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# Newsletter of the International Society of Difference Equations



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Edited by Małgorzata Guzowska

4/14/2014



# A Letter from the President

April 14, 2014

## Dear ISDE Members,



Our annual conference, the 20th International Conference on Difference Equations and Applications (ICDEA) 2014, will be held in Wuhan, China, from July 21 to 25, 2014. The conference website is now complete and on March 20, the online registration service has been opened. The deadline for early registration is June 15 and the deadline for abstract submission is June 20. I encourage everyone to attend this exciting event and to take this opportunity to visit the very exciting city of Wuhan. Now is the time to make your travel arrangements and to obtain a visa for China if necessary. The organizers, headed by **Yiming Ding**, will be glad to assist you with providing necessary documents for the visa application and with arranging your accommodation in Wuhan during the conference. Please refer to the conference website [icdea2014.csp.science.cn](http://icdea2014.csp.science.cn) for further details concerning our ICDEA 2014 conference. I would like to thank the

organizing committee for their hard work in preparing this conference and the scientific committee, chaired by **Ondřej Došlý**, for their excellent work in selecting the plenary speakers of the conference.

The society's other conference series is Progress on Difference Equations (PODE), and PODE 2014 is just around the corner and will be held in Izmir, Turkey, from May 21 to 24, 2014. I hope many members of our society will be able to attend this workshop; it is still possible to register and to submit your abstract in the next few days, with a deadline of April 15. Please refer to the website of the conference at [dm.ieu.edu.tr/pode2014](http://dm.ieu.edu.tr/pode2014) for further details concerning our PODE 2014 conference, including information on how to register and submit an abstract. I also take this opportunity to thank the organizing committee, chaired by **Ünal Ufuktepe**, and the scientific committee, chaired

by **Saber Elaydi**, for their terrific work in planning for this conference.

In my previous letter to the society, I have already announced that ICDEA 2015 will be held in Białystok, Poland. The organizing committee is chaired by **Agnieszka Malinowska**. Moreover, in the meantime, the Board of Directors of the society has received a proposal by **Stefan Siegmund** to hold ICDEA 2018 in Dresden, Germany. On December 12, 2013, the Board of Directors unanimously approved this proposal. As of today, the locations for ICDEA 2016 and 2017 have not yet been decided. I encourage any ISDE member who wishes to organize one of these conferences 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 [isdeds.com](http://isdeds.com). I am also looking forward to receiving proposals for the PODE conference 2015.



**Martin Bohner**

**ISDE President**



# A Letter from the President



Now I would like to give you an update on the membership situation of the society. The society currently has 552 (as of April 14, 2014) members. Regular Membership is free, and I encourage all of you to help in recruiting new members and refer them to our website, where they may fill out a membership application form. The complete ISDE Membership Directory is accessible from the website, using a password which was sent to you in my last e-mail. In the case you forgot this password, please e-mail me and I will send it to you. This way we can make sure that only members have access to this directory. Please also review the information given for you in the directory and inform me of any necessary changes by e-mail to [bohner@mst.edu](mailto:bohner@mst.edu). The society also offers a Sponsoring Membership category. In this category, for annual membership dues of 100 USD (which can be paid conveniently on the society's website using PayPal or a credit card), sponsoring members help to support the society's activities and will receive a reduced registration fee for the annual ICDEA conference and a one-year

online subscription to JDEA. As of today, our society has the following ten 2014 Sponsoring Members (see their pictures on the left side of this page): **Ziyad Al-Sharawi** (Sultan Qaboos University, Muscat, Oman), **Adel Antippa** (Université du Québec à Trois-Rivières, Trois-Rivières, Canada), **Kenneth Berenhaut** (Wake Forest University, Winston-Salem, North Carolina, USA), **Martin Bohner** (Missouri University of Science and Technology, Rolla, Missouri, USA), **Jim Cushing** (University of Arizona, Tucson, Arizona, USA), **Göran Högnäs** (Åbo Akademi University, Åbo, Finland), **Vlajko Kocić** (Xavier University, New Orleans, Louisiana, USA), **Evelina Lapierre** (Johnson and Wales University, Providence, Rhode Island, USA), **Alexander Sharkovsky** (National Academy of Sciences of Ukraine, Kiev, Ukraine), and **Jaroslav Smítal** (Silesian University, Opava, Czech Republic). I would like to thank these colleagues for their support to our society and hope many more of the regular members will decide to become an ISDE sponsoring member for 2014.

