

PAPER • OPEN ACCESS

2nd International Seminar on Applied Mathematics and Mathematics Education (ISAMME) 2020

To cite this article: H Hendriana *et al* 2020 *J. Phys.: Conf. Ser.* **1657** 011001

View the [article online](#) for updates and enhancements.

You may also like

- [Implementation of the school literacy movement development stage in fostering secondary school students' mathematical literacy skills](#)
Hanifah Nurus Sopiany, Turmudi, Dadang Juandi et al.
- [The Mathematical Literacy Teachers' Ability for Quantity Area on PISA Adaptation Test](#)
H Julie, F Sanjaya, A Y Anggoro et al.
- [The International Seminar on Applied Mathematics and Mathematics Education \(ISAMME\) 2019](#)



ECS
The
Electrochemical
Society
Advancing solid state &
electrochemical science & technology

DISCOVER
how sustainability
intersects with
electrochemistry & solid
state science research

2nd International Seminar on Applied Mathematics and Mathematics Education (ISAMME) 2020

H Hendriana¹, W Hidayat¹, S A Widodo², M Irfan², M S Noto³, K S Perbowo⁴ and R C I Prahmana⁵

¹Institut Keguruan dan Ilmu Pendidikan Siliwangi, Cimahi, Indonesia

²Universitas Sarjanawiyata Tamansiswa, Yogyakarta, Indonesia

³Universitas Swadaya Gunung Jati, Cirebon, Indonesia

⁴Universitas Muhammadiyah Prof. DR. HAMKA, Jakarta, Indonesia

⁵Universitas Ahmad Dahlan, Yogyakarta, Indonesia

E-mail: wahyu@ikipsiliwangi.ac.id

Preface

Indonesian education system demands changes due to the dynamic challenges in human resources as the effect of the Industrial Revolution 4.0. As a result, the curriculum set into contemporary literacies: Data Literacy comprises the ability to read and analyze, Technology Literacy includes the ability to apply technology, and Human Literacy aims at creating humanists who can communicate well. This new education system requires professionals who create innovation based on research information. This notion calls for a new perspective converting challenges into opportunities. Thus, the Mathematics Education Department of IKIP Siliwangi and the Indonesian Mathematics Educator Society (I-MES) invite researchers, practitioners, and educators to participate in and contribute to The 2nd International Seminar on Applied Mathematics and Mathematics Education (ISAMME) 2020 under the theme "Issues and Challenges for Applied Mathematics and Mathematics Education in Digital Era."

This seminar has objectives to expand mathematics contribution to society, improve mathematics teaching, and solve mathematics problems. It was carried out online through the Zoom application with a capacity of 1000 people. The Zoom application is also equipped with a Zoom breakout feature to support the implementation of contribution and streaming sessions on Youtube.

The seminar's reason carried out online is that the conditions in Indonesia and other countries are still experiencing the Covid-19 pandemic, so face-to-face seminars cannot do it. Although the implementation of ISAMME 2020 is an online conference, the venue for this seminar is still being held at the campus of Institut Keguruan dan Ilmu Pendidikan Siliwangi, Cimahi, Indonesia, as a host in Zoom application.

In the implementation of the 2nd ISAMME 2020, there are still two sessions: plenary and contribution. There were six presenters from 5 countries in the Plenary Session, namely the USA, UK, Brunei Darussalam, Turkey, and Indonesia. The Plenary Session will be held from 8 am - 4 pm (Western Indonesian Time). Meanwhile, the Contribution Session was divided into 16 parallel rooms using the Zoom breakout feature, which was attended by 96 presenters.

The keynote speaker presentations are provided, mainly to show the contribution of mathematics



Content from this work may be used under the terms of the [Creative Commons Attribution 3.0 licence](https://creativecommons.org/licenses/by/3.0/). Any further distribution of this work must maintain attribution to the author(s) and the title of the work, journal citation and DOI.

educators in the world of mathematics education towards research and knowledge sharing. We have six keynote speakers coming from the University of Massachusetts Lowell, MA, USA, Dr. Iman Chafik Chahine; Sultan Hassanah Bolkiah Institute of Education, Universiti Brunei Darussalam, Brunei Darussalam, Dr. Masitah Shahrill; Queen's University Belfast, UK, Dr. Erin Early; Amasya University, Turkey, Dr. Mehmet Filiz; IKIP Siliwangi, Prof. Dr. Hj. Euis Eti Rohaeti, M.Pd, and from Universitas Ahmad Dahlan, Dr. Rully Charitas Indra Prahmana.

