

**LEMBAR**  
**HASIL PENILAIAN SEJAWAT SEBIDANG ATAU PEER REVIEW**  
**KARYA ILMIAH : PROSIDING**

Judul Karya Ilmiah : Intact stability and seakeeping characteristics of autonomous surface vehicle (asv) using swath hullform to support bathymetry survey activities on the coastal area

Jumlah Penulis : 4 Orang

Status Pengusul : Penulis ke-1

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Komponen Yang Dinilai	Nilai Reviewer		Nilai Rata-rata
	Reviewer I	Reviewer II	
a. Kelengkapan unsur isi prosiding (10%)	3	3	3
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c. Kecukupan dan kemutakhiran data/informasi dan metodologi (30%)	7	8	7,5
d. Kelengkapan unsur dan kualitas terbitan/prosiding(30%)	7	7	7
<b>Total = (100%)</b>	<b>24</b>	<b>24</b>	<b>24</b>
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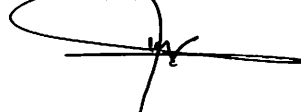
Semarang, 27 Juni 2019

Reviewer 2



Ojo Kurdi, S.T., M.T., Ph.D  
 NIP. 197303171999031001  
 Unit Kerja : S1 Teknik Mesin FT UNDIP

Reviewer 1



Dr. Eng. Hartono Yudo, S.T., M.T.  
 NIP. 197510211999031004  
 Unit Kerja : S1 Teknik Perkapalan FT UNDIP

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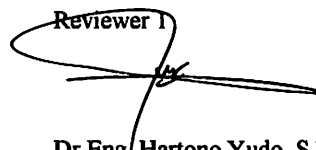
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<b>Total = (100%)</b>	<b>30,00</b>		<b>24</b>
<b>Nilai Pengusul = (60% x 24)= 14,4</b>			

**Catatan Penilaian Paper oleh Reviewer :**

- Kesesuaian dan kelengkapan unsur isi paper:**  
Artikel telah memenuhi kelengkapan sesuai dengan template prosiding
- Ruang lingkup dan kedalaman pembahasan:**  
Kajian terhadap performa ASV telah dilakukan dengan pembahasan yang baik, namun tidak ada metode baru yang digunakan untuk memperoleh hasil analisis, level pembahasan biasa.
- Kecukupan dan kemutakhiran data/informasi dan metodologi:**  
Novelty penggunaan SWATH untuk ASV cukup baik dan telah ditunjang oleh beberapa literature yang cukup relevan, namun metodologi yang digunakan bukan metode baru. Indeks similaritas turnitin sebesar 17% (bebas plagiarism)
- Kelengkapan unsur dan kualitas terbitan:**  
Prosedia memiliki reputasi biasa, unsur-unsur terbitan juga telah terpenuhi, SJR Index 0,15 dan H-Indeks 12

Semarang, 27 Juni 2019

Reviewer 1  


Dr.Eng. Hartono Yudo, S.T., M.T.  
 NIP. 197510211999031004  
 Unit Kerja : S1 Teknik Perkapalan FT UNDIP

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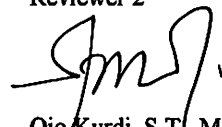
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d. Kelengkapan unsur dan kualitas terbitan/prosiding(30%)	9,00		7
<b>Total = (100%)</b>	<b>30,00</b>		<b>24</b>
<b>Nilai Pengusul = (60% x 24)= 14,4</b>			

Catatan Penilaian Paper oleh Reviewer :

- Kesesuaian dan kelengkapan unsur isi paper:**  
Struktur dan tata tulis sudah memenuhi template yang sudah disyaratkan
- Ruang lingkup dan kedalaman pembahasan:**  
Ruang lingkup dan pembahasan mengenai penerapan SWATH pada teknologi ASV telah dilakukan dengan baik, namun analisis yang dilakukan bukan sesuatu yang bersifat baru.
- Kecukupan dan kemutakhiran data/informasi dan metodologi:**  
Metodologi yang digunakan bukan metode baru, referensi yang digunakan memiliki tingkat kebaruan yang cukup update, indeks similiraty cukup baik 17%
- Kelengkapan unsur dan kualitas terbitan:**  
Prosedia sesuai dengan topik seminar dan memiliki reputasi biasa, indeks SJR 0,15, H-Index 12

