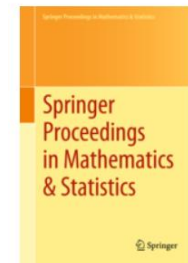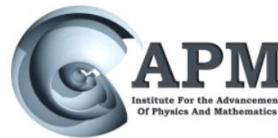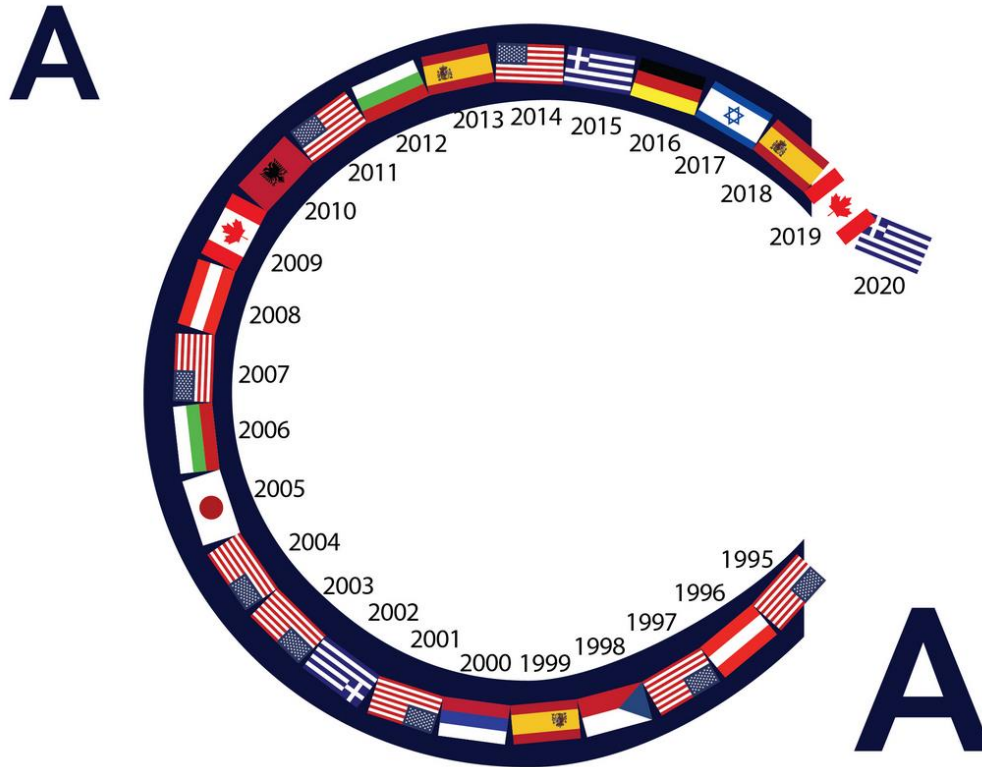# ACA 2021 Report

Dimitris E. Simos

June 23-27, 2021 (Virtual, Online, AM EDT | UTC+2)

ACA History

- 2020: Cancelled due to Covid-19

- 2021: Virtual, Online

ACA2021 in a nutshell

- **Thirteen sessions** on several topics of computer algebra
  - Many thanks to the session organizers for organizing them remotely
- Participants from several countries around the world
- # participants per session (est.): 20 – 30 online, some 40
- **# of talks**: 166

ACA 2021 Sessions

S1	Algebraic Geometry from an Algorithmic Point of View (Cristina Bertone and Francesca Cioffi)
S2	Hybrid Symbolic-Numeric Computation (Robert M. Corless, Mark Giesbrecht, George Labahn and Leili Rafiee Sevyeri)
S3	Computational Differential and Difference Algebra and its Applications (Roberto La Scala, Alexander Levin and Daniel Robertz)
S4	Effective Ideal Theory in Commutative and non-Commutative Rings and its Applications (Michela Ceria, André Leroy and Teo Mora)
S5	Computer Algebra Modeling in Science and Engineering (Alexander Prokopenya and Haiduke Sarafian)
S7	Computer Algebra in Coding Theory and Cryptography (CACT) (Edgar Martinez-Moro and Irene Marquez-Corbella)
S8	Computer Algebra for Geometry and Combinatorics (Anton Betten and Fatma Karaoglu)
S10	Polytopes - Algebra - Computation (PAC) (Gizem Sungu and Zafeirakis Zafeirakopoulos)
S11	Computer Algebra in Education (Michel Beaudin, Michael Wester, Alkis Akritas, Noah Dana-Picard, José Luis Galán García and Elena Varbanova)
S12	Algebraic and Algorithmic Aspects of Differential and Integral Operators Session (AADIOS) (Moulay Barkatou, Thomas Cluzeau, Clemens Raab and Georg Regensburger)
S13	Algorithmic Combinatorics (Hao Du, Christoph Koutschan and Ali Uncu)
S14	Algorithms for Polynomial System Solving and their Applications (Ryoya Fukasaku, Yosuke Sato and Tateaki Sasaki)
S15	Symbolic and Exact Linear Algebra over Rings and Fields (Mark Giesbrecht, Armin Jamshidpey and Eric Schost)
X	Invited Session - Business Meeting - ACA ERA Award (Dimitris Simos, Ilias Kotsireas and Michael Wester)

