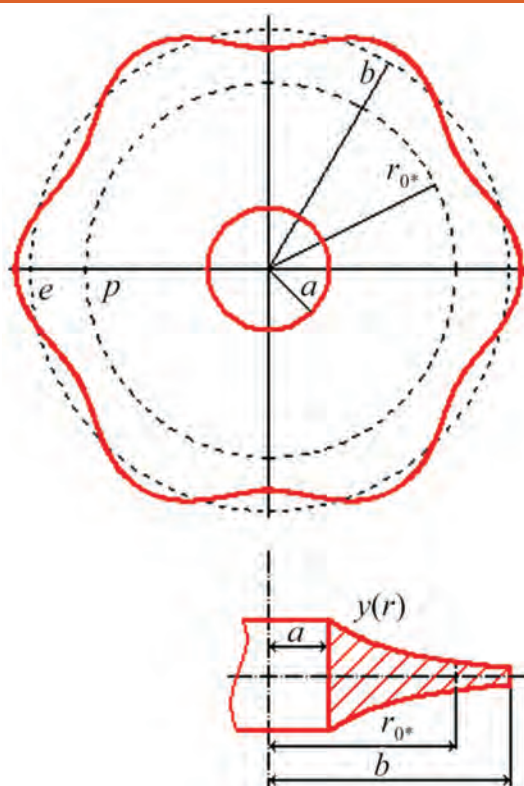




Applied Mathematics



физико-математические науки



Исследования в области математики

Journal Editorial Board

fp p k=ONROJTPUR=Éãá íF==p p k=ONROJTPVP=E áãá ÉF
Üíé Wü i i KÁæé KçÖLàçì eã~ãL~ã

