

Директору Математичког института САНУ
Проф. др Зорану Огњановићу
Научном већу Математичког института САНУ
академику Драгошу Цветковићу

Стручни извештај о учешћу у НАУЧНОЈ КОНФЕРЕНЦИЈИ



APPROXIMATION AND COMPUTATION THEORY AND APPLICATIONS (ACTA 2017)

(АПРОКСИМАЦИЈЕ И ИЗРАЧУНАВАЊА - ТЕОРИЈА И ПРИМЕНЕ)

The conference is dedicated to the renowned mathematician

Walter Gautschi,

one of the founders of modern numerical analysis.

Belgrade, November 30 – December 2, 2017

<http://easychair.org/smart-program/ACTA2017/index.html>



Поштовани директоре, Професоре Огњановићу,
Поштовани председниче, Професоре Цветковићу,
Цењени чланови Научног Већа МИ САНУ,

У периоду од 29. новембра до 3. децембра 2017, боравила сам у Београду, и учествовала сам у научном програму међународне научне конференције из области нумеричке математике и примена, под називом:

APPROXIMATION AND COMPUTATION - THEORY AND APPLICATIONS (ACTA 2017)

(АПРОКСИМАЦИЈЕ И ИЗРАЧУНАВАЊА - ТЕОРИЈА И ПРИМЕНЕ)

The conference is dedicated to the renowned mathematician Walter Gautschi,
one of the founders of modern numerical analysis.

Dedicated to Professor Walter Gautschi on the Occasion of his 90th Anniversary, Belgrade,
November 30 – December 2, 2017

која је била посвећена оснивачу модерне нумеричке анализе, а поводом његовог 90-тог рођендана.

Walter Gautschi, born in Basel, Switzerland, 11 December 1927, is one of the the world leading scientists in the field of numerical analysis, special functions and approximation theory and a longtime professor at Purdue University (now emeritus professor).

Конференција **ACTA 2017** је одржана у организацији Српске академије наука и уметности, Машинског факултета Универзитета у Београду и Математичког института САНУ уз подршку математичких факултета из Београда, Ниша, Крагујевца и Новог Сада, као и Електротехничког факултета из Београда.

У прилогу је дат извод из програма конференције **ACTA 2017**, а комплетан програм са апстрактима се може видети на линку:

<http://easychair.org/smart-program/ACTA2017/index.html>

Међу учесницима конференције било је учесника из 12 земаља. Нучни ниво Конференција је, по научном програму, на највишем научном нивоу области тематике конференције и истог нивоа ко интернационалне и свектске конференције из ове и других научних области. Органиузација конференције је била одлична по оценама учесника, а и мојој, с обизиром на моја сазнања.

Сајт конференције је организован на савременим електронским приступима, са страницом програма на којој су били доступни апстракти предавања и саопштења.

Прва предавања су била посвећена научном опусу професора **Walter Gautschi-ja**, као и научним резултатима достигнутим из сарадње професора **Walter Gautschi-ja** и академика Градимира Миловановића. Ти резултати су заиста импресивни.

Моје учешће се састојало у одржавању 30-томинутног предавања у секцији примена апроксимација.

Апстракт мог рада је публикован под следећим библиографским подацима:

Katica R (Stevanovic) Hedrih, **Approximations in an investigation of the vibro-impact dynamics of rolling bodies in successive central collisions on curvilinear trace, book of Absytacys, ACTA 2017: Approximation and Computation - Theory and Applications**, Dedicated to Professor Walter Gautschi on the Occasion of his 90th Anniversary, November 30 – December 2, 2017, SASA, Belgrade, Serbia, pp: 25-26.



Katica R (Stevanovic) Hedrih, **Approximations in an investigation of the vibro-impact dynamics of rolling bodies in successive central collisions on curvilinear trace, book of Absytacys, ACTA 2017: Approximation and Computation - Theory and Applications**, Dedicated to Professor Walter Gautschi on the Occasion of his 90th Anniversary, November 30 – December 2, 2017, SASA, Belgrade, Serbia, pp: 25-26.

<http://easychair.org/smart-program/ACTA2017/index.html>

Поред одржаног предавања имала сам част и да председавам једном секцијом Конференције из области апроксимација у примени.

