Redesign of a Conference from In-Person to Online.
Case Study: ICCCC

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Abstract. „Intelligent Methods for Computing, Communications and Control"
volume, published by Springer in „Advances in Intelligent Systems and Computing"
Series, is in fact the Proceedings of the 8th International Conference on Computers
Communications and Control (ICCCC) 2020. The ICCCC has been founded in 2006
by Ioan Dzitac, Florin Gheorghe Filip and Misu-Jan Manolescu, and was organized
every even year by Agora University of Oradea, under the aegis of the Information
Science and Technology Section of Romanian Academy. The first seven editions
were organized face to face (in-person, traditional). Due to the COVID-19 pandemic,
the 8th edition, ICCCC2020, which was designed initial to be in-person, we had
redesign it as an online event (remotely). In this article we will present our study and
conclusions regarding a parallel between the two types of conferences, traditional vs.
online, each with advantages and disadvantages.

Keywords: Conference organization, ICCCC, in-person, COVID-19, online, remote,
accessibility, costs, comfort, socialization, Zoom Pro.

1 Introduction

The 8th International Conference on Computers Communications and Control
(ICCCC) 2020, planned to be held in-person at Hotel President from Băile Felix,
Oradea, in the period May 11-15, 2020, was redesigned on March 19, due to the
COVID-19 pandemic, for Online Host (remotely): Agora University of Oradea,
Romania, in the same period.

Scope and topics of ICCCC2020. The goal of this conference is to bring together
international researchers, scientists from academia and industry to present and discuss
in a friendly environment their latest research findings on a broad array of topics in
computer networking and control. The Program Committee is soliciting paper
describing original, previously unpublished, completed research, not currently under
review by another conference or journal, addressing state-of-the-art research and
development in all areas related to computer networking and control. Topics of
ICCCC2020 were:
- Theory for Computing and Communications,
- Integrated Solutions in Computer-based Control,
- Computational Intelligence and Soft Computing,
- Decision Making and Support Systems.

A good organization of a conference is not a simple thing, but it involves a quality managerial and organizational activity, which involves planning, economic evaluation and a good knowledge of social psychology.

When organizing a traditional international conference we must pay an interactive attention to the following:
    1) Choosing an attractive, accessible and safe location,
    2) Planning a suitable period for the conference,
    3) Evaluation of the costs and identification of funding sources,
    4) Scientific attractiveness of the conference (keynote speakers, publications).
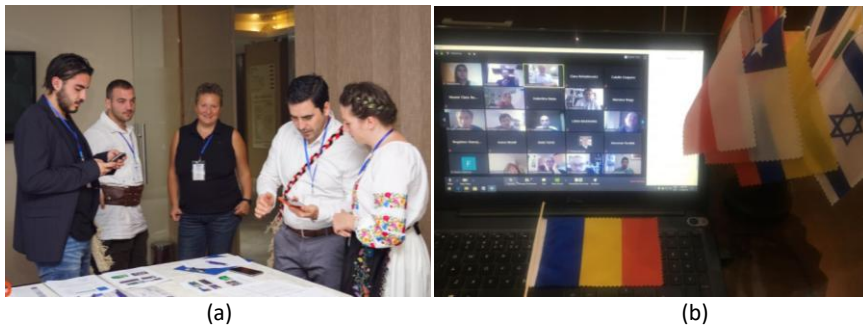

(a)   (b)

Fig. 1. Registration: (a) ICCCC2018 (in-person) vs. (b) ICCCC2020 (online)

(a)   (b)

Fig. 2. Official opening: (a) ICCCC2018 (in-person) vs. (b) ICCCC2020 (online)

2 Choosing an attractive, accessible, and safe location

For attractiveness, many traditional conferences choose their location in exotic areas. Many of these areas, however, present risks to personal health or safety. Others are not accessible by plane, not having an airport nearby. All previous editions of ICCCC took place at Băile Felix, an attractive tourist resort, located 10 km from Oradea, a city where you can reach by plane, train or car transport. From Baile Felix we organized trips in the mountains, visiting the Bear Cave, the Glacier Cave, Turda Salt Mine, etc.

In online organization the location is not important. Important is the good quality of the technical resources [2].

