrukh Mukhamedov<sup>†</sup>

*\*Department of Physics University of Pretoria Pretoria 0002 South Africa*

*† Department of Computational and Theoretical Sciences, Faculty of Science International Islamic University Malaysia, P.O. Box 141, 25710 Kuantan, Pahang Malaysia*

**Abstract.** We study various ergodic properties of  $C^*$ -dynamical systems inspired by unique ergodicity. In particular we work in a framework allowing for ergodic properties defined relative to various subspaces, and in terms of weighted means.

**Keywords:** unique ergodicity, unique weak mixing,  $C^*$ -dynamical systems, semigroup actions, weighted means, higher order mixing, joinings.

ID76