Главне теме конференције су биле: Topics

- Polynomials and Orthogonal Systems
- Numerical Integration (Quadrature and Cubature formulae)
- Approximation Theory
- Scientific Computing
- Applied Mathematics

У наставку Извештаја, дат је један број прилога из којих се може видети програмска структура научног програма Конференције.

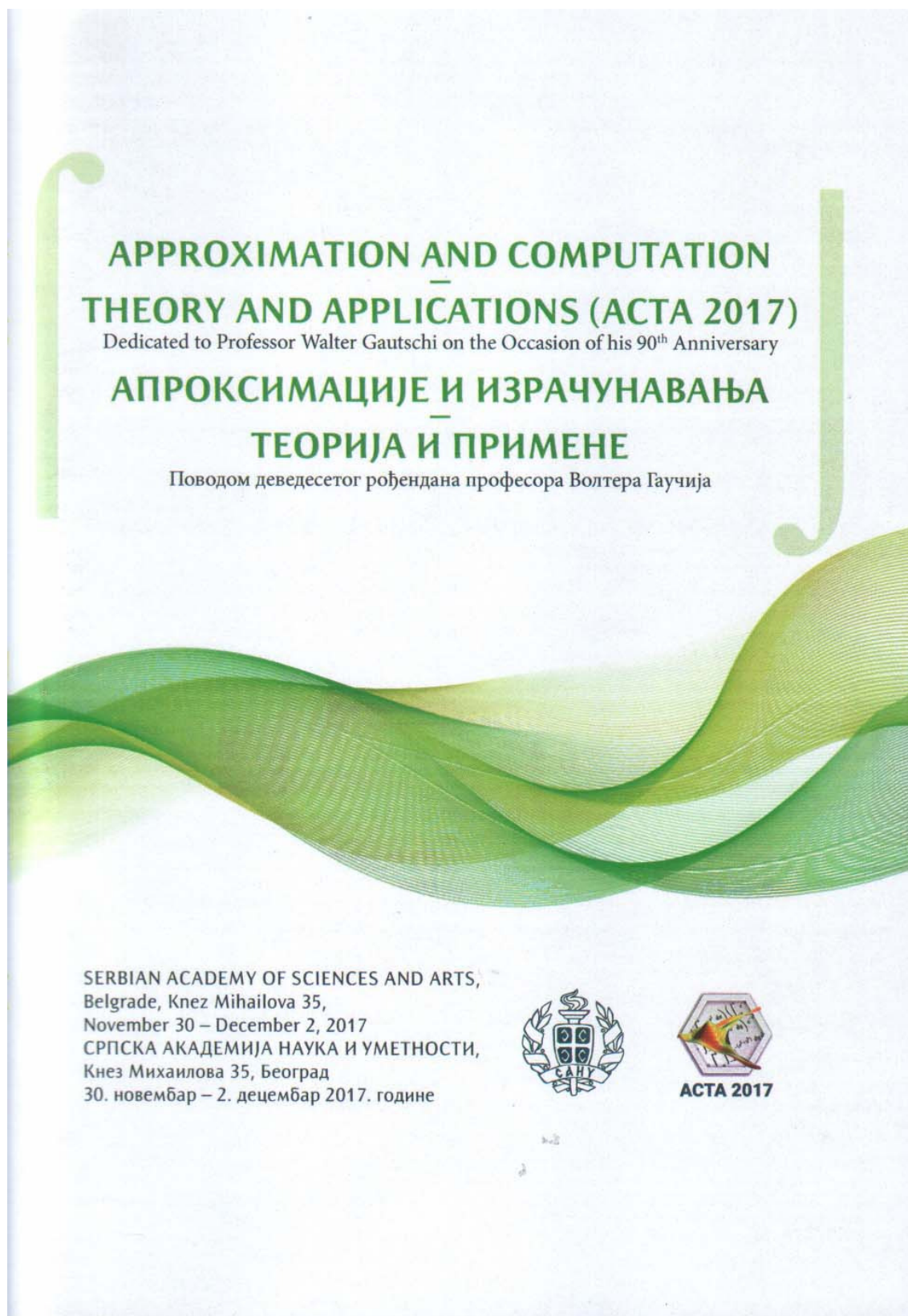
С поштовањем и захвалношћу директору, председнику Научног већа МИ САНУ, као и члановима Научног већа који су гласили за подршку пројектним активностима пројекта ОН174001 у периоду 2011-2017,

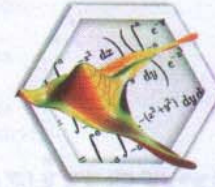
У Београду, 6. 12. 2017.