For ICCCC2020 online we are used the resources from home of the General Chair (Ioan Dzitac, Oradea, Romania): a good connection to the Internet (via optical fiber link from RDS-RCS company), good quality of the host devices (Lenovo PC, Microsoft video - audio camera), video conference room online (Zoom Pro). All worked perfectly during the five days of the online conference.
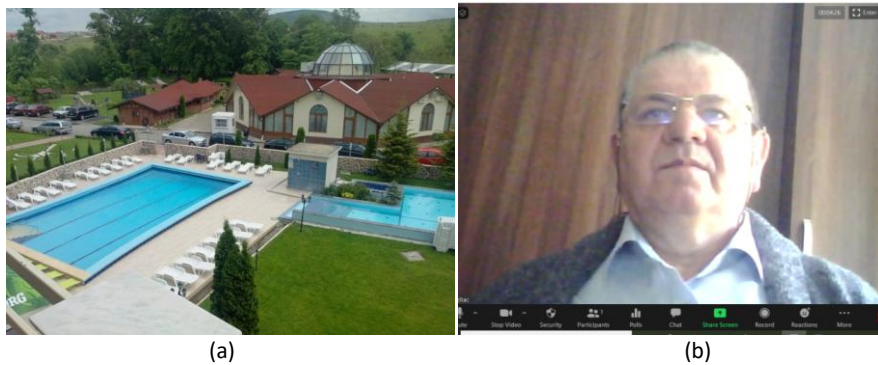

| (a) | (b) |

Fig. 3. Location: (a) ICCCC2018 (Baile Felix) vs. (b) ICCCC2020 (Zoom Pro at Home)

To make up for the social fun of the in-person model, we introduced, in each of the five days, a two-hour program of regular paper presentations, a one-hour break, and a two-hour keynote lecture. During the break, we broadcast entertainment: videos about Romania, Oradea, collages with memories from previous editions of ICCCC, excursions filmed through magnificent areas of Romania. We also transmitted local folk customs from Bihor County (costumes, songs, dances), as well as songs from the countries of the participants of that day.

The advantage of this online conference was that people who were not planned in the classic version could also participate: all co-authors, former participants or some people with physical disabilities.

For example, in the end of official opening of ICCCC2020 we had receives several messages, online or video registered, from *former invited speakers at ICCCC*, such as:

1. Fuad ALESKEROV, National Research University Higher School of Economics, Moscow, Russia (ICCCC2016)
2. Barnabas BEDE, DigiPen University, USA (ICCCC2018)
3. Pierre BORNE, Ecole Centrale de Lille , France (ICCCC2008)
4. Amlan CHAKRABATI, University of Calcutta, India (ICCCC2018)
5. Kaoru HIROTA, Beijing Institute of Technology, China/ Tokyo Institute of Technology, Japan (ICCCC2006)
6. Arturas KAKLAUSKAS, Gediminas Vilnius Technical University, Lithuania (ICCCC2018)

7. Gang KOU, Southwestern University of Finance and Economics, Chengdu, China (ICCCC2012, ICCCC2016)
8. George METAKIDES, University of Patras, Greece & Digital Enlightenment, Bruxelles (ICCCC2008)
9. Gheorghe PĂUN, Romanian Academy, Romania (ICCCC2008, ICCCC2018)
10. Yong SHI, University of Chinese Academy of Sciences, China/ University of Nebraska at Omaha, USA (ICCCC2012, ICCCC2014)
11. Athanasios STYLIADIS, International Hellenic University, Greece (ICCCC2006)
12. Mincong TANG, Beijing Jiatong University, China (ICCCC2014)
13. Horia-Nicolai TEODORESCU, Romanian Academy, Romania (ICCCC2008)
14. Dan TUFIȘ, Romanian Academy, Romania (ICCCC2006, ICCCC2008)
15. Zenonas TURSKIS, Gediminas Vilnius Technical University, Lithuania (ICCCC2016)

