



Scientific Program

6th International Conference on
**Theoretical and
Applied Physics**

May 16-17, 2019 | Rome, Italy

DAY-1

May 16, 2019

Meeting Hall: **Olimpica 1**

08:00-09:00 Registrations

Opening Ceremony **09:00-09:25**

KEYNOTE FORUM

09:25-09:30 Introduction

09:30-10:10 **Title: The nonlinear BK system: Structure, stability and interaction of multidimensional solitons in complex dispersive media**
Vasily Yu Belashova, Kazan Federal University, Russia

10:10-10:50 **Title: Fast screening of binary systems of phase change materials for thermal energy storage**
Marie Duquesne, CNRS, France

Networking & Refreshments 10:50-11:10 @ Foyer

11:10-11:50 **Title: Challenge to the black hole model of quasars and active galactic nuclei**
Qiuhe Peng, Nanjing University, China

11:50-12:30 **Title: Wearable brain-computer interface for augmented reality based inspection in industry 4.0**
Pasquale Arpaia, University of Napoli Federico II, Italy

GROUP PHOTO (12:30-12:40)

Lunch Break 12:40-13:40 @ Hotel Restaurants

Sessions: Theoretical, Experimental and Computational Physics | Astro-Particle Physics and Cosmology | Quantum Physics & Technology | Plasma Physics | Material Science & Engineering

Chair: Marie Duquesne, CNRS, France

Co-Chair: Oleg A Kharshiladze, Tbilisi State University, Georgia

INTRODUCTION

13:40-14:05 **Title: Stability problem and simulation of interaction of the multidimensional NLS solitons in non-uniform and nonstationary media**
Vasily Yu Belashova, Kazan Federal University, Russia

14:05-14:30 **Title: Modeling of evolution and non-elastic interaction of solitary NLS envelop pulses in complex media**
Oleg A Kharshiladze, Tbilisi State University, Georgia

14:30-14:55 **Title: The effect of strains on electronic structures of group IV diamond like crystals – DFT based studies**
Norbert Janik, Wroclaw University of Science and Technology, Poland

14:55-15:20 **Title: A promising biosourced, organic phase change material for seasonal storage**
Marie Duquesne, CNRS, France

Networking & Refreshments 15:20-15:40 @ Foyer

15:40-16:05 **Title: Explosion of collapsed supernova and hot big bang of the universe driven by magnetic monopoles**
Qiuhe Peng, Nanjing University, China

16:05-16:30 **Title: Heun equation and its uses in physics**
Nasser Saad, University of Prince Edward Island, Canada

YOUNG RESEARCHERS FORUM

16:30-16:50 **Title: On the algebraic exact solution for the quantum harmonic oscillator with variable frequency**
D M Tibaduiza, Institute of Physics - UFRJ, Brazil

16:50-17:10 **Title: New technical concepts for velocity map imaging in a THz streak camera**
Mamuna Anwar, University of Hamburg, Germany

VIDEO PRESENTATION

17:10-17:25 **Title: Refinement of law the world gravitation force for gravitational field of the universe**
Valentyn A Nastasenko, Kherson State Maritime Academy, Ukraine

Panel Discussion

Awards & Closing Ceremony

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DAY-2

May 17, 2019

Meeting Hall: **Olimpica 1**

Networking Lunch 12:30-13:30 @ Hotel Restaurants