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Newsletter of the International Society of Difference Equations

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Edited by Malgorzata Guzowska

11/7/2013

International Society of Difference Equations
http://isdeds.com

A Letter from the President

October 30, 2013

Martin Bohner

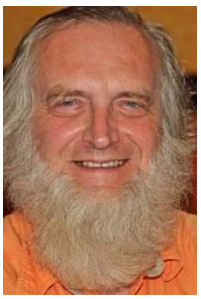
ISDE President

Board Elections

In April/May 2013, the new ISDE Board of Directors was elected and the results were announced on May 2, 2013. The new members of the seventh ISDE Board of Directors are **Linda Allen** (Texas Tech University, Lubbock, Texas, USA), **Martin Bohner** (Missouri University of Science and Technology, Rolla, Missouri, USA), **Jim Cushing** (University of Arizona, Tucson, Arizona, USA), **Ondřej Došlý** (Masaryk University, Brno, Czech Republic), **Saber Elaydi** (Trinity University, San Antonio, Texas, USA), **István Győri** (University of Pannonina, Veszprém, Hungary), **Gerasimos Ladas** (University of Rhode Island, Kingston, Rhode Island, USA), **Allan Peterson** (University of Nebraska, Lincoln, Nebraska, USA), and **Christian Pötzsche** (Alpen-Adria University, Klagenfurt, Austria). The new Board of Directors then elected **Martin Bohner** as President and **Jim Cushing** as Vice President. According to the ISDE Bylaws, the new Board and the new President and Vice President shall serve a two-year term that has begun on August 1, 2013.

I would like to thank all ISDE members for participating in the Board elections and also all new Board members for their willingness to serve on the ISDE Board of Directors. I would also like to thank the outgoing Board for their work during the past two years, in particular Vice President **Robert Sacker** and President **Jim Cushing** who has served two terms as president and hence, according to the bylaws, was not eligible for another term. It is a honor and pleasure for me to serve our society as the fourth president following ISDE's outstanding leaders **Bernd Aulbach**, **Saber Elaydi**, and **Jim Cushing**. I will continue to promote our society and its goals in the spirit of my predecessors. Together with the new Board, I will work hard on promoting difference equations and discrete dynamical systems as one of the fundamental subjects in mathematics.

Prizes awarded by the Society



The most prestigious award of our society, the Bernd Aulbach Prize, is awarded biennially for significant contributions to the areas of difference equations and/or discrete dynamical systems. In 2013, the Bernd Aulbach Prize was awarded to **Mihał Misiurewicz** (IUPUI, Indianapolis, Indiana, USA). Mihał Misiurewicz is the second winner of the Bernd Aulbach Prize. The prize was awarded for the first time in 2011 to **Alexander Sharkovsky** (National Academy of Sciences of Ukraine, Kiev, Ukraine). See later in the Newsletter for a summary of Professor Misiurewicz' accomplishments.

Another prize given by the society is the prize for the best JDEA paper. This prize is awarded annually. In 2013, the recipient of this prize was **Subrahmonian Moothathu** (University of Hyderabad, Hyderabad, India) for his paper "The speed with which an orbit approaches a limit point", J. Difference Equ. Appl. 18 (no. 10), 1611—1621, 2012.

A Letter from the President

2013 Conferences of the Society

ICDEA, the International Conference on Difference Equations and Applications, is the flagship conference of our society. It is held annually since 1994. The 2013 ICDEA took place at Sultan Qaboos University in Muscat, Oman, May 26—30, 2013. The conference was a big success, and I refer to the summary that appears later in the Newsletter. The society is indebted to the organizers of ICDEA 2013, in particular the Chair of the Organizing Committee, **Ziyad Al-Sharawi**.

PODE, Progress on Difference Equations, is the other conference series of our society. It is held annually since 2007. The 2013 PODE took place at Białystok University of Technology in Białystok, Poland, July 21—26, 2013. This conference was also a big success, and I refer to the summary that appears later in the Newsletter. The society thanks the organizers of PODE 2013, in particular the Chair of the Organizing Committee, **Agnieszka Malinowska**.