The discussion process in the plenary session activity and contribution occurred in two directions because 1 Moderator and 1 Interpreter accompany each Session of the keynote speaker (the Plenary Session) and Presenter (the Contribution Session). So, the implementation of the discussion becomes more active.

The room of the Plenary Session contained up to 850 participants, while the contribution session reached 140 people (including 96 presenters & 44 participants) in the zoom application. Meanwhile, in the contribution session using the breakout application found in the zoom application. Thus the discussion process, the feasibility of space for Q&A, becomes more optimal, effective, and efficient. All participants in this activity came from various regions in various countries, such as USA, UK, Brunei Darussalam, Turkey, and Indonesia.

In the implementation of ISAMME 2020, the technical difficulties that occur are the internet connection, which sometimes hinders the speakers' delivery of material. However, this is not a big obstacle. During the plenary session, a streaming process was also carried out via youtube (<https://www.youtube.com/watch?v=0k2oBvDQmDs>), so that the Speaker at ISAMME 2020 presented all information can be seen by the wider community, especially the Mathematics Education community.

The following are figures that show the ISAMME 2020 process online.



Figure 1. Iman Chafik Chahine from University of Massachusetts Lowell delivering keynote talk

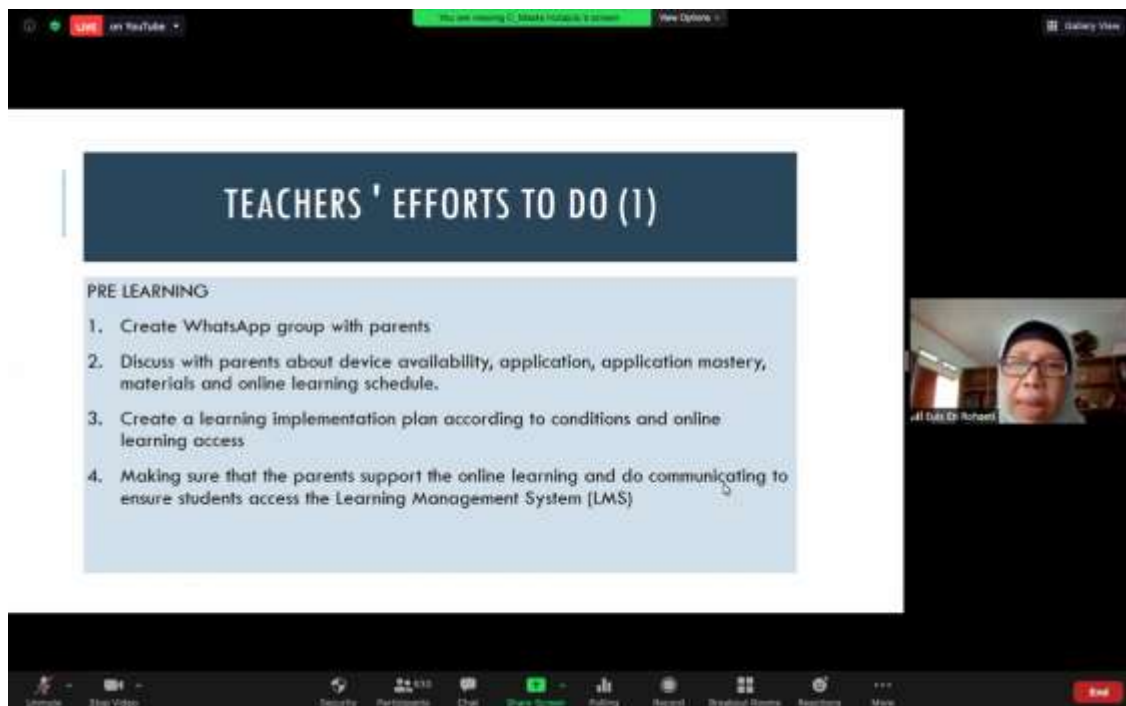


Figure 2. Euis Eti Rohaeti from Institut Keguruan dan Ilmu Pendidikan Siliwangi delivering keynote talk