Semarang, 27 Juni 2019

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Ojo Kurdi, S.T., M.T., Ph.D  
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Intact stability and seakeeping characteristics of autonomous surface vehicle (asv) using swath hullform to support bathymetry survey activities on the coastal area (Conference Paper) (Open Access)

Ahmad Fauzan, Z.<sup>a</sup>, Triwiyatno, A.<sup>b</sup>, Sasmito, B.<sup>c</sup>, Nubly, M.H.<sup>a</sup>

<sup>a</sup>Naval Architecture Department, Engineering Faculty, Diponegoro University, Indonesia  
<sup>b</sup>Electrical Engineering Department, Engineering Faculty, Diponegoro University, Indonesia  
<sup>c</sup>Geodetical Engineering Department, Engineering Faculty, Diponegoro University, Indonesia

Abstract

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The information is an important thing to search a new resource. In this decade, with leading-edge technology is easier to find any information about our earth. Thus, that is must be explored by the ships. The exploration works usually take a long time, and for convenience, the unmanned technology is much promised. In this research, we focused on the autonomous surface vehicle for bathymetry survey. To design the ASV, we must consider the reliability, efficiency, and safety. To reach those three components, the analysis of resistance, stability and wave response are necessary. Therefore, the hull form design is focused on Small Waterplane Area Twin Hull (SWATH) hull form. According to the numerical analysis, the proposed SWATH hull form of ASV is suitable for bathymetry activities. It can be proved by the stability performance which the maximum value of GZ is at 26.40. The resistance calculation result is indicated that the drag of coefficient of this hull form is about 0.013. © 2018 The Authors, published by EDP Sciences.

SciVal Topic Prominence ⓘ

Topic: Autonomous underwater vehicles | Vehicles | Vehicle AUV

Prominence percentile: 98.905 ⓘ

Indexed keywords

Engineering controlled terms:

- Bathymetry
- Coastal engineering
- Disaster prevention
- Disasters
- Environmental management
- Surveys

Engineering uncontrolled terms

- Autonomous surface vehicles
- Intact stability
- Leading edge technology
- Resistance calculation
- Small waterplane area twin hulls
- Stability performance
- Three component
- Wave response

Engineering main heading:

- Unmanned surface vehicles

Funding details

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The work is funded by Directorate of Research and Community Services (DRPM) of the Indonesian Ministry of

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Intact stability and seakeeping

