

International Conference on Gravitation Cosmology and Continuum Mechanics 2016

Dedicated to the Centenary of Kirill Petrovich Staniukovich

Journal of Physics: Conference Series Volume 731

Moscow, Russia
3 - 4 March 2016

ISBN: 978-1-5108-2729-5
ISSN: 1742-6588

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2016) by the Institute of Physics
All rights reserved. The material featured in this book is subject to
IOP copyright protection, unless otherwise indicated.

Printed by Curran Associates, Inc. (2016)

For permission requests, please contact the Institute of Physics
at the address below.

Institute of Physics
Dirac House, Temple Back
Bristol BS1 6BE UK

Phone: 44 1 17 929 7481
Fax: 44 1 17 920 0979

techtracking@iop.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

Table of contents

Volume 731

**International Conference on Gravitation Cosmology and Continuum Mechanics
(dedicated to the centenary of Kirill Petrovich Staniukovich)
3–4 March 2016, Moscow, Russia**

**Accepted papers received: 8 July 2016
Published online: 26 July 2016**

Preface

011001

OPEN ACCESS

[International Conference on Gravitation Cosmology and Continuum Mechanics
\(dedicated to the centenary of Kirill Petrovich Staniukovich\)](#)

011002

OPEN ACCESS

[Organizing Committee of the Conference](#)

011003

OPEN ACCESS

[Academic Committee of the conference](#)

011004

OPEN ACCESS

[Peer review statement](#)

Papers

012001

OPEN ACCESS

[Mathematics of oscillations and waves](#)

P N Antonyuk.....1

012002

OPEN ACCESS

[Research into the process of impingement of two plane jets of an ideal fluid with free boundaries](#)

V D Baskakov and K A Karnaukhov.....5

012003

OPEN ACCESS

[Space-time inversion and its consequences](#)

M Chelnokov.....11

012004

OPEN ACCESS

[The models of cosmological inflation in the context of kinetic approximation](#)

I Fomin.....21

012005

OPEN ACCESS

[Universal non-destructive testing method in the microwave range](#)

R Yu Gerasimov, G N Fadeev, Yu V Gerasimov and E A Kondrakova.....27

012006

OPEN ACCESS

[Equation of state for hydrogen-like materials with high energy densities](#)

Y V Gerasimov and A G Maslov.....30

012007

OPEN ACCESS

[Axion-photon conversion in space and in low symmetrical dielectric crystals](#)

V S Gorelik.....39

012008

OPEN ACCESS

[On propagation of electromagnetic and gravitational waves in the expanding Universe](#)

V O Gladyshev.....44

012009

OPEN ACCESS

[K.P. Stanyukovich and GR Extensions by his colleagues in Diverse Dimensions](#)

V N Melnikov.....47

012010

OPEN ACCESS

[Space-time with a fluctuating metric tensor model](#)

A N Morozov.....51

012011

OPEN ACCESS

[On the direct detection of gravitational waves, and some of the problems of improving laser interferometers](#)

V I Pustovoyt.....58

012012

OPEN ACCESS

[Solitons in Skyrme - Faddeev spinor model and quantum mechanics](#)

Y Rybakov.....66