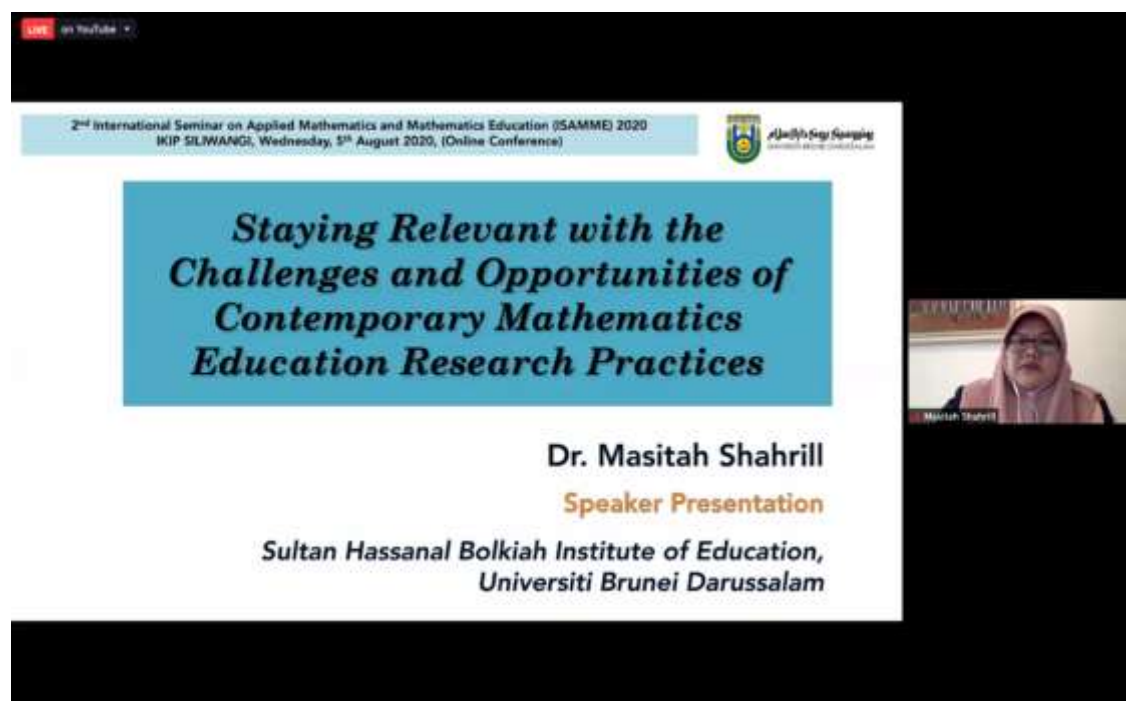


Figure 3. Masitah Shahrill from Sultan Hassanal Bolkiah Institute of Education,Universiti Brunei Darussalam delivering keynote talk