Editor-in-Chief

Prof. Chris Cannings

r áãî Éëëáíó=qÑ=ñÉÑñÉãÇI=rh

b Çáçêã~ä=ç~êç=EÁÁçêçãÖ=ç= æÜ~ÄÉíF

Prof. Leva A. Beklaryan

o i ëëã~ä= Ä~ÇÉã ó=qÑ=ñÁÉã ÁÉI=ä ëëã~

Dr. Aziz Belmiloudi

fãëíáíí í=k~íáç á~ä=Çç=pÁÉã ÁÉç= ééãëì ÉÉç=Çç=Éãá ÉÉI=ç~ä ÁÉ

Prof. Mark Broom

` áíó=rãáî ÉëëáíóI=rh

Prof. Amares Chattopadhyay

fã Çã~ä=pÁÜç ç ä=qÑ=jáá ÉÉI=f Çã==

Dr. Badong Chen

qëääÖÜ ~rãáî ÉëëáíóI=`Üää~

Prof. Jose Alberto Cuminato

r áãî Éëëáíó=qÑ=pç=mí äç I=pç~ää

Prof. Konstantin Dyakonov

r áãî Éëëáíó=qÑ=_êÁÉç á~I=pç~ää

Dr. David Greenhalgh

r áãî Éëëáíó=qÑ=ñ~íÜÄóÇÉI=rh==

Prof. Zhiqing Han

a ~ää~ä=rãáî Éëëáíó=qÑqÉÄÜä ç äç ÖóI=`Üää~~

Prof. Yurii G. Ignatyev

h ~ò~ä=pi~íÉ=rãáî ÉëëáíóI=ä ëëã~

Prof. Palle Jorgensen

r áãî Éëëáíó=qÑçñ ~I=rp^

Prof. Kil Hyun Kwon

h çêÉ~Ç Çí~ä ÁÉÇ=fëíáíí íÉ=qÑ=ñÁÉã ÁÉ=ä ÇqÉÄÜä ç äç ÖóI=hçêÉ~Éçì íÜF

Prof. Hong-Jian Lai

t Éëí~sá êÖää~ä=rãáî ÉëëáíóI=rp^

Dr. Goran Lesaja

d ÉçêÖä~ñì íÜÉã=rãáî ÉëëáíóI=rp^

Prof. Tao Luo

d ÉçêÖÉíçî ä=rãáî ÉëëáíóI=rp^=

Prof. Agassi Melikov

k ~íáç á~ä~î á~íáç á~ä Ä~ÇÉã óI=ä òÉÉÄ~ää~ä

Prof. María A. Navascués

r áãî Éëëáíó=qÑ=ñ~Öç ò~I=pç~ää

Dr. Donatus C. D. Oguamanam

o óÉëççã=rãáî ÉëëáíóI=~ã~Ç~

Prof. Alexander S. Rabinowitch

j çêÄçí=p í~íÉ=rãáî ÉëëáíóI=ä ëëã~

Dr. Epaminondas Sidiropoulos

^ éæíç íáÉ=rãáî Éëëáíó=qÑqÉÉç~äç áãáí=çÉÉÁÉ

Prof. Sergei Silvestrov

j Žã~êç~äÉã=rãáî ÉëëáíóI=p ÉÇÉã

Prof. Jacob Sturm

o i íÖÉç=rãáî ÉëëáíóI=rp^

Dr. Zheng Su

d Éã Éã íÉÄÜ=fÄK=rp^

Prof. Mikhail Sumin

k áóÜääá=kçî Öç êç Ç=p~íÉ=rãáî ÉëëáíóI=ä ëëã~

Dr. Feridun Turkman

r áãî Éëëáíó=qÑ=ñ~Äç á I=ñçèì Ö~ä

Dr. Chengbo Wang

gç Üääë=çç éãääë=rãáî ÉëëáíóI=rp^

Dr. Yi-Rong Zhu

o ÉçÉ~êÄÜ=ñÁÉ íáçí=i~ñÇÉ=çÉÉ~êÄÜ=fÄK=rp^

b Çáçêã~ä=ëëæí~ái

Tian=Huang

p ÁÁÉíáíñÄ=óçÉ~êÄÜ=mÄäçÜääÖI=rp^

Statement of Priority

In the paper Yash Paul, Wali Mohammad Shah, Gulshan Singh (2011), *Integral Mean Estimates for Polynomials Whose Zeros are within a Circle*, Applied Mathematics, Vol. 2, No. 1, 2011, pp. 141-144, the statement of the main result, Theorem 1, is precisely the same as Theorem 3 of A. Aziz and N. A. Rather (2004), *Some Zygmund Type L^q Inequalities for Polynomials*, Journal of Mathematical Analysis and Applications, Vol. 289, 2004, pp. 14-29.

The objective of the paper by Paul, Shah and Singh was to give a simpler proof of this theorem than that given in Aziz and Rather, and the authors should have referred to that paper and apologize for this oversight.

AM E ditorial Office

TABLE OF CONTENTS

Volume 2 Number 5

May 2011

Tail Behavior of Threshold Models with Innovations in the Domain of Attraction of the Double Exponential Distribution

A. Diop, S. Diouf.....515

Surface Wave Propagation in a Generalized Thermoelastic Material with Voids

B. Singh, R. Pal.....521

Solving Large Scale Unconstrained Minimization Problems by a New ODE Numerical Integration Method

T. M. Han, X. L. Luo, Y. H. Han.....527

Estimate of Multiple Attracting Domains for Cohen-Grossberg Neural Network with Distributed Delays

Z. K. Huang, Z. Y. Wang533

Pressure/Saturation System for Immiscible Two-Phase Flow: Uniqueness Revisited

K. B. Fadimban.....541

Multi-Item EOQ Model with Both Demand-Dependent Unit Cost and Varying Leading Time via Geometric Programming

K. A. M. Kotb, H. A. Fergany.....551

Compactness, Contractibility and Fixed Point Properties of the Pareto Sets in Multi-Objective Programming

Z. D. Slavov, C. S. Evans.....556

Two Theorems about Nilpotent Subgroup

L. J. Zeng.....562

Pulse-Width Pulse-Frequency Based Optimal Controller Design for Kinetic Kill Vehicle Attitude Tracking Control