Проф. др Катица (Стевановић) Хедрих
Руководилац Пројекта ОИ174001
Динамика хибридних система сложених структура
Математички институт САНУ

Прилог 1:





ACTA 2017

APPROXIMATION AND COMPUTATION THEORY AND APPLICATIONS

BOOK OF ABSTRACTS

DEDICATED TO PROFESSOR WALTER GAUTSCHI ON THE OCCASION OF
HIS 90th ANNIVERSARY

BELGRADE, NOVEMBER 30 - DECEMBER 2, 2017



Прилог 2:



ACTA 2017: APPROXIMATION AND COMPUTATION – THEORY AND APPLICATIONS

HOME	POSTER	ORGANIZERS	COMMITTEES	SPEAKERS	SUBMISSION	LOCAL INFORMATION	IMPORTANT
DATES	PROGRAM	INDEXES					

PROGRAM

Days: [Thursday, November 30th](#) [Friday, December 1st](#) [Saturday, December 2nd](#)

Thursday, November 30th

View this program: [with abstracts](#) [session overview](#) [talk overview](#)

09:00-10:00 Session : Registration

LOCATION: Main hall 2nd floor (Serbian Academy of Sciences and Arts)

10:00-10:30 Session : Opening Ceremony

LOCATION: Main hall 2nd floor (Serbian Academy of Sciences and Arts)

10:30-11:30 Session A

CHAIRS: [Gradimir Milovanović](#), [Lothar Reiche](#) and [Miodrag Spalević](#)

LOCATION: Main hall 2nd floor (Serbian Academy of Sciences and Arts)

10:30 [Gradimir Milovanović](#)

WALTER GAUTSCHI - A Master in Approximation and Computation ([abstract](#))

11:00 [Walter Gautschi](#)

Progress by Accident: Some Reflections on my Career ([abstract](#))

11:30-12:00 ☕ Coffee Break

12:00-12:30 Session B
LOCATION: Main hall 2nd floor (Serbian Academy of Sciences and Arts)
12:00 [Miodrag Spalević](#)
Walter Gautschi and Serbian School of Numerical Integration ([abstract](#))

12:30-13:15 Session C
LOCATION: Main hall 2nd floor (Serbian Academy of Sciences and Arts)
12:30 [Walter Van Assche](#)
Multiple Hermite polynomials and simultaneous quadrature ([abstract](#))

13:30-15:00 || Lunch Break

15:00-16:30 Session D
LOCATION: Main hall 2nd floor (Serbian Academy of Sciences and Arts)
15:00 [Martin Gander](#)
Five Decades of Time Parallel Time Integration: Best Current Methods for Parabolic and Hyperbolic Problems ([abstract](#))
15:45 [Francisco Marcellan](#), [Cleonice Bracciali](#) and [Serhan Varma](#)
Orthogonal polynomials, Geronimus transformations and quadrature rules ([abstract](#))

16:30-17:00 ☕ Coffee Break

17:00-18:30 Session E
LOCATION: Main hall 2nd floor (Serbian Academy of Sciences and Arts)
17:00 [Sotirios Notaris](#)
Gauss-Kronrod quadrature: Recent advances and open questions ([abstract](#))
17:45 [Lothar Reichel](#), [Hessah Alqahtani](#) and [Miroslav Pranic](#)
Generalized Anti-Gauss-Type Quadrature Rules ([abstract](#))

15:00-16:30 Session B3
CHAIR: [Katica R Stevanovic Hedrih](#)
LOCATION: 513 (Faculty of Mechanical Engineering)

15:00 [Irem Kucukoglu](#) and [Yilmaz Simsek](#)
Numerical evaluations on power series including the numbers of Lyndon words and interpolation functions for the Apostol-type polynomials ([abstract](#))