ACA2021 Conference Organization

Conference Organization

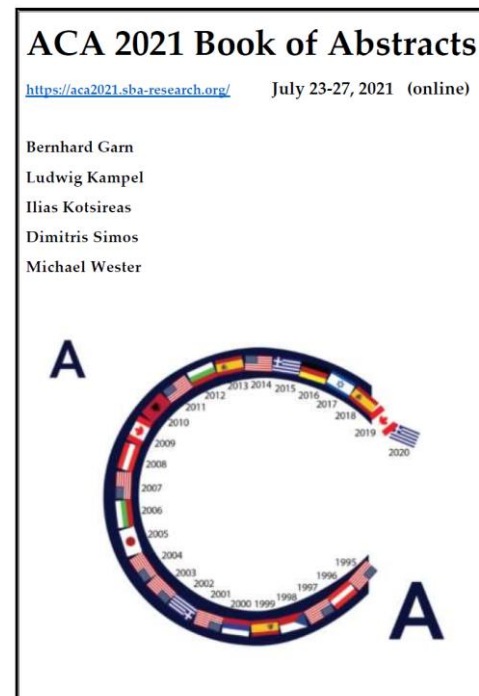|		
General Chair	**Ilias Kotsireas** (ACA WG co-chair)	Waterloo, Canada
General Chair	**Michael Wester** (ACA series co-founder and ACA WG co-chair)	New Mexico, USA
Program Committee Chair	**Dimitris Simos**	Vienna, Austria
Scientific Committee	ACA Working Group	**Homepage**
Advisory Committee	**Eugenio Roanes-Lozano** (past ACA WG co-chair)	Madrid, Spain
Advisory Committee	**Stanly Steinberg** (ACA series co-founder)	New Mexico, USA

ACA 2021 Publications

- ACA 2021 **Book of Abstracts**, 257 pages.

- https://aca2021.sba-research.org/data/ACA_2021_Book_of_Abstracts.pdf

- **Editors**: Bernhard Garn, Ludwig Kampel, Ilias Kotsireas, Dimitris Simos and Michael Wester
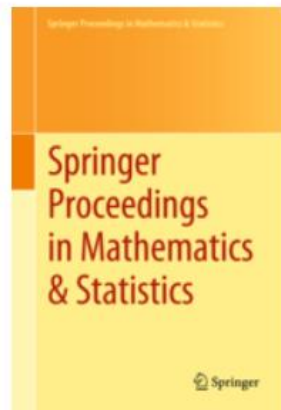
ACA 2021 Post-Proceedings

- All ACA2021 participants are invited to also submit an **extended version** of their abstract to one of the three following options:

  1. **Springer Proceedings in Mathematics & Statistics**

  2. **Special Issue: Mathematics in Computer Science published by Springer**

  3. **Special Issue: Applicable Algebra in Engineering, Communication and Computing published by Springer**

- The ACA2021 website will be updated soon with detailed information regarding the post-proceedings

ACA 2021 Post-Proceedings #1: PROMS

- **Springer Proceedings in Mathematics & Statistics (PROMS)**

- **Guest Editors: Ilias S. Kotsireas, Dimitris E. Simos, Michael J. Wester and Zafeirakis Zafeirakopoulos (also Corresponding Editor)**

- **Contract is signed; submission deadline: October 31st, 2021**

- Submission via easychair: https://easychair.org/conferences/?conf=aca2021

- Paper length: Up to 20 pages (excluding bibliography and appendix)

ACA 2021 Post-Proceedings #2: MCS

- **Mathematics in Computer Science (MCS) Special Issue**

- **Guest Editors: TBD**

- **Submission Deadline: October 31st , 2021**

- Submission information will become available on ACA2021 website

ACA 2021 Post-Proceedings #3: AAECC

- **Applicable Algebra in Engineering, Communication and Computing (AAECC) Special Issue**

- **Guest Editors: Ilias Kotsireas, Teo Mora, Dimitris Simos**

- **Submission Deadline: October 31st , 2021**

- **Author Notification: March 31st, 2022**

- Submission per mail at aaecc@dima.unige.it (latex template available)
  - Submission for SI_AE

Many thanks to our Virtual Organization!

- Zoom Infrastructure is sponsored by the Strategic Innovation & Communication team at SBA Research

  – Largest research center in Austria focusing on IT Security

- ACA2021 volunteers are junior & senior researchers of MATRIS group https://matris.sba-research.org/

  – Research on applied mathematics and IT security

  – Use methods from combinatorial, optimization, symbolic computation and algorithmic engineering to solve real-world problems

  – Always welcome collaboration on such topics: matris@sba-research.org