ISSN: 2261236X  
Source Type: Conference Proceeding  
Original language: English

DOI: 10.1051/mateconf/201817701001  
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🔗 Ahmad Fauzan, Z.; Naval Architecture Department, Engineering Faculty, Diponegoro University, Indonesia;  
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
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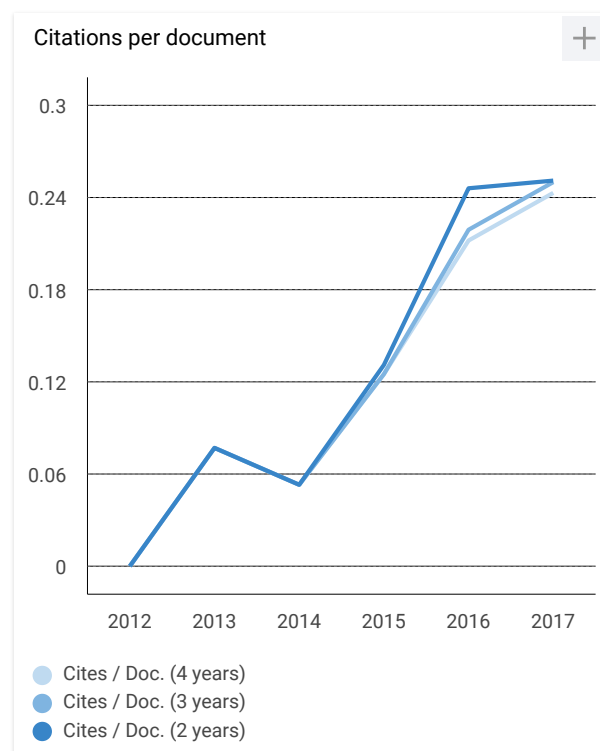
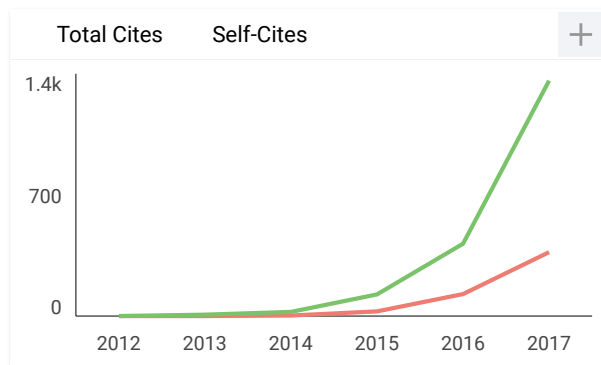
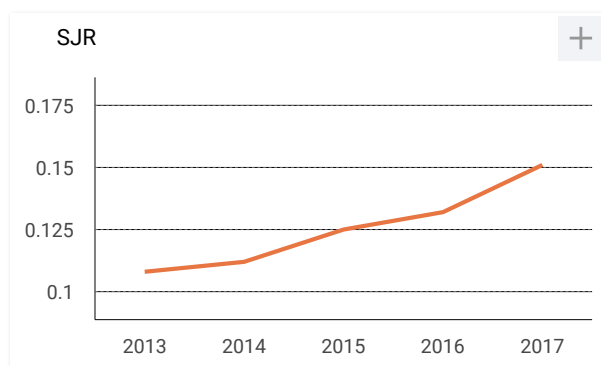
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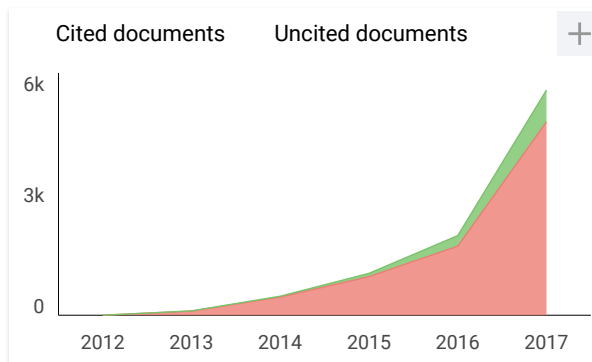
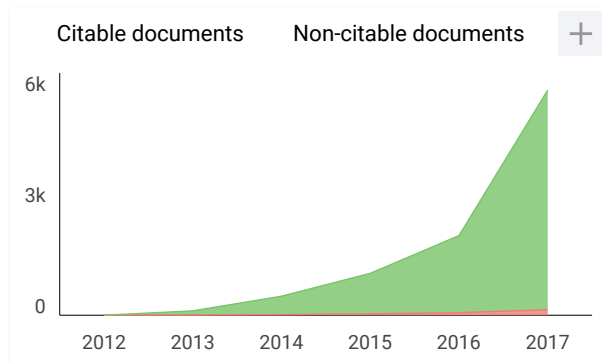
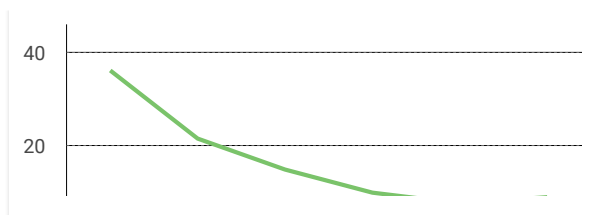
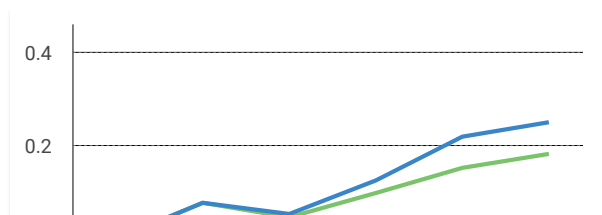
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# The 5<sup>th</sup> International Seminar on Ocean and Coastal Engineering, Environmental and Natural Disaster Management (ISOCEEN) 2017