Another example of online facility is the case of Marius Șucan, a brilliant digital artist and computer programmer, with severe physical disabilities (without fingers and with Epidermolysis Bullosa), presented a series of his works (paintings and software products). Marius had the chance to attend a conference and presents a lecture for the first time in his life, which he could not have done in the case of an in-person conference.
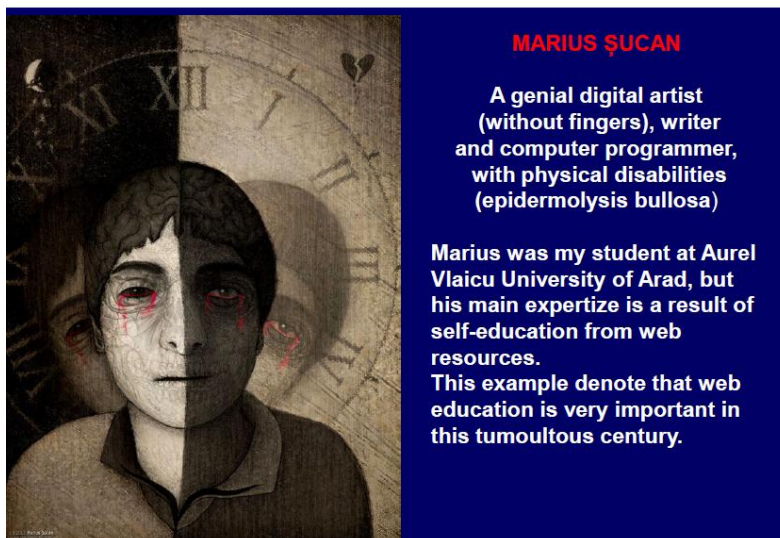

Fig. 4. Presentation by Ioan Dzitac of a digital artist, Marius Șucan (self-portrait)
http://robodesign.ro/

3 Planning a suitable period for the conference

In period planning, similar as in traditional in-person variant, in online variant we need to consider to be out of religious holidays, taking into account all religions, to be out of exam sessions, not to be in a period when other similarly attractive conferences take place, not to be in the middle of the summer season, to be in a season with a pleasant climate etc.

(a)   (b)

Fig. 5. Period: (a) ICCCC2018 (May 08-12) vs. (b) ICCCC2020 (May 11-15)
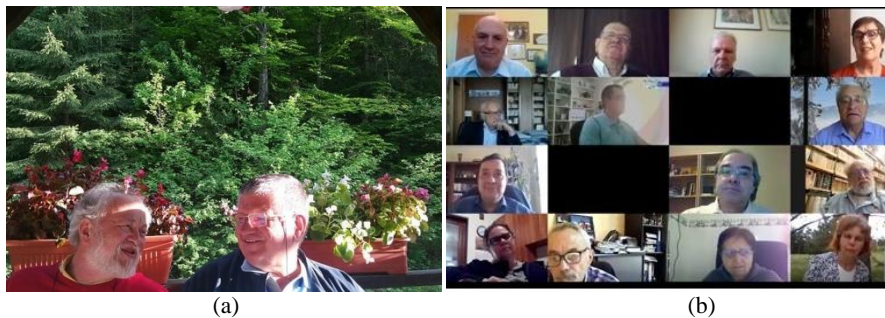

(a)   (b)

Fig. 6. Socialization: (a) ICCCC2018 (In-Person) vs. (b) ICCCC2020 (Online)

Fig. 7. Socialization in excursion at ICCCC2018

4 Evaluation of the costs and identification of funding sources

Table 1. Conference Cost: (a) ICCCC2018 (in-person) vs. (b) ICCCC2020 (online)

Services	(a) ICCCC2018	(b) ICCCC2020
Including registration fee, accommodation at 4 stars hotel for 4 nights and daily meals	800 EUR 700 EUR –for students	-
Including registration fee and daily meals	600 EUR 500 EUR – for students	-
Registration fee	-	400 EUR 300 EUR for students
Transport cost	Depend of distance to conference location (100 – 1,500 EUR)	-
Total cost	500 - 2,300 EUR	300 - 400 EUR

ICCCC in-person not was very expensive but it is clear that for the participants in traditional version is much expensive than the online one. If a participant do not have a funding source then her/his participation in-person at conference is very dificult.

For organizers is also much expensive in traditional vs. online version, because must cover the travel, accomodation, and daily meals costs for invited speakers. In online version no any costs in this matter.