15:30 [Svetislav Savovic](#), [Branko Drljaca](#) and [Alexandar Djordjevic](#)
Unconditionally positive finite difference and standard finite difference schemes for advection–diffusion reaction equations ([abstract](#))

16:00 [Svetislav Savovic](#), [Branko Drljaca](#) and [Alexandar Djordjevic](#)
Numerical solution of one-dimensional advection-diffusion equation with constant and periodic boundary conditions ([abstract](#))

16:30-17:00 ☕ Coffee Break

17:00-19:00 Session B4
CHAIR: [Bilge Peker](#)
LOCATION: 513 (Faculty of Mechanical Engineering)

17:00 [Zorica Milovanović Jeknić](#)
Parabolic-Hyperbolic Transmission Problem in Disjoint Domains ([abstract](#))

17:30 [Bratislav Sredojević](#) and [Dejan Bojović](#)
Finite difference method for the 2D heat equation with concentrated capacity ([abstract](#))

18:00 [Katica R Stevanovic Hedrih](#)
Approximations in an investigation of the vibro-impact dynamics of rolling bodies in successive central collisions on curvilinear trace ([abstract](#))

18:30 [Haldun Alpaslan Peker](#)
A Semi-Analytical Approach to Solve a Flow Model ([abstract](#))

Прилог 3:



APPROXIMATION AND COMPUTATION – THEORY AND APPLICATIONS

Dedicated to Professor Walter Gautschi on the Occasion of his 90th
Anniversary



Belgrade, November 30 – December 2, 2017

International conference

- Polynomials and Orthogonal Systems
- Numerical Integration (Quadrature and Cubature formulae)
- Approximation Theory
- Scientific Computing
- Applied Mathematics

Scientific Committee:

Claude Brezinski, France
Aleksandar Ivić, Serbia
Boško Jovanović, Serbia
Francisco Marcellán, Spain
Giuseppe Mastroianni, Italy
Gradimir V. Milovanović, Serbia, Chairman
Giovanni Monegato, Italy
Sotiros E. Notaris, Greece
Stevan Pilipović, Serbia
Lothar Reichel, USA
Miodrag Spalević, Serbia
Endre Süli, UK
Walter Van Assche, Belgium

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Nenad Cakić
Aleksandar Cvetković
Dragan Djordjević
Nataša Krejić
Miodrag Mateljević
Zoran Ognjanović
Vladimir Rakočević
Miodrag Spalević, Chairman
Zorica Stanimirović
Marija Stanić

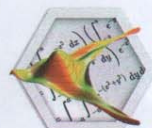


Serbian Academy of Sciences and Arts

Organizers:



Прилог 4:



ACTA 2017

**International Conference: ACTA 2017 - APPROXIMATION
AND COMPUTATION – THEORY AND APPLICATIONS**
(E-mail: acta2017@easychair.org)

Participant: Katica R (Stevanović) Hedrih (Serbia)

Talk: *Approximations in an investigation of the vibro-impact dynamics of rolling bodies in successive central collisions on curvilinear trace*

This is the certificate of your attending on the international conference ACTA 2017: APPROXIMATION AND COMPUTATION – THEORY AND APPLICATIONS that was held in Belgrade, Serbia, on November 30 - December 2, 2017.

Your participation and your contribution helped tremendously to make the conference a memorable event. Your involvement in the ACTA 2017 conference is very much appreciated and we hope to see you again in the near future.

In the name of Organizing committee
of the ACTA 2017 conference

Prof. Dr. Miodrag M. Spalević

Прилог 5:

From: [Journal of Mathematics and System Science \(ISSN 2159-5291, USA\)](http://www.davidpublishing.org)

jmss@davidpublishing.org<jmss@davidpublishing.org>;

Sent: Tuesday, December 05, 2017 3:35 AM

To: katica

Subject: Greetings and call for paper from Journal of Mathematics and System Science (ISSN 2159-5291, USA)

From Knowledge to Wisdom **Journal of Mathematics and System Science, USA**

ISSN 2159-5291 (Print); ISSN 2159-5305 (Online)

Dear Hedrih (Stevanovic) Katica,

This is *Journal of Mathematics and System Science* (ISSN 2159-5291, USA).

We have learned your paper "**Approximations in an investigation of the vibro-impact dynamics of rolling bodies in successive central collisions on curvilinear trace**" at the ACTA 2017, November 30-December 2, 2017, Serbia.

We are very interested in publishing some papers from you. If you have any unpublished papers, you can send them to us at any time. You can send your paper to us by email attachment to:

jmss.mathematics@hotmail.com; jmss@davidpublishing.org;
jmss.mathematics@gmail.com.

Or from our online submission system:

Below is a brief introduction of our journal:

Description

Journal of Mathematics and System Science (ISSN 2159-5291, USA) is collected and indexed by the Library of U.S. Congress, on whose official website (<http://catalog.loc.gov>) an on-line inquiry can be triggered with its publication number ISSN 2159-5291, as key words in "Basic Search" column and also retrieved by the following renowned databases indeed:

- Database of EBSCO, Massachusetts, USA
- Index Copernicus, Poland
- CiteFactor, USA
- Google Scholar
- Turkish Education Index
- J-GATE database, India
- CSA Technology Research Database
- Ulrich's Periodicals Directory
- Electronic Journals Library (EZB)
- Public Affairs Information Service

- Norwegian Social Science Data Services (NSD), Database for Statistics on Higher Education (DBH), Norway
- Universe Digital Library S/B, Proquest
- Summon Serials Solutions
- SHERPA/RoME
- Polish Scholarly Bibliography
- NewJour, USA
- Berlin Social Science Center
- Chinese Electronic Periodicals Service, Airiti Inc, Taiwan
- Online Computer Library Center, Inc., USA
- Chinese Scientific Journals Database, VIP Corporation, Chongqing, P. R. China

Current columns include:

- **Mathematics**

- ✧ Pure Mathematics: Analysis, Abstract algebra, Geometry, Number theory, etc;
- ✧ Applied Mathematics: Scientific computing, Computer Science, Operations research and management science, Statistics, Actuarial science, Other disciplines;
- ✧ Computational Mathematics and Scientific/Engineering Computing: Computational biology; Computational fluid dynamics; Computational geometry; Finite element and boundary element methods; Inverse problems and solutions in mathematical physics; Linear and nonlinear optimization, etc.

- **System Science:** system optimization and management, complex and control systems, modeling and system biology, information and computer mathematics, etc.

Information for authors

1. The manuscript should be original, and has not been published previously. Do not submit the material that is currently being considered by another journal.
2. Please write your text in English, the authors who require information about language editing and copyediting services pre- and post-submission.
3. The manuscript should be in MS Word format, TeX format or PDF format.
4. Authors of the articles accepted are required to sign the Transfer of Copyright Agreement form.
5. Authors will receive the e-journal and 1 copy of the issue within their papers after publication.

Peer review policy

Journal of Mathematics and System Science (ISSN 2159-5291, USA) is peer review journals. All research articles in this journal undergo rigorous peer review, based on initial editor screening and anonymised refereeing by at least two anonymous referees.

Editorial Procedures

All papers considered appropriate for this journal are reviewed. The process of review usually takes 2-4 weeks. Papers are accepted for publication subject to no substantive, stylistic change. The Editor reserves the right to make any necessary changes in the papers, or request the author to do so, or reject the paper submitted.

Should you have any questions or concerns, feel free to contact us.

Best regards,
Sean Cooper
Editor Office

Journal of Mathematics and System Science (ISSN 2159-5291, USA)

Address of Headquarter: 616 Corporate Way, Suite 2-4876, Valley Cottage, NY 10989, USA.

Прилог 6:

From: [Mai Osama](#)

Sent: Sunday, December 10, 2017 4:22 AM

To: khedrih@sbb.rs

Subject: Fwd: Invitation to Guest Edit a Special Issue for Shock and Vibration

Dear Dr. Hedrih,

Earlier this month I sent you an invitation to lead a Special Issue in Shock and Vibration. I just wanted to follow up and check if this is something you would be interested in. Please let me know and I will provide you with more detailed information.

I look forward to hearing from you.

Best regards,

Mai Osama

----- Original Message -----

Subject: Invitation to Guest Edit a Special Issue for Shock and Vibration

Date: Sun, 3 December 2017

From: "Mai Osama" <mai.osama@hindawi.com>

To: khedrih@sbb.rs

Dear Dr. Hedrih,

On behalf of **Shock and Vibration** <https://www.hindawi.com/journals/sv/>, I would like to invite you to lead a **Special Issue** focused on an emerging subject from within your research expertise. Special Issues typically concentrate on a topic that is currently of increasing prominence, or one where recent advances render it of extra significance.

As the **Lead Guest Editor**, your main responsibilities would be to assemble a team of Guest Editors, prepare a Call for Papers, and coordinate the peer review of submitted manuscripts. Our editorial office will of course be on hand to provide you with the necessary administrative and editorial assistance. The entire process is outlined here in more detail <https://about.hindawi.com/special-issues/si-process/>.

Shock and Vibration is an Open Access journal published by Hindawi, meaning that your Special Issue will be made freely available online to all interested readers, leading to the maximum possible dissemination and recognition within the scientific community.

The most recent Impact Factor for Shock and Vibration is 1.281 according to the 2016 Journal Citation Reports released by Clarivate Analytics in 2017.

Please let me know if this is something you would be interested in, and I will provide you with more detailed information.

I look forward to hearing from you.

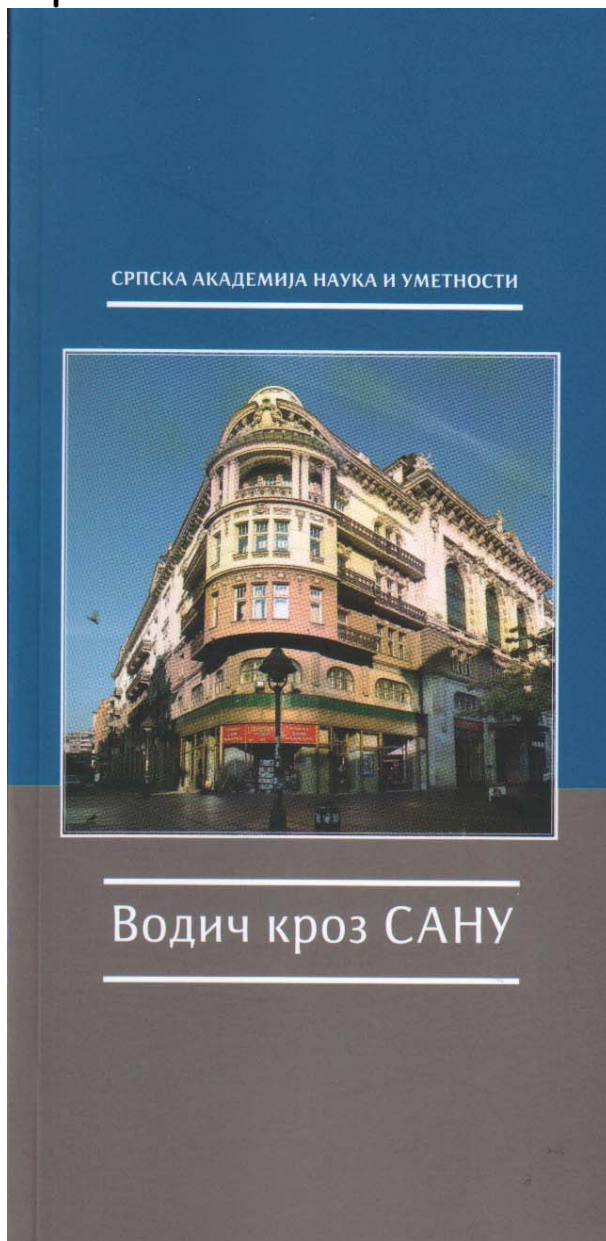
Best regards,

Mai Osama

Mai Osama
Special Issue Developer
Hindawi
<https://www.hindawi.com/>

You have received this email from Shock and Vibration published by Hindawi Limited (Adam House, Third Floor, 1 Fitzroy Square, London, W1T 5HF, UK). Hindawi respects your right to privacy. To see the types of information we may hold or collect about you and how we may use that information, please see our [Privacy Policy](#). If you would prefer not to receive any further messages from Shock and Vibration or Hindawi, please visit our [unsubscribe page](#).

Прилог 7:



Прилог 8:





