



# INTERNATIONAL CONFERENCE ON OPERATIONS RESEARCH (ICOR)

# 4<sup>th</sup>

## Policies and Optimal Decisions on Energy and Environment

Sam Ratulangi University, Manado, Indonesia  
19 - 20 September 2019

### GENERAL AGENDA & PARALLEL SESSION SCHEDULE



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**GENERAL AGENDA**  
**The 4<sup>th</sup> INTERNATIONAL CONFERENCE ON OPERATIONS RESEARCH**  
**"Policies and Optimal Decisions on Energy and Environment"**  
**MANADO, 19 SEPTEMBER 2019**

<b>TIME START (Indonesia Central Standard Time)</b>	<b>ACTIVITIES</b>	<b>VENUE</b>	
07.30	Registration		
<b>Opening Ceremony</b>			
08.30	VIP Entry Procession	<b>Auditorium</b>	
	Welcoming and Theme Performance: Energy Dance		
	National Anthem: Indonesia Raya		
	Prayer		
09.00	Environment in Industrial Era 4.0		
	Introductory Speech by the President of IORA: Prof. Dr. Sudradjat Supian		
	Opening Speech: Rector of Sam Ratulangi University Prof. Dr. Ir. Ellen Joan Kumaat, M.Sc, DEA		
	Keynote Speech: Dirjen Konservasi Sumber Daya Alam dan Ekosistem, Kementerian Lingkungan Hidup dan Kehutanan		
	Thank you Note: Conference Chairman Dr. Nelson Nainggolan, M.Si		
09.55	Photo Session		
10.05	Line Dance		
10.15	Coffee Break / Poster Session / Exhibition		
10.30	Plenary Speeches: - Prof. Dr. Heike Waegele (Alexander Koenig - Leibniz Institute, Germany) - Dr. Prasad Kaparaju (Griffith University, Australia) - Prof. Dr. Seiya Negami (Yokohama National University, Japan) - Prof. Dr. Abdul Talib Bon, PhD (Universiti Tun Hussein Onn, Malaysia)		
	12.15	Lunch	<b>Fakultas MIPA UNSRAT</b>
	13.00	To Linow Lake	<b>On the way</b>
	14.15	Parallel Sessions	<b>Linow Lake</b>
	17.30	Back to Manado	<b>On the way</b>

Nr.	Authors	Title
3	Dolfie P. Pandara Buldan Muslim Bambang Sunardi Ferdy Mans Mananohas Kristian Ango	Analysis of Ionosphere disturbance caused by