Fig. 8.The invited speakers at ICCCC2016

5 Scientific attractiveness of the conference

5.1 Scientific reputation of the organizers, program committee members, and of invited speakers

Staff of ICCCC2020:
1. General Chair: Ioan DZITAC, Aurel Vlaicu University of Arad & Agora University of Oradea, Romania
2. IPC Chair: Florin Gheorghe FILIP, Romanian Academy, Romania
3. Conference Chair: Simona DZITAC, University of Oradea, Romania
4. Co-Chair: Misu-Jan MANOLESCU, Agora University of Oradea, Romania
5. Proceedings Chair: Horea OROS, University of Oradea, Romania
6. Online Chair: Domnica DZITAC, New York University Adu Dhabi, UAE

IPC: International Program Committee (ICCCC2020):
1. Răzvan ANDONIE, Central Washington University, USA
2. Valentina BALAS, Aurel Vlaicu University of Arad, Romania
3. Barnabas BEDE, DigiPen University, USA
4. Valeriu BEIU, Aurel Vlaicu University of Arad, Romania
5. Pierre BORNE, Ecole Centrale de Lille, France
6. Dominic BUCERZAN, Aurel Vlaicu University of Arad, Romania
7. Felisa CORDOVA; Universiy of Finis Terrae, Chile
8. Gabriela CRISTESCU, Aurel Vlaicu University of Arad, Romania
9. Antonio DI NOLA, University of Salerno, Italy
10. Yezid DONOSO, Universidad de los Andes, Colombia
11. Gintautas DZEMYDA, University of Vilnius , Lithuania
12. Ömer EĞECİOĞLU, University of Santa Barbara, USA
13. Florin Gheorghe FILIP, Romanian Academy, Romania
14. Enrique HERERRA-VIEDMA, University of Granada, Spain
15. Kaoru HIROTA, Tokyo Institute of Technology, Japan
16. Arturas KAKLAUSKAS, Vilnius Gediminas Technical University, Lithuania
17. Gang KOU, Southwestern University of Finance and Economics, Chengdu, China
18. Ioana MOISIL; Lucian Blaga University of Sibiu, Romania
19. Radu NICOLESCU, The University of Auckland, New Zealand
20. Sorin NADABAN, Aurel Vlaicu University of Arad, Romania
21. Mariana NAGY, Aurel Vlaicu University of Arad, Romania
22. Shimon Y. NOF, Purdue University, USA
23. Stephan OLARIU, Old Dominion University, USA
24. Gheorghe PĂUN, Romanian Academy, IMAR, Romania
25. Yi PENG, University of Electronic Science and Technology of China, China
26. Mario de J. PEREZ-JIMENEZ, University of Seville, Spain
27. Lorena POPA, Aurel Vlaicu University of Arad, Romania
28. Radu-Emil PRECUP, Politehnica University of Timisoara, Romania

29. Imre J. RUDAS, Óbuda University, Hungary (Member of IEEE)
30. Yong SHI, University of Chinese Academy of Sciencies
31. Bogdana STANOJEVIC, Mathematical Institute of the Serbian ASA, Serbia
32. Milan STANOJEVIC, University of Belgrad, Serbia
33. Codruţa STOICA, Aurel Vlaicu University of Arad, Romania
34. Athanasios D. STYLIADIS, Kavala Institute of Technology, Greece
35. Ioan Alexandru ŞUCAN, Google [x] , USA
36. Gheorghe TECUCI, George Mason University, USA
37. Horia-Nicolai TEODORESCU, Technical Univ. Gh. Asachi Iasi, Romania
38. Dan TUFIŞ, Romanian Academy – Institute of Artificial Intelligence "Mihai Draganescu", Romania
39. Zenonas TURSKIS,Vilnius Gediminas Technical University, Lithuania

OC: Organizing Committee ICCCC2020:
1. Dan BENTA, Agora University of Oradea, Romania
2. Gabriela BOLOGA, Agora University of Oradea, Romania
3. Casian BUTACI, Agora University of Oradea, Romania
4. Domnica DZITAC, New York University Abu Dhabi, UAE
5. Viorina JUDEU, Agora University of Oradea, Romania
6. Adriana MANOLESCU, Agora University of Oradea, Romania
7. Ioana MOISIL, "Lucian Blaga" University of Sibiu, Romania
8. Astrid ODDERSHEDE, University of Santiago de Chile, Chile
9. Horea OROS, University of Oradea, Romania
10. Marius SINCA, Agora University of Oradea, Romania
11. Ramona URZICEANU, Agora University of Oradea, Romania