**8<sup>TH</sup> NOVEMBER 2017**

## Introduction

We are delighted to announce that Institut Teknologi Sepuluh Nopember (ITS) especially Department of Ocean Engineering and Tohoku University have collaboration since 1997. In which, in the year 2006, a Memorandum of Understanding (MoU) has been signed between Tohoku University, Japan and Institut Teknologi Sepuluh Nopember to promote further collaboration between two institutions and and it has been extended until 20 December 2016. Many activities that have performed well in term of collaborative research, faculty and student exchange, joint educational program, seminars, workshops etc, especially for the seminar and workshop has been done several times before, namely; Japan-Indonesia Estuary Workshop, August 22<sup>nd</sup>, 2005 Jakarta, Japan – Indonesia Workshop on Estuary and Climate Change (JIWECC), August 8<sup>th</sup> -10<sup>th</sup> Surabaya, Indonesia and The first International Seminar on Ocean, Coastal Engineering, Environmental and Natural Disaster Management (ISOCEEN), Novem-

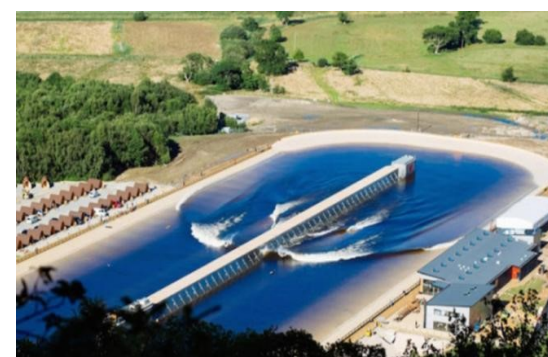
ber 11, 2013, Surabaya Indonesia. The 2<sup>nd</sup> International Seminar on Ocean and Coastal Engineering, Environmental and Natural Disaster Management was held on December 2, 2014. in which the selected papers have been published to the International Journal, Procedia Earth and Planetary Science. <http://www.sciencedirect.com/science/journal/18785220/14>.

The 3<sup>rd</sup> International Seminar on Ocean and Coastal Engineering, Environmental and Natural Disaster Management was held on December 10, 2015. Published to Applied Mechanics and Material, <https://www.scientific.net/AMM.862>

The 4<sup>th</sup> International Seminar on Ocean and Coastal Engineering, Environmental and Natural Disaster Management was held on December 13, 2016, the selected paper was processed to publish into IOP Conference

Series – Earth and Environmental Sciences indexed in Scopus .

The 5<sup>th</sup> International Seminar on Ocean and Coastal Engineering, Environmental and Natural Disaster Management will be held on November 8, 2017. The selected paper will be published into: IOP Conference Series – Earth and Environmental Sciences indexed in Scopus.



## Call For Papers

The technical program of the Conference will consist of keynote addresses, contributed papers and special sessions with invited speakers. Authors are invited to submit an extended abstracts (short papers) of 2-3 pages, including some results and/or graphics ([ISOCEEN-2017-Extended AbstractTemplate](#)). The extended abstracts will be reviewed and selected by an International Technical Committee for oral presentation. Prospective authors are requested to submit an extended abstracts to the Seminar Secretariat. It may be submitted either online through conference website or via regular mail. After the seminar, the full paper must be submitted and will be reviewed to be aligned with the requirements published in MATEC Web of Conference indexed in Scopus.