X. Y. Xu, Y. L. Cai.....565

The Role of Space Dimension on the Blow up for a Reaction-Diffusion Equation

Z. L. Liang.....575

Stability Loss of Rotating Elastoplastic Discs of the Specific Form

D. M. Lila, A. A. Martynyuk.....579

Influence of Rigid Boundary and Initial Stress on the Propagation of Love Wave	
S. Gupta, A. Chattopadhyay, S. K. Vishwakarma, D. K. Majhi.....	586
Common Fixed Points of Single and Multivalued Maps in Fuzzy Metric Spaces	
P. Vijayaraju, Z. M. I. S ajath.....	595
Mathematical Models for Flow of Chyme during Gastrointestinal Endoscopy	
R. Roy, F. Rios, D. N. Riahi.....	600
Meshless Method of Lines for Numerical Solution of Kawahara Type Equations	
N. Bibi, S. I. A. Tirmizi, S. Haq.....	608
A Problem of a Semi-Infinite Medium Subjected to Exponential Heating Using a Dual-Phase-Lag Thermoelastic Model	
A. E. Abouelregal.....	619
Generalized Thermo Elasticity in an Infinite Nonhomogeneous Solid Having a Spherical Cavity Using DPL Model	
A. E. Abouelrega.....	625
Uses of the Buys-Ballot Table in Time Series Analysis	
I. S. Iwueze, E. C. Nwogu, O. Johnson, J. C. Ajaraogu.....	633
Numerical Solution of a Class of Nonlinear Optimal Control Problems Using Linearization and Discretization	
M. H. Noori Skandari, E. Tohidi.....	646
Evolution of Weak Shock Waves in Perfectly Conducting Gases	
L. P. Singh, D. B. Singh, S. Ram.....	653

The figure on the front cover is from the article published in Applied Mathematics, 2011, Vol. 2, No. 5, pp. 579-585 by Dmitrii Makarovich Lila and Anatolii Andreevich Martynyuk.

Applied Mathematics (AM)

Journal Information

SUBSCRIPTIONS

The *Applied Mathematics* (Online at Scientific Research Publishing, www.SciRP.org) is published monthly by Scientific Research Publishing, Inc., USA.

Subscription rates:

Print: \$59 per issue.

To subscribe, please contact Journals Subscriptions Department, E-mail: sub@scirp.org

SERVICES

Advertisements

Advertisement Sales Department, E-mail: service@scirp.org

Reprints (minimum quantity 100 copies)

Reprints Co-ordinator, Scientific Research Publishing, Inc., USA.

E-mail: sub@scirp.org

COPYRIGHT

Copyright©2011 Scientific Research Publishing, Inc.

All Rights Reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, scanning or otherwise, except as described below, without the permission in writing of the Publisher.

Copying of articles is not permitted except for personal and internal use, to the extent permitted by national copyright law, or under the terms of a license issued by the national Reproduction Rights Organization.

Requests for permission for other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works or for resale, and other enquiries should be addressed to the Publisher.

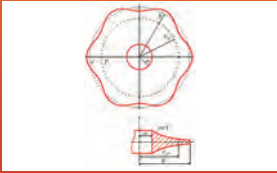
Statements and opinions expressed in the articles and communications are those of the individual contributors and not the statements and opinion of Scientific Research Publishing, Inc. We assume no responsibility or liability for any damage or injury to persons or property arising out of the use of any materials, instructions, methods or ideas contained herein. We expressly disclaim any implied warranties of merchantability or fitness for a particular purpose. If expert assistance is required, the services of a competent professional person should be sought.

PRODUCTION INFORMATION

For manuscripts that have been accepted for publication, please contact:

E-mail: am@scirp.org

Applied Mathematics



www.scirp.org/journal/am

˘ ~ ää Ñç ê= m~ é Êêë

^ééäÉÇ† ~í ÜÉã ~í áÄëÆ^j F

fppk=ONROJTPUR-EmôáÍF==ppfk=ONROJTPVP=E áääÉF
ÜíéWü ï ïKëÄäëKçöÖLàçì èã~ä~ã

Applied Mathematics (AM)=äë~ã=ääíÉää~íäçã~äçì èã~ä=ÇÉÇÄ~íÉÇ=ç=íÜÉ=ä~íÉëí=~Çì ~äÄÉä Éäí=çÑ= ~ééääÉÇä ~íÜÉä ~íÄëK=ÜÉ=Çç~äçÑÜäçì èã~ääçç=ééçì äÇÉ=éä~íÑ èã=ÑçëÄÉäíäíë=äÇ=A~ÇÉä Ää~äë= ~ääçì Éë~ÜÉ= çäÇçç=ééçä çíÉí=Ü~Äí=äÇ=ÇäÄí èë= ~äçì è~äí= äëì Éë=äÇ=ÇÉí Éäçéä Éäíë=ä~ÇäÑÉäí= ~ÄÉ~ëK

pì ÄäÉÄí=˘ çì Êë~ÖÉ

qÜäççì èã~äääí äÉë=çäÖää~äëëÉë~äÜ=äÇ=çí äí= é~éÉëë=Ü~í=ÇÇäëë=ÜÉ=ççäçì äÖäëì ÉëKççéäÄë=çÑ= ääíÉäëí=äÄä ÇÉí=Ä í=ÄÉ=äçí=ä äÉÇ=çW