Reviewers of the manuscripts (ICCCC2020):
1. Adriana ALEXANDRU, National Inst. for R & D in Informatics, Romania
2. Răzvan ANDONIE, Central Washington University, USA
3. Valeriu BEIU, Aurel Vlaicu University Arad, Romania
4. Dominic BUCERZAN, Aurel Vlaicu University Arad, Romania
5. Cristian CIUREA, Bucharest University of Economic Studies, Romania
6. Charles J. COLBOURN, University of Toronto, Canada
7. Gabriela CRISTESCU, Aurel Vlaicu University Arad, Romania
8. Leonard DAUS, Technical University of Civil Engineering Bucharest, Romania
9. Yezid DONOSO, Universidad de los Andes, Colombia
10. Florin DRAGOMIR, Valahia University of Târgoviște, Romania
11. Horaţiu DRAGOMIRESCU, Bucharest University of Economic Studies, Romania
12. Vlad DRĂGOI, Aurel Vlaicu University Arad, Romania
13. Florin Gheorghe FILIP, Romanian Academy, Romania
14. Arpad GELLERT, Lucian Blaga University of Sibiu¸ Romania

15. Angela IONIȚĂ, RACAI, Romania
16. Gang KOU, Southwestern University of Finance and Economics, China
17. Gabriel NEAGU, National Inst. for R & D in Informatics, Romania
18. Marilena IANCULESCU, National Inst. for R & D in Informatics, Romania
19. Ioana MOISIL, Lucian Blaga University of Sibiu¸ Romania
20. Nageswara Rao MOPARTHI, KL University, India
21. Mariana NAGY, Aurel Vlaicu University Arad, Romania
22. Sorin NĂDĂBAN, Aurel Vlaicu University Arad, Romania
23. Radu-Emil PRECUP, Politehnica University of Timisoara, Romania
24. Constanta Zoie RADULESCU, National Inst. for R & D in Informatics, Romania
25. Ioan Ștefan SACALA, Politehnica University of Bucharest, Romania
26. Bogdana STANOJEVIC, Math. Inst. of the Serbian Academy of Sci. and Arts
27. Csaba SZANTO, Babeș-Bolyai University of Cluj-Napoca, Romania
28. Ioan ȘUȘNEA, University of Galați, Romania
29. Bogdan ȚIGĂNOAIA, Politehnica University of Bucharest, Romania
30. Doina ZMARANDA, University of Oradea, Romania

In 2018 were the same organizers like in 2020. At ICCCC 2018 was seven keynote speakers from six countries (Colombia, India, Israel, Lithuania, Romania, and USA), and at ICCCC2020 was nine keynote speakers from eight countries (Chile, Colombia, Israel, Lithuania, Poland, Romania, Spain, and USA).
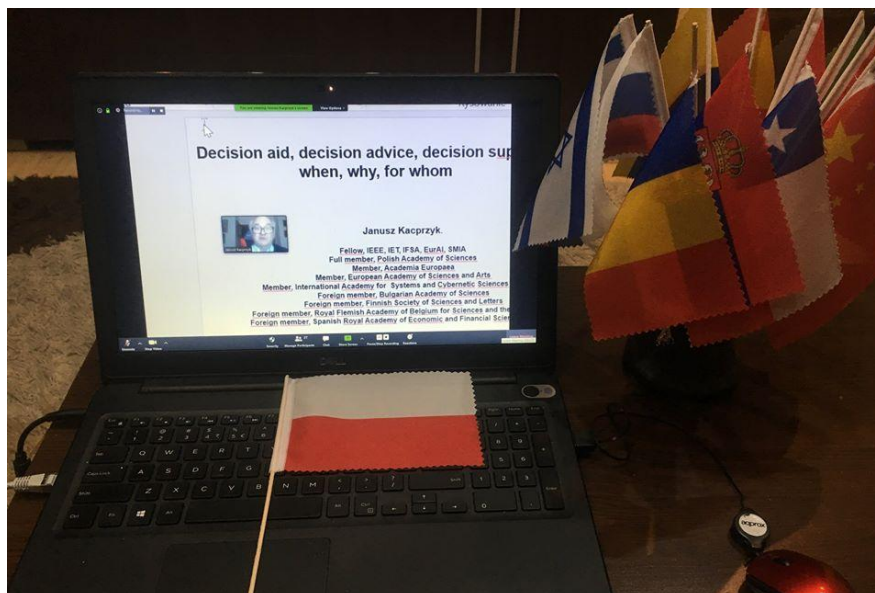