Finally, let me also take the opportunity to acknowledge and thank the treasurer **Andrea Bruder** and the webmaster and newsletter editor **Małgorzata Guzowska**. Both of them as well as the entire Board of Directors are working hard and spending a lot of their time on promoting difference equations and discrete dynamical systems as one of the fundamental subjects in mathematics.

With Best Regards,

*Newsletter Editor: Małgorzata Guzowska*

## INTRODUCTION FROM THE NEWSLETTER EDITOR

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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 emailed to:  
[MalgosiaGuzowska@gmail.com](mailto:MalgosiaGuzowska@gmail.com)



With Best Regards

A handwritten signature in blue ink that reads "M. Guzowska". The signature is written in a cursive style.

Małgorzata Guzowska

## ICDEA 2014 - from July 21 to 25, 2014, Wuhan (Hubei, China)

The **20th International Conference on Difference Equations and Applications** will be held in Wuhan (Hubei, China), from July 21 to 25, 2014. The conference is organized by *Wuhan Institute of Physics and Mathematics, Chinese Academy of Sciences*, under the auspices of the *International Society of Difference Equations (ISDE)*.

The purpose of the conference is to exchange the latest developments in difference equation, discrete dynamical systems, fractal geometry, to explore the application of discrete models in natural science, social science and engineering, and to enhance the international cooperation on the theory and applications of difference equations.

### PLENARY SPEAKERS

1. **Lluís Alseda** (Universitat Autònoma de Barcelona, Spain)
2. **Ziyad Al-Sharawi** (Sultan Qaboos University, Oman)
3. **Martin Bohner** (Missouri University of Science and Technology, USA )
4. **Ai-Hua Fan** (Université de Picardie Jules Verne, France)
5. **Peter Kloeden** (University of Frankfurt, Germany)
6. **Piotr Oprocha** (AGH University of Science and Technology, Poland)
7. **Kenneth Palmer** (National Taiwan University, Taiwan, China)
8. **Weixiao Shen** (National University of Singapore, Singapore)
9. **Roderick Wong** (City University of Hong Kong, Hong Kong, China)
10. **Xiangdong Ye** (University of Science and Technology of China, China)
11. **Huijiang Zhao** (Wuhan University, China)

#### Scientific Committee:

Luis Alseda  
Yongluo Cao  
Robert Devaney  
Yiming Ding  
Ondřej Došlý  
Peter Kloeden  
Eduardo Liz  
Michał Misiurewicz  
Sandra Pinelas  
Mihaly Pituk  
Christian Pötzsche  
Hal Smith  
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Xia Cao ( WIPM, Secretary)  
Hongfei Cui (WIPM)  
Ziqing Zhang (WIPM)  
Jihua Ma (Wuhan University)

More information: <http://icdea2014.csp.escience.cn>

## PODE 2014 in Izmir, Turkey from May 21 to May 24, 2014

The 2014 Progress on Difference Equations will take place in the Izmir University of Economics in Izmir, Turkey from May 21 to May 24, 2014.

This meeting continues in the line of other PODE workshops, the first two held in Laufen (Germany) PODE 2007, PODE 2008, followed by the workshops in Będlewo (Poland) PODE 2009, Xanthi (Greece) PODE 2010, Dublin (Ireland) PODE 2011, Richmond (Virginia, USA) PODE 2012 and Białystok (Poland) PODE 2013. The workshop's aim is to provide a forum for researchers in the area of difference equations (ordinary and partial), discrete dynamical systems, and their applications, and to discuss and exchange their latest works. A special session dedicated to fractional difference equations will be organized.