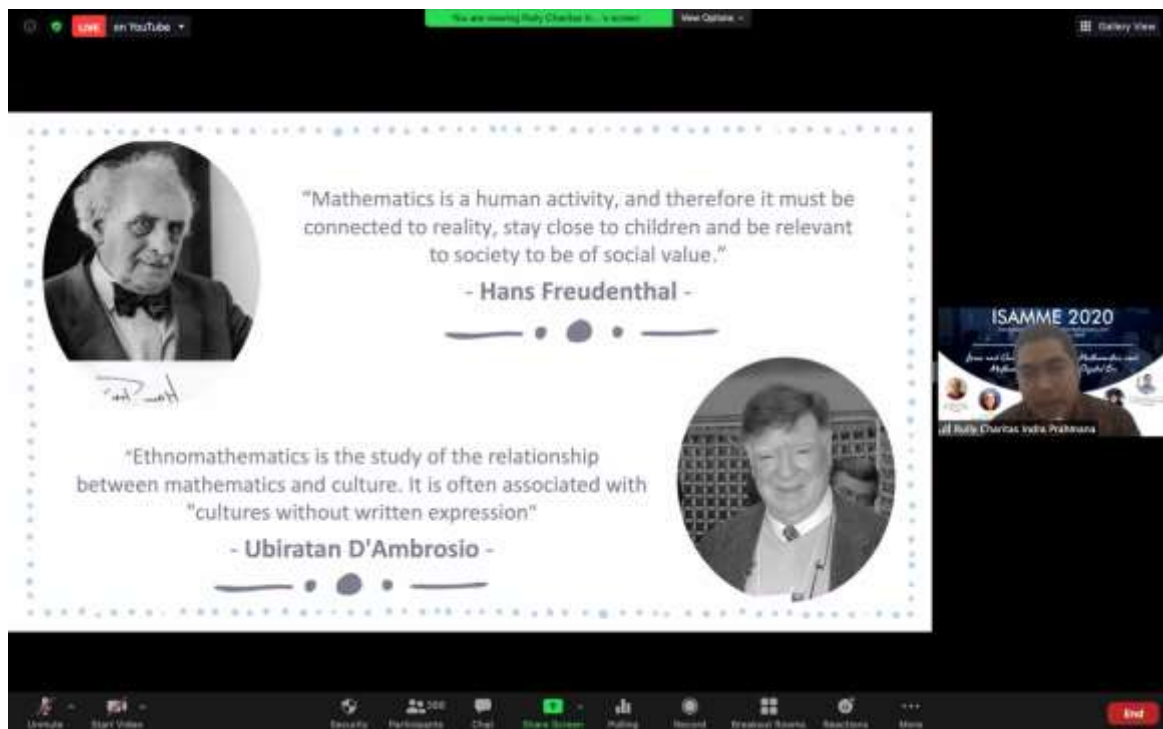


Figure 4. Rully Charitas Indra Prahmana from Universitas Ahmad Dahlan delivering keynote talk

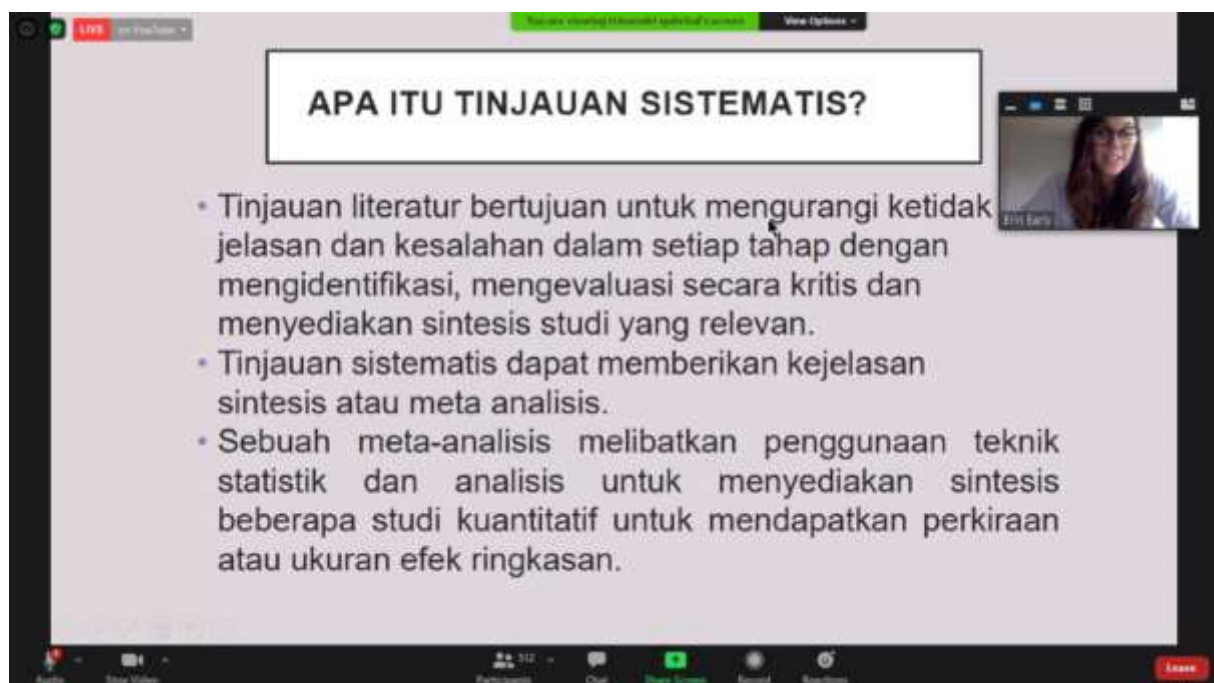


Figure 5. Erin Early from Queen's University Belfast delivering keynote talk with the presentation has been translated to Bahasa by Translator in this talk

2.6. Create a data extraction table

Author	Participant	Intervention	Comparison	Outcome
Quasmiadani, 2011)	120 Greek students studying at the department of pre-school education of the western Macedonia University	30.6	N/A	<p>Outcome: The mean of students (the number of items): Cronbach's alpha.</p> <p>Attitudes toward Statistics and Technology Scale (Owen) (2010: 368)</p> <p>Components: Students cognitive competence (R: .91) Technology cognitive competence (R: .82) Attitudes in learning statistics with technology (R: .72) Factor (R): .818 effect (R): .870</p>
(Cahono & Trianggono, 2013)	38 students participated in the four sessions of a college-level introductory statistics course. By region: 11 in morning, 11 in pre-lunch, 11 in evening, and 5 in post-lunch. 1 in psychology, 1 in sociology, 1 in physics, 1 in education, 2 in chemistry, 2 in mathematics, 1 in education, 1 did not have a major. Age: mean 21.3, SD 1.4	A classroom approach designed based on an active learning approach	Pre & Post SATS There is a control group: pre & post data are from another study.	<p>The Survey of Attitudes Toward Statistics – 34 (Owen) (2010: 368)</p> <p>Components: cognitive: pre: 88 – post: 87 Cognitive competence (R): pre: .91 – post: .88 Factor (R): pre: .87 – post: .88 Difficulty (R): pre: .81 – post: .81 Impact (R): pre: .89 – post: .89 Effect (R): pre: .83 – post: .72</p> <p>Findings related to statistics self-concept: $Mean^{pre} = 2.74$, $SD_{pre} = 1.11$ for experimental, $Mean^{post} = 4.83$, $SD_{post} = 1.15$ for control, t-score = 3.84, $p < .01$, $d_{pre} = .613$</p>

ISAMME 2020

Figure 6. Mehmet Filiz from Amasya University delivering keynote talk

ISAMME 2020
International Seminar on Applied Mathematics and Mathematics Education

"Improving Student's Mathematical Creative Think and Habits of Mind Using a Problem-Solving Approach Based on Cognitive Thinking Stage"

Ratna Maria Desti | Citra Megiana Pertiwi | Utari Sumarmo | Wahyu Hidayat

Activate Windows
Go to Settings to activate Windows.

Figure 7. One of the participants delivering her talk in parallel session

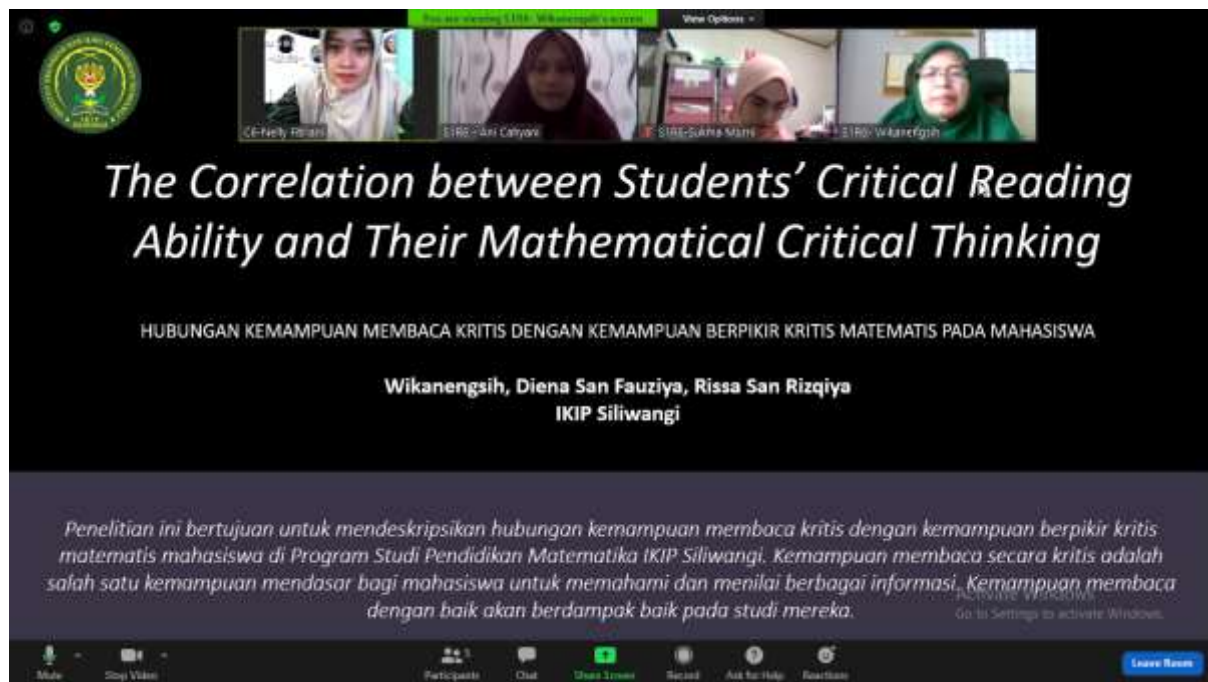
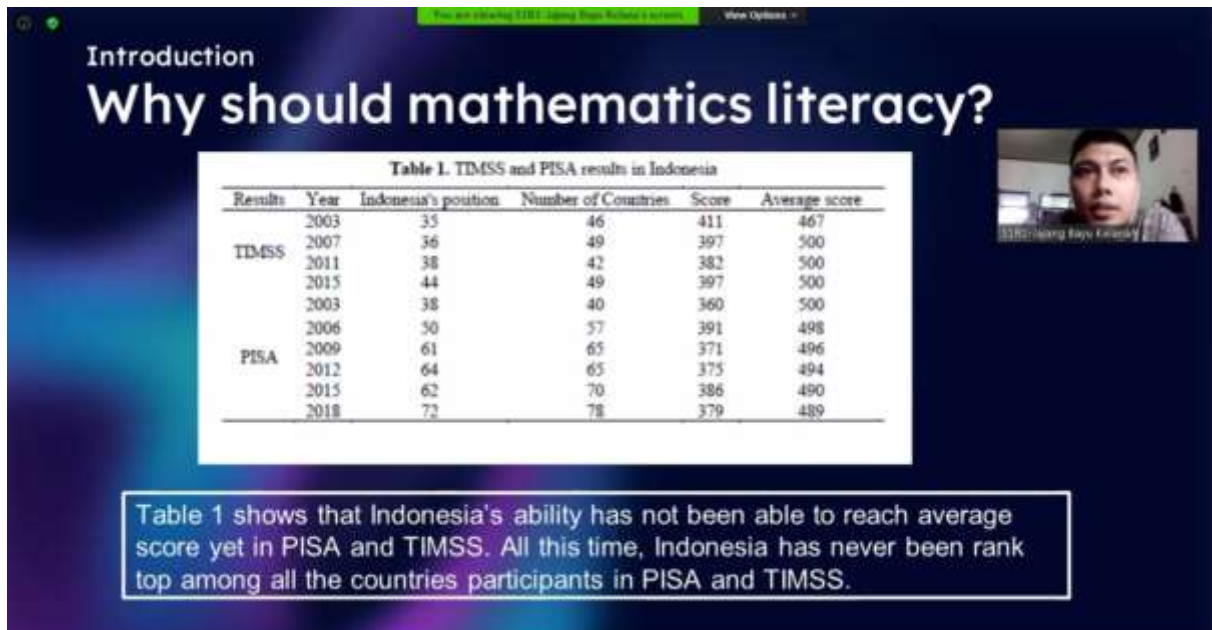


Figure 8. One of the participants delivering her talk in parallel session



Figure 9. One of the participants delivering her talk in parallel session



Introduction

Why should mathematics literacy?

Table 1. TIMSS and PISA results in Indonesia

Results	Year	Indonesia's position	Number of Countries	Score	Average score
TIMSS	2003	35	46	411	467
	2007	36	49	397	500
	2011	38	42	382	500
	2015	44	49	397	500
PISA	2003	38	40	360	500
	2006	50	57	391	498
	2009	61	65	371	496
	2012	64	65	375	494
	2015	62	70	386	490
	2018	72	78	379	489

Table 1 shows that Indonesia's ability has not been able to reach average score yet in PISA and TIMSS. All this time, Indonesia has never been rank top among all the countries participants in PISA and TIMSS.

Figure 10. One of the participants delivering her talk in parallel session

On this seminar implementation, from one hundred and sixty-two presenter registers, ninety-six presenters were declared qualified. We trust that all the participants found their involvement in the seminar, both valuable and rewarding. Our wish is that all participants would enjoy this seminar, improve their knowledge and experiences.

Publishing Team