A Letter from the President

Upcoming Conferences of the Society

I am very happy to announce that the ISDE Board of Directors has approved the following three proposals for ICDEA 2014, PODE 2014, and ICDEA 2015. ICDEA 2014 is just around the corner and will be held at the Wuhan Institute of Physics and Mathematics of the Chinese Academy of Sciences in Wuhan, China, July 21–25, 2014. The Chair of the Organizing Committee is **Yiming Ding**. The Scientific Committee for ICDEA 2014, chaired by **Ondřej Došlý**, has been established and is currently selecting the plenary speakers for the conference. The website for ICDEA 2014 is still under construction but is already available at *http://icdea2014.csp.escience.cn*, please check it out now and make your plans to travel to Wuhan this July for ICDEA 2014.

PODE 2014 will be held in Izmir University of Economics in Izmir, Turkey, May 21–24, 2014. The Chair of the Organizing Committee is **Ünal Ufuktepe**. The Scientific Committee for PODE 2014, chaired by **Saber Elaydi**, has been established and is currently selecting the plenary speakers for the conference. The website for PODE 2014 is still under construction but it may be already viewed at *http://dm.ieu.edu.tr/pode2014*. Please mark your calendars and make sure not to miss this exciting conference.

ICDEA 2015 was planned to be held in Beirut, Lebanon, but, due to political boundary conditions, this proposal has been postponed. On September 13, 2013, the Board of Directors has approved a proposal for ICDEA 2015 to be held at Białystok University of Technology in Białystok, Poland, July 19–25, 2015. The Chair of the Organizing Committee is **Agnieszka Malinowska**. Currently, a website for ICDEA 2015 is not yet available.

Any ISDE member who wishes to organize an upcoming ICDEA or PODE conference is cordially invited to submit a proposal to me or any of the members of the ISDE Board of Directors. Guidelines for preparing proposals for ICDEA conferences are available on the ISDE website at *http://isdeds.com*. No special format is required for proposals of PODE conferences. The society would like to have ICDEA conferences finalized at least two years in advance. This means, right now is the time to prepare and submit your proposals for ICDEA 2016 and ICDEA 2017. I am looking forward to receiving your proposals for organizing these important conferences. Successful organizations of ICDEA and PODE conferences will continue to demonstrate that the area of difference equations and its applications is an active and important area of research in mathematics.

A Letter from the President

ISDE Membership Directory

In the last few months, I have worked hard to combine various ISDE membership lists that were given to me, sometimes containing nothing else but an e-mail address of the member. The product of this work is an html version of the current ISDE Membership Directory. This directory is available only to ISDE members. You may go to the society's website at *http://isdeds.com* and then click on "Members". From there, the ISDE Membership Directory is available by entering a password. This password will be sent to you separately by e-mail. However, I need your help in verifying the details. Please take a moment now and review the information given in the directory. If you find any errors or would like me to change any of the information given in there, please inform me by e-mail to the e-mail address *bohner@mst.edu*.

During the process of creating the ISDE Membership Directory, I have gathered some information which I would like to share with you today. The society currently (October 30, 2013) has 537 members. We truly are an international society, and this is manifested by the fact that our members are based in 68 different countries. The countries with the most members are (in that order) USA, China, Poland, Portugal, Turkey, India, Czech Republic, Russia, Germany, Japan, Spain, Ukraine, and Canada.

That said, I ask all of you to help in recruiting even more new members for our society and thus new prospective participants at further ICDEA and PODE conferences. If you know anybody working in the areas of difference equations and/or discrete dynamical systems, please take a moment to invite this person to become a member of ISDE. Applying for ISDE membership is easy: Just go to the society's website at *http://isdeds.com* and click on "Membership application" and fill in the requested information. The applicant has the option to apply for regular membership (which is free of charge) or to become a sponsoring member of the society. Sponsoring membership is 100 USD a year, and the dues can be paid conveniently online using a credit card or paypal. The funds received through sponsoring memberships help to support the society's activities in developing and enhancing research and education in difference equations and discrete dynamical system. As an ISDE Sponsoring Member, you will receive a reduced registration fee for the annual ICDEA conference and a one-year online subscription to JDEA. Please consider changing your regular membership into a sponsoring membership.

With my Best Regards,

Volume 4, Issue 1 November 2013

Newsletter Editor: Małgorzata Guzowska

INTRODUCTION FROM THE NEWSLETTER EDITOR

Dear Colleagues:

It is my great pleasure to present to you the new issue of the ISDE Newsletter. I hope you will enjoy reading this new issue.

Also thanks to all ISDE members who have sent information for this newsletter.

I would also like to ask the members of the Society to contribute information and articles about their faculties, new books, new conferences, new grants and job opportunities to the newsletter and webpage, as well as any relevant information about mathematics or about our members.

All information may be e-mailed to:
MalgosiaGuzowska@gmail.com

With Best Regards

M. Guzowska

Małgosia Guzowska

CONFERENCE REPORTS

The 19th Annual **International Conference on Difference Equations and Applications (ICDEA 2013)** took place at the Sultan Qaboos University, Muscat, Oman, May 26 – 30, 2013.

Group picture, ICDEA 2013, Muscat, Oman.

Dr. Ziyad Al-Sharawi chaired the organizing committee and is to be highly commended for the overwhelming success of the conference, which was attended by over 100 participants from around the world. Special topic sessions focused on all areas of difference equations and discrete dynamical systems were addressed. The main theme was applications of difference equations to mathematical sciences and, in particular, mathematical biology, ecology and epidemiology.

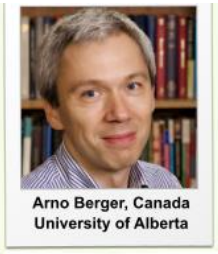
Special thanks go to the conference committees:

Scientific Committee:
Linda Allen, Texas Tech University,
Lluís Alsedà, Universitat Autonoma de Barcelona
Ziyad Al-Sharawi, Sultan Qaboos University
Saber Elaydi, Trinity University
Yoshihiro Hamaya, Okayama University of Science
Allan Peterson, University of Nebraska
Christian Pötzsche, Alpen-Adria Universität Klagenfurt
George Sell, University of Minnesota
Lubmir Snoha, Matej Bel University

Organizing Committee:
Dr. Asma Al-Ghassani, Sultan Qaboos University
Dr. Nasser Al-Salti, Sultan Qaboos University
Dr. Ziyad Al-Sharawi, Sultan Qaboos University (Chair)
Dr. Mohamed Rhouma, Sultan Qaboos University

During the conference, plenary addresses were given by:

Azmy Ackleh, USA
University of Louisiana at Lafayette


Arno Berger, Canada
University of Alberta

Henk Bruin, Austria
University of Vienna

Rod Halburd, UK
Univesity College London

Eduardo Liz, Spain
University of Vigo

Michal Misiurewicz, USA
Indiana University –PUI

Hinke Osinga,New Zealand
The University of Auckland

Martin Rasmussen, UK
Imperial College London

Jaroslav Smital, Czech
Mathematical Institute in Opava

Yasuhiro Takeuchi, Japan
Aoyama Gakuin University

One highlight of ICDEA 2013 was the award of the second Bernd Aulbach Prize to Professor Michał Misiurewicz (Department of Mathematical Sciences at Indiana University - Purdue University, Indianapolis, USA). The Society established the Bernd Aulbach Prize in 2010 in memory of the late Bernd Aulbach for his contributions to difference equations and to the establishment of the Society (Bernd served as the first ISDE president). The prize is awarded every two years to individuals who make significant contributions to the areas of difference equations and/or discrete dynamical systems by the development of new areas of research or by the discovery of important new theorems or by having made important applications of difference equations to some scientific discipline. Professor Michał Misiurewicz delivered a lecture at the conference, entitled “Semiconjugacy to a Map of a Constant Slope”.

Another award announced at ICDEA 2013 was the Best JDEA Paper Prize for Prof. T.K. Subrahmonian Moothathu (Department of Mathematics and Statistics, University of Hyderabad, Hyderabad 500 046, India) for his paper "The speed with which an orbit approaches a limit point" which appeared in JDEA, Vol. 18, No. 10, October 2012, 1611–1621.

The conference Progress on Difference Equations 2013 (PODE 2013) took place at the Bialystok University of Technology in Bialystok, Poland, from July 21 – 26, 2013.

Group picture, PODE 2013, Bialystok, Poland.

The organizers, led by Agnieszka Barbara Malinowska, chair of the Organizing Committee and Saber Elaydi, chair of the Scientific Committee are to be congratulated on putting together this successful conference. The conference addressed difference equations, discrete dynamical systems and their applications. Also, a special session on fractional difference equations was organized.

Plenary addresses were given by:

Martin Bohner, Missouri University of Science and Technology, Rolla, USA

Saber Elaydi, Trinity University, San Antonio, USA

Istvan Győri, University of Pannonia, Veszprém, Hungary

Ülle Kotta, Institute of Cybernetics at TUT, Tallinn, Estonia

Michał Misiurewicz, Indiana University, Indianapolis, USA

Ewa Schmeidel, University of Bialystok, Bialystok, Poland

Delfim F. M. Torres, University of Aveiro, Aveiro, Portugal.

Special thanks go to the conference committees:

Scientific Committee

Saber Elaydi, Trinity University (Chair)
Zbigniew Bartosiewicz, Bialystok University of Technology (Co-Chair)
Martin Bohner, Missouri University of Science and Technology
Istvan Győri, University of Pannonia
Ulle Kotta, Institute of Cybernetics at TUT
Gerry Ladas, University of Rhode Island
Małgorzata Migda, Poznan University of Technology
Michał Misiurewicz, Indiana University
Ewa Schmeidel, University of Bialystok
George Sell, University of Minnesota

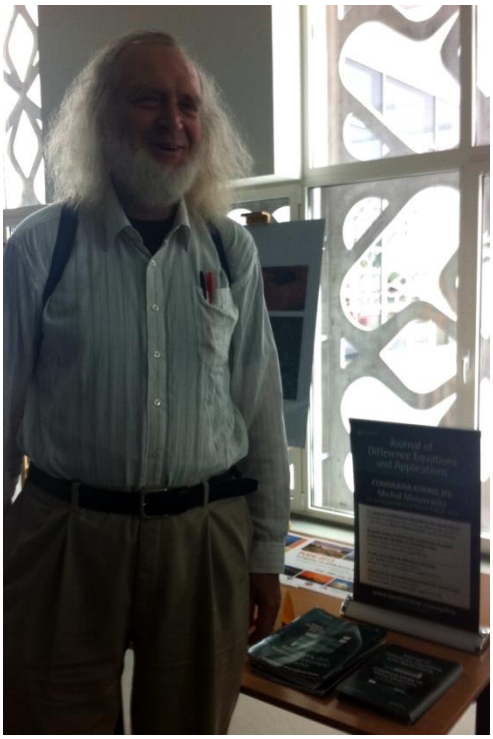
Organizing Committee

Agnieszka B. Malinowska, Bialystok University of Technology (Chair)
Zbigniew Bartosiewicz, Bialystok University of Technology
Ewa Girejko, Bialystok University of Technology
Małgorzata Guzowska, University of Szczecin
Klara Janglajew, University of Bialystok
Dorota Mozyrska, Bialystok University of Technology
Ewa Pawłuszewicz, Bialystok University of Technology
Ewa Schmeidel, University of Bialystok

MICHAŁ MISIUREWICZ

THE BERND AULBACH PRIZE LAUREATE

Professor Michał Misiurewicz is the winner of the Bernd Aulbach Prize 2013. The Aulbach Prize is awarded by the International Society of Difference Equations for significant contributions to the areas of difference equations and/or discrete dynamical systems. Michał Misiurewicz was born and grew up in Poland. He studied at the University of Warsaw, where he was granted his Master's degree in 1971 and earned his PhD in 1974 (under supervision of Bogdan Bojarski). He learned about dynamical systems and ergodic theory from Karol Krzyzewski and Wieslaw Szlenk. He worked first at the University of Warsaw, and since 1992 he has been employed at the Indiana University - Purdue University Indianapolis (Indiana, USA). Professor Misiurewicz's favorite topics are one-dimensional dynamics and topological entropy about which he wrote a book. From time to time he likes to work on problems that are motivated by or have application to other sciences, like biology, chemistry, physics or economics, and his most "applied" paper is about lacing shoes. He is an author of about 140 papers.



The Journal of Difference Equation and Application would like to celebrate the award by offering free access to the following papers published by Michał Misiurewicz:

Singular limits of absolutely continuous invariant measures for families of transitive maps (Peyman Eslami and Michał Misiurewicz), Volume 18, Issue 4, April 2012, pages 739-750.

A note on a rational difference equation (Lluís Alsedà and Michał Misiurewicz), Volume 17, Issue 11, November 2011, pages 1711-1713.

Attractors for unimodal quasiperiodically forced maps (Lluís Alsedà and Michał Misiurewicz), Volume 14, Issue 10-11, October 2008, pages 1175-1196.

ISDE CALENDAR

- **27—31 January 2014, Central Configurations, Periodic Orbits and Beyond in Celestial Mechanics (DANCE Winter School),** Centre de Recerca Matematica, Bellaterra, Barcelona, Spain. Information: http://www.crm.cat/en/Activities/Pages/ActivityDescriptions/ACCelMech.aspx

- **21 - 24 May 2014, Progress of Difference Equations 2014 (PODE 2014),** will be held in Izmir University of Economics in Izmir, Turkey. Information: http://dm.ieu.edu.tr/pode2014

- **7-11 July 2014, The 10th AIMS Conference on Dynamical Systems, Differential Equations and Applications,** Madrid, Spain

- **21 - 25 July 2014**, **The International Conference on Difference Equations and Applications (ICDEA 2014)** will be held in Wuhan Institute of Physics and Mathematics of the Chinese Academy of Sciences in Wuhan, China. Information: http://icdea2014.csp.escience.cn

- **5-8 September 2014**, **Symposium on Differential Equations and Difference Equations 2014**, Homburg, Germany, Information: https://sites.google.com/site/sandrapinelas/sdede-2014

- **18-20 September 2014**, **Modelli Dinamici in Economia e Finanza (MDEF 2014),** will be held in Urbino, Italy, Information: http://www.mdef.it/meetings-workshops/

BOOKS AUTHORED BY ISDE MEMBERS

- **Stability Theory of Solutions of Dynamic Equations on Time Scales**, by A.A. Martynyuk, Kiev: Phoenix, 2012, 277 pages.

- Dr. Dimitar Mishev (Michev), titled "**Difference and Differential with Applications in Queueing Theory**" is under production with John Wiley & Sons and is due in the market in mid 2013. It contains basics of probability & statistics, transforms, differential equations, difference equations, and queuing theory, in which all of the above have been employed.

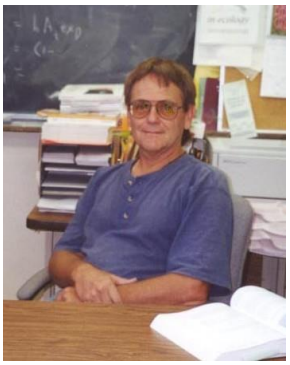
- A Special Issue dedicated to the international workshop "**Infinite and Infinitesimal in Mathematics, Computing and Natural Sciences**" held in Cetraro, Italy, 17–21 May 2010, has been published in the international journal Applied Mathematics and Computation (Elsevier, Impact Factor = 1.534), volume 218, Issue 16, Pages 7977-8216 (15 April 2012). http://www.sciencedirect.com/science/journal/00963003

- **Local Analytic Classification of *q*-Difference Equations**, by Jean-Pierre Ramis, Jacques Sauloy, Changgui Zhang.

- **Uncertain Dynamical Systems: Stability and Motion Control,** by A.A. Martynyuk and Yu.A. Martynyuk-Chernienko, CRC Press Taylor and Francis Group, A Chapman and Hall Book, 2012.

ISDE BOARD OF DIRECTORS 2013—2015

Martin Bohner
President
Missouri University of Science and Technology,
Rolla, Missouri, USA



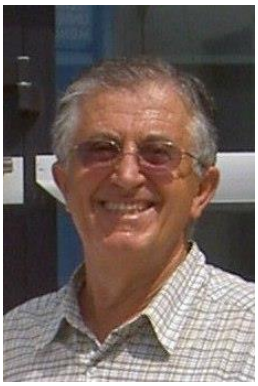
Jim Cushing
Vice President
University of Arizona, Tucson, Arizona, USA

Linda Allen
Texas Tech University,
Lubbock, Texas, USA

Ondřej Došlý
Masaryk University,
Brno, Czech Republic

Saber Elaydi
Trinity University, San
Antonio, Texas, USA

István Győri
University of Pannonina,
Veszprém, Hungary



Gerasimos Ladas
University of Rhode Island,
Kingston, Rhode Island, USA

Allan Peterson
University of Nebraska,
Lincoln, Nebraska, USA

Christian Pötzsche
Alpen-Adria University,
Klagenfurt, Austria

GOALS OF THE SOCIETY

To promote difference equations and discrete dynamical systems, defined broadly, as one of the fundamental subjects in Mathematics.

To promote discrete models as models of premiere mathematical importance in the natural sciences, engineering, economics, etc.

To coordinate activities in the area of difference equations such as organizing conferences, annual meetings, workshops, special sessions, etc.

To lend support to researchers in difference equations from developing countries and those who need help by making available copies of research articles, lecture notes, technical reports and books.

To promote the publication of books, monographs, lecture notes and expository articles in the area of difference equations.

ISDE International Society of Difference Equations ISDE

We are on the web
http://isdeds.org/