Fig.9. ICCCC2020 Online Capture: Keynote Lecture of Acad. Janusz Kacprzyk

Fig. 10. ICCCC2020 Poster: Chairs and Keynote Speakers
http://univagora.ro/en/icccc2020/program/

5.2. Papers publication

Proceedings:
- IEEE Proceedings for ICCCC2018 papers [1],
- Springer Proceedings for ICCCC2020 papers [3].

Journal Journal od Computers Communications & Control (IJCCC) for several selected papers publication (extended variants):

Fig. 11. IJCCC was an atractive indexed journal for ICCCC2018 and ICCCC2020

Best Paper Award (ICCCC2020 Online). Sponsor for Best Paper Award was the International Journal of Computers Communications & Control (IJCCC), http://univagora.ro/jour/index.php/ijccc/.

The Editorial Team of IJCCC and chairpersons of conference sessions grant the Best Paper Award for following papers included in this volume:

Experimenting with Beta Distributions for Approximating Hammocks' Reliability, *by Simon Cowell, Sorin Hoara and Valeriu Beiu*

Automatons Immersed in Ocean Currents for Transformation of Biomass Into Fuel, *by Lucio Cañete Arratia, Felisa Córdova and Andrés Pérez de Arce*

Empirical versus Analytical Solutions to Full Fuzzy Linear Programming, *by Bogdana Stanojević and Milan Stanojević*

6 Conclusions

International participation at ICCCC2020 online, via Zoom Pro, was very good. Our attendees were from 20 countries and from over 50 universities and other academic institutions or industrial companies. All were very impressed, excited and enthusiastic. Please see bellow a summary.

Countries (20): Chile, China, Colombia, Greece, Iran, Israel, Japan, Jordan, France, Lithuania, Mexico, Poland, Portugal, Romania, Russia, Serbia, Spain, Switzerland, UAE, USA.

Academies (4): Lithuanian Academy of Sciences, Polish Academy of Sciences, Romanian Academy, Serbian Academy of Sciences and Arts.

Universities of Romania (10): Agora University of Oradea, Aurel Vlaicu University of Arad, Babes-Bolyai University of Cluj-Napoca, Bucharest University of Economic Studies, Lucian Blaga University of Sibiu, Politehnica University Timisoara, Transilvania University of Brasov, University Politehnica of Bucharest, University of Oradea, Technical University of Civil Engineering Bucharest.

Universities of Abroad (19): Central Washington University, Gediminas Technical Vilnius University, National Research University Higher School of Economics, Pontificia Universidad Catolica de Valparaiso, Princess Sumaya University for Technology, Universities Technion of Haifa, University of Belgrade, University of the Basque Country, Universidad del País Vasco, University of Cádiz, University of Zacatecas, University of Granada, Universidad Antofagasta Chile, Universidad Antofagasta, Université Jean Monnet, Universidad Finis Terrae, Universidad de Santiago de Chile , Universidad Mayor, Vilnius University.

R & D Institutes (3): Institute of Mathematical Statistics and Applied Mathematics Gheorghe Mihoc - Caius Iacob, Mathematical Institute of the Serbian Academy of Sciences and Arts, National Institute for Research and Development in Informatics.

Companies & NGO (4): Association Cluster of Scientific Research, Innovation and European Studies from Oradea, Cercetare Dezvoltare Agora (Romania), LITIS (France), Trade Plus S.A. (Romania).

Appreciations from attendees of the virtual ICCCC2020. During the five days of the conference join online all presenters of regular papers, all keynote speakers, several co-authors, many former ICCCC special guests, and as well lot of other occasional guests or collaborators. Some feedback messages are presented bellow.