### PLENARY SPEAKERS

1. Murat Adıvar, Izmir University of Economics, Turkey
2. Luis Alsedá, Universitat Autònoma de Barcelona, Spain
3. Martin Bohner, University of Missouri S&T, USA
4. Saber Elaydi, Trinity University, USA
5. Mats Gyllenberg, University of Helsinki, Finland
6. Billur Kaymakçalan, Çankaya University, Turkey
7. Hüseyin Koçak, University of Miami, USA
8. Stefan Siegmund, Technische Universität Dresden, Germany

#### Scientific Committee:

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Murat Adıvar, Izmir University of Economics (Co-Chair)  
Lluís Alsedá, Universitat Autònoma de Barcelona  
İsmihan Bayramoğlu, Izmir University of Economics  
Martin Bohner, Missouri University of Science and Technology  
Gusein Guseinov, Atılım University  
Istvan Györi, University of Pannonia  
Billur Kaymakçalan, Çankaya University  
Hüseyin Koçak, University of Miami  
Gerry Ladas, University of Rhode Island  
Agnieszka Malinowska, Białystok University of Technology  
Michał Misiurewicz, Indiana University  
Ünal Ufuktepe, Izmir University of Economics  
Ağacık Zafer, Middle East Technical University

#### Organizing Committee:

Ünal Ufuktepe, Izmir University of Economics (Chair)  
Mehmet Ünal, Çanakkale 18 Mart University (Co-Chair)  
Güvenç Arslan, Izmir University of Economics  
Aslı Güldürdek, Izmir University of Economics  
Cihangir Kan, Izmir University of Economics  
Necla Kayaalp, Izmir University of Economics  
Halis Can Koyuncuoğlu, Izmir University of Economics  
Murat Özkut, Izmir University of Economics

More information: [dm.ieu.edu.tr/pode2014/](http://dm.ieu.edu.tr/pode2014/)



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## ISDE CALENDAR

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- **21-24 May 2014, Progress of Difference Equations 2014 (PODE 2014)**, will be held in Izmir University of Economics in Izmir, Turkey. Website: <http://dm.ieu.edu.tr/pode2014>
- **23-26 June 2014, International Congress in Honour of Professor Ravi P. Agarwal**, will be held at the Campus of Uludag University, Bursa, Turkey. Website: <http://agarwal2014.uludag.edu.tr/>
- **23-27 June 2014, Conference on Differential and Difference Equations and Applications**, will be held in Jasna, Slovak Republic. Website: [fpv.uniza.sk/cddea2014](http://fpv.uniza.sk/cddea2014)
- **1-4 July 2014, 6th Podlasie Conference on Mathematics (6PCM)**, will be held in Białystok, Poland. Website: <http://katmat.pb.bialystok.pl/pcm14/>
- **7-11 July 2014, 10th AIMS Conference on Dynamical Systems, Differential Equations and Applications**, Madrid, Spain. Website: <http://www.aims.org/conferences/2014/>
- **17-19 July 2014, Pure Mathematics, Applied Mathematics and Computational Methods (PMAMCM)**, will be held in Santorini, Greece. Website: <http://tinyurl.com/pmamcm>
- **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. Website: <http://icdea2014.csp.escience.cn>
- **5-8 September 2014, Symposium on Differential Equations and Difference Equations 2014**, Homburg, Germany. Website: <https://math.la.asu.edu/~easc2014/>
- **14-20 September 2014, 20th European Conference on Iteration Theory**, will be held in Łagów, Poland. Website: <http://ecit2014.wmie.uz.zgora.pl/>
- **17-20 September 2014, DMV-PTM Mathematical Meeting**, will be held in Poznan, Poland. Website: <http://dmv.ptm.org.pl/index.html>
- **18-20 September 2014, Modelli Dinamici in Economia e Finanza (MDEF 2014)**, will be held in Urbino, Italy. Website: <http://www.mdef.it/meetings-workshops/>
- **22-28 September 2014, "Recent Advances and Current Research on the Difference Equations and its Applications"** part of International Conference of Numerical Analysis and Applied Mathematics 2014 (ICNAAM) in Rhodos, Greece. Website: [http://www.icnaam.org/Sessions\\_Minisymposia.htm](http://www.icnaam.org/Sessions_Minisymposia.htm)

## BOOKS AUTHORED BY ISDE MEMBERS

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- **Geometric Theory of Discrete Nonautonomous Dynamical Systems**, by Christian Pötzsche, Springer | 2010 | ISBN: 3642142575 | 398 pages | File type: PDF | 3,2 mb
- **Quantum Variational Calculus, Series: SpringerBriefs in Electrical and Computer Engineering, Subseries: SpringerBriefs in Control, Automation and Robotics**, by Agnieszka B. Malinowska and Delfim F. M. Torres,  
  
Series Editors: Basar, Tamer; Bicchi, Antonio; Krstic, Miroslav. Published by: Springer, 2014. Electronic ISBN: 978-3-319-02747-0 Print ISBN: 978-3-319-02746-3 DOI: 10.1007/978-3-319-02747-0
- **Almost Automorphic Type and Almost Periodic Type Functions in Abstract Spaces**, by Toka Diagana, New York Springer. 2013, 303 pages.
- **Difference and Differential Equations with Applications in Queueing Theory**, by Aliakbar Montazer Haghighi and Dimitar P. Mishev, John Wiley & Sons, 2013, 424 pages.
- **Stability Analysis via Matrix Functions Method**, by A. A. Martynyuk, 2013 Part I, 262p. and Part II, 130p. [www.bookboon.com](http://www.bookboon.com) Section Statistics and Mathematics.
- **Weakly Connected Nonlinear Systems, Boundedness and Stability of Motion**, 2013, CRC Press, Taylor and Francis, 212p., Zbl pre06110079.
- **Stability Theory of Solutions of Dynamic Equations on Time Scales**, by A.A. Martynyuk, Kiev: Phoenix, 2012, 277 pages.
- 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.

## PHD STUDENTSHIPS

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We are happy to announce the launching of the **FCT MAP Doctoral Programme in Applied Mathematics (FCT MAP-PDMA)**.

Funding is available for up to six PhD studentships, to start in the academic year 2014/2015:

<http://www.eracareers.pt/opportunities/index.aspx?task=global&jobId=44852&idc=1>

Application details at

<http://map-pdma.up.pt>

(please follow the link indicated in the post-it).

The information that the candidates must upload is:

- 1- Certificate Course units completed (Mandatory)
- 2- Curriculum vitae (Mandatory)
- 3- Motivation letter stating your scientific objectives for joining the MAP-PDMA Programme (Mandatory)
- 4- Any other document you may consider relevant to the assessment of merit mentioned in the curriculum vitae (Optional)
- 5- If you are applying for a PhD grant within the Doctoral Programme FCT MAP-PDMA in Applied Mathematics declare here your awareness and acceptance of the rules in the "Regulamento de Bolsas de Investigação da FCT, IP" (Mandatory)
- 6- Three reference letters from professors or researchers with a Ph.D. working in an internationally recognized higher education institution (Mandatory)

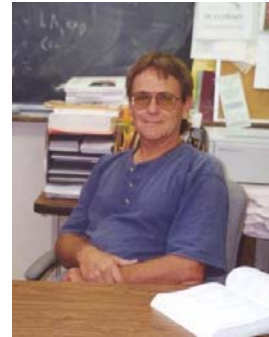
Best regards,  
Delfim F. M. Torres  
University of Aveiro  
Aveiro, Portugal

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## GOALS OF THE SOCIETY

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*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.*



**We are on the web**  
<http://isdeds.org/>