- ^ ééäÉÇ=ñç Ä~Äääó=
- ^ ééäÉÇ=p~íäíäë=
- ^ ééççñää ~íäçäç ÜÉÇó=
- ˘ Ü~çëç ÜÉÇó=
- ˘ çä Ää~íçäë=
- ˘ çä éäëñäóç ÜÉÇó=
- ˘ çä éí í~Äääóç ÜÉÇó=
- ˘ çä éí í~íäçä~ä=j ÉÄÜ~ääë=äÇ=ñüóéäë=
- ˘ çäíäí ì äj ÉÄÜ~ääë=
- ˘ çäíäçäç ÜÉÇó=
- ˘ äóéíç Öë~éÜó=
- a äÄÉíÉ=dÉçä Éíó=
- a óä~ä ä~ä=péíÉä ë=
- b~äíçÇóä~ä äë=
- b í çä íäçä~ëó=˘ çä éí í~íäçä=
- c ä~äÄä~ä=j~íÜÉä ~íäë=
- c ì òòó=íç Öä=
- d ~ä Éç ÜÉÇó=
- d ë~éÜç ÜÉÇó=
- fäñçä ~íäçäç ÜÉÇó=
- fäí ÉäëÉ=ñç Ääë ë=
- j ~íÜÉä ~íä~ä=äççÖó=
- j ~íÜÉä ~íä~ä=ÜÉä äíó=
- j ~íÜÉä ~íä~ä=äççäçä äë=
- j ~íÜÉä ~íä~ä=ñüóéäë=
- j ~íÜÉä ~íä~ä=äóÄÜçäçÖó=
- j ~íÜÉä ~íä~ä=p ÄçäçÖó=
- j ~íäñ=˘ çä éí í~íäçäë=
- k Éí ë~ä=íÉí çäë=
- k çäääÉ~ë=ñç ÄÉëÉë=ä=ñüóéäë=
- k ì ä ÉäÄ~ä~ä~äë=
- l éÉë~íäçäë=dÉëÉ~äÜ=
- l éíä ~ä=çäíäçä=
- l éíä ä~íäçä=
- l éçä~ëó=ääÑÉäíä~ä=äì ~íäçäë
- m~äíä~ä=ääÑÉäíä~ä=äì ~íäçäë
- mç Ä~Äääóç ÜÉÇó
- p í~íäíä~ä=ä~äÄÉ
- p íçÄÜ~éíä=ñç ÄÉëÉë
- q ÜÉÇäíä~ä=p~íäíäë

t É=ÄÉ=äçç=ääíÉäëíÉÇ=ä~ëÜçäë~éÉëë=ÄÉíÉäëF~Ü~í=ÄÉ~äë=ÇÇäëë=ëéÉÄäÄ~éçÄäÉä Ì=äÇ=ëÜçäë= èì ä Éóççëççäçäçä~éÉëë=Ü~í=äÄÉíÄÜ~ÜÉ=äëì äëççëççÄäÉä ëçä~ëéÉÄäÄ~äçäK=† íÜçëëççÑëÄÉíÉÇ= ëÜçäë~éÉëë= çì äÇÄÉä äÉÇçç= äÉ=ÄÉÖ ä~ëë~éÉëçä=ÜÉ~ä ÉççéäÄëëñ Ì äëëì ÉëççÑäéäÉÇ= **j ~íÜÉä ~íäëK**

k çíÉë=Ñë=äíÉä Çää Ö^ ì íÜçëë

pì Ää äíÉÇ=é~éÉëë=ëÜçì äçççì=Ü~í É~ÄÉä~éëí äçì äëëì ÄäëÜÉÇ=äççÄÉÄí äëäíäçä äÇÉëÄçäëäÇÉë~íäçä= Ñçëì ÄäÄ~íäçä~éäëí ÜÉäK~éÉëëì Ää äëççä~ä äÄÉÜ~äÇÉÇ=ÄÉÄíçäçä~äë=Üçì ÖÜ~ÜÉ= ÉÄäÉK~ä= é~éÉëë=ÄÉ~ÄÑÉäÉÇ~Üçì ÖÜ=éÉÉëëí äí= éççÄÉëëKççéä çäÉ=ÇÉí~äë=Äçì í=ÜÉ=ì Ää äëççäëì~éÄ~éÉ= ~ÄÄëë=ÜÉ=íÉÄäÉK

t ÉÄäíÉ=äÇ=Üj ~ää