## IMPORTANT DATES

Deadline for Extended abstracts submission	21 Oktober 2017
Notification of Acceptance	24 Oktober 2017
Deadline for Authors' Registration	30 Oktober 2017
Seminar Date	8 November 2017
Deadline for Full Paper submission	30 December 2017
Review process	1-30 January 2018
Revision process	1-28 February 2018
Final checking and editing by Editors	30 May 2018
Deliver the Final Manuscript to the Publisher	15 June 2018

## REGISTRATION FEE

	Foreign	Indonesian
Delegates	US \$ 75	IDR 600,000
Contributing Author	US \$ 400	IDR 3,000,000
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Title, date and place of the conference

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The 5th International Seminar on Ocean and Coastal Engineering, Environmental and Natural Disaster Management (ISOCEEN) 2017, November 8th, 2017 in Surabaya, Indonesia

Proceedings editor(s):   Suntoyo, PhD and Agro Wisudawan, MT

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Date and editor's signature

15 June 2018

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## Preface

International Seminar on Ocean and Coastal Engineering, Environmental and Natural Disaster Management (ISOCEEN) is an annual international conference event held by cooperation among Institut Teknologi Sepuluh Nopember (ITS) especially Department of Ocean Engineering, Tohoku University, Japan, HZ University of Applied Sciences, Netherlands and The Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security (CTI-CFF). This forum was more focused on creating and expanding professional network to foster the relationship between the University, industry, business and communities across the country. The Organizing Committee worked many years for preparing of this seminar and their efforts resulted to full success. Based on the cooperation, there are some conference that we already held before, as follows :

- Japan – Indonesia Workshop on Estuary and Climate Change (JIWECC), August 8<sup>th</sup> -10<sup>th</sup> Surabaya, Indonesia
- The 1<sup>st</sup> International Seminar on Ocean and Coastal Engineering, Environmental and Natural Disaster Management (ISOCEEN), November 11, 2013,. Surabaya, Indonesia.
- The 2<sup>nd</sup> International Seminar on Ocean and Coastal Engineering, Environmental and Natural Disaster Management (ISOCEEN), December 2, 2014, Surabaya, Indonesia.
- The 3<sup>rd</sup> International Seminar on Ocean and Coastal Engineering, Environmental and Natural Disaster Management (ISOCEEN), December 10, 2015, Surabaya, Indonesia.
- The 4<sup>th</sup> International Seminar on Ocean and Coastal Engineering, Environmental and Natural Disaster Management (ISOCEEN), December 13, 2016, Surabaya, Indonesia.
- The 5<sup>th</sup> International Seminar on Ocean and Coastal Engineering, Environmental and Natural Disaster Management (ISOCEEN), November 8, 2017, Surabaya, Indonesia

ISOCEEN 2017 was aimed on providing a discussion, for exchanging of knowledge, researches and of recent solutions for many researchers and experts in the field of Ocean, Offshore, Coastal engineering, Environmental and Disaster Management. The results of discussions are presented in this

book. We hope this book will be interesting and usefull for many engineers and scientists whose activity related with researches of ocean and development of coastal areas.

Finally, on behalf of the organizing committee of the seminar, sincere appreciation is expressed to all authors who contribute to our seminar. Special thanks are also due to all keynote speakers, invited talks and chairpersons for the efforts in preparing the manuscripts and managing the sessions, respectively.

**Suntoyo, PhD**  
Chairman of Organizing Committee



# Committees

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- Head of Ocean Engineering Department, Faculty of Marine Technology - ITS, Indonesia

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- Dr. Taufiqur Rachman (Hasanuddin University, Indonesia)

**Opening Speech by Chairman of ISOCEEN 2017 for International Seminar on Ocean and Coastal Engineering, Environmental and Natural Disaster Management, on Tuesday, 08 November, 2017 at 08.45 am at Swiss Bellin Manyar Hotel, Surabaya**

The first that we respect, Rector of ITS, Prof. Joni Hermana, Head of Ocean Engineering Department, Dr.Eng. Rudi Walujo P, Keynote Speaker, Dr. Alvaro Semedo, Dr. Ali Dastgheib, from Unesco-IHE, Netherlands, Invited talks **Dr. Mohd Faris Khamidi**, University of Reading Malaysia, Liliane Geerling, R.TD, HZ University of Applied Sciences-Delta Academy, Netherlands, Lecturers within ITS, Contributing Authors, Seminar delegates , experts, scholar, all student, Ladies and gentlemen.