„I would like to thank you and all your colleagues for organizing and running this beautiful conference." (Ahmat Hiasat, participant with an reasearch article at ICCCC2020, first time at ICCCC, Jordan)

"I wish to congratulate you for such a great conference. I participated in recent weeks at a couple of online conferences and your had the only one which was really running, in the sense of full session, and numerous speakers, and also quality. At other conferences, there were all kind of problems, lack of connections, absence of confirmed speakers, etc. etc. Thanks so much for your hospitality which was remarkable in spite of a lack of physical contact. I strongly believe that we will be able to meet in the future when the situation will change." (Janusz Kacprzyk, invited speaker at ICCCC2020, first time at ICCCC, Poland)

„The conference was particularly successful in all respects. You have induced the spirit of previous editions in this online edition as well. Thank you for giving us the opportunity to participate. Thank you very much for the diploma and for the nomination. All participants were present with the soul not only with the slides in all sections. The presentations were interesting and instructive. And the emotional surprises. Congratulations to you, Simona and Domnica for the conception and organization. I have not participated in any online conference, but this conference did not lack anything and we do not see what could have been better!" (Bogdana & Milan Stanojevic, participants at several previous editions of ICCCC and at ICCCCC2020, Serbia)

„Congratulations dear Ioan, Simona, Domnica, Agora University team, congratulations and thanks for these great moments. The ICCCC2020 online conference is truly successful and I am very happy to be able to take part in it. I am certain that the days to come will offer us great presentations. You are great!! Congratulations from the bottom of my heart. You are fantastic! And many thanks to all the organizers: The Golden Dzitac Trio : Ioan Dzitac, Simona Dzitac and Domnica Dzitac, Rector Misu-Jan Manolescu and Adriana Manolescu and the Agora University, Florin Gheorghe Filip and the Romanian Academy, the CCSISEO Association and their talented friends, and the Aurel Vlaicu University of Arad. And all my thanks to the participants for the interesting presentations. It was an enriching experience and it gave us hope in these hard times. I must confess that there were moments when the discussions were so interesting and dynamic that I almost forget we were online." (Ioana Moisil, former invited speaker at ICCCC2016, Romania)

„Excellent Organization, truly wonderful experience!"(Amlan Chakrabarti, former invited speaker at ICCCC2018, India)

"I enjoyed the virtual conference very much; interesting talks, nice participants and wonderful social program during breaks. I wanted to thank you very much for your excellent management of what has turned out to be a successful and highly stimulating conference. I am sure that everyone must have told you this. Congratulations!" (Valentina Balas, former invited speaker at ICCCC2008, Romania)

"Dear friend, you made the best decision and did everything possible in such a situation." (Razvan Andonie, former invited speaker at ICCCC2010, keynote speaker at ICCCC2020, USA)

Table 2. Online vs. In-Person in ICCCC Organization

Type/Indicator	Online	In-Person	Remarks
Accessibility	High	Low-Medium	In online version can participate all co-authors and other people, people with physically disability. In-Person participation depends of geographical distance.
Cost	Low	Medium-High	For remote participation is not necessary transport, accommodation, meals etc.
Comfort	Medium	Low	In online we can attend the conference from home but the time zone can be a problem. In traditional variant the travel can be a problem.
Sessions	Serial for ICCCC 2020	Plenary & Parallel	In online we can attend all presentation but duration is bigger than in classic variant. In online are possible also parallel sessions with multiple hosts.
Socialization	Low-Medium	High	Face-to-face meeting is better vs. Online.

Several final conclusions about online conference versus in-person conference are listed bellow:

1) In online organization the location is not important. Important is a good quality of the technical resources and we had demonstrate that all our digital resources worked perfectly during the five days of the online conference.
2) It is clear that the online version is much cheaper than the traditional one (for online is not necessary transport, accommodation, meals etc.).
3) For social contact traditional face-to-face meeting is better that a virtual one.
4) In online variant we can attend the conference from home but the time zone can be a problem if the timetable is not correct planed.
5) In traditional variant the travel can be a problem and accessibility is low (in pandemic time is impossible).
6) Persons with physically disabilities can participate easy in online variant.

Our final conclusion is that the mixed organization, in-person & online (remotely), will be a good solution in the future.

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