Assalamu alaikum Wr. Wb., Good morning! Presence of Allah SWT 's grace that has given favors and gifts in this morning. Welcome to this **The 5<sup>th</sup> International Seminar on Ocean and Coastal Engineering, Environmental and Natural Disaster Management (ISOCEEN 2017)**. I am pleased to join you here today.

We are delighted to announce that Institut Teknologi Sepuluh Nopember (ITS) especially Department of Ocean Engineering and Tohoku University have collaboration since 1997. In which, in the year 2006, a Memorandum of Understanding (MoU) has been signed between Tohoku University, Japan and Institut Teknologi Sepuluh Nopember to promote further collaboration between two institutions and and it has been extended until 20 December 2016. Many activities that have performed well in term of collaborative research, faculty and student exchange, joint educational program, seminars, workshops etc, especially for the seminar and workshop has been done several times before, namely; Japan-Indonesia Estuary Workshop, August 22<sup>nd</sup>, 2005 Jakarta, Japan – Indonesia Workshop on Estuary and Climate Change (JIWECC), August 8<sup>th</sup> -10<sup>th</sup> Surabaya, Indonesia. However the previous seminar activities organized not regularly therefore Since 2013 held an annual seminar entitled The first International Seminar on Ocean, Coastal Engineering, Environmental and Natural Disaster Management (ISOCEEN), November 11, 2013, Surabaya Indonesia. The 2<sup>nd</sup> International Seminar on Ocean and Coastal Engineering, Environmental and Natural Disaster Management (ISOCEEN), December 2, 2014. In which the selected papers have been published to the International Journal, Procedia Earth and Planetary Science. <http://www.sciencedirect.com/science/journal/18785220/14>

The 3<sup>rd</sup> ISOCEEN has been organized at 10 December 2015. The selected papers have been published to Trans Tech Publication on Applied Mechanics and Material Volume 862 in Special Edition Ocean Science and Coastal Engineering indexed in ISI Thomshon Rheuter.

Moreover, a Memorandum of Understanding (MoU) has been signed on July 29, 2015 between Institut Teknologi Sepuluh Nopember and HZ University of Applied Sciences, Netherlands to promote the development of academic scientific and cultural exchange, and of teaching and research activities, especially with Department of Ocean Engineering, ITS. And in 2016-2019

Our Department also have grants from Nuffic-Niche Project to increase collaboration among ITS-ITB and TU Delft Consorsium, Netherlands.

The 4<sup>th</sup> ISOCEEN has been organized at 13 December 2016. The selected papers have been published to to “*IOP Conference Series: Earth and Environmental Science*” indexed in Scopus. <http://iopscience.iop.org/issue/1755-1315/135/1>

With the increasing amount of cooperation between Indonesia, Japan, Netherlands and another country then this forum is more focused on creating and expanding professional network to foster the relationship between the University, industry, business and communities across the country. Therefore it is necessary to hold **The 5<sup>th</sup> International Seminar on Ocean and Coastal Engineering, Environmental and Natural Disaster Management (ISOCEEN) 2017** in which the selected papers presented in the seminar will be published to “*MATEC Web of Conferences*” indexed in Scopus.

Finally, on behalf of the organizing committee of the seminar, sincere appreciation is expressed to all speakers contributing to our seminar. Special thanks are also due to all keynote speakers and all committee for the efforts in preparing the manuscripts and managing the sessions, respectively.

Wish the seminar a complete success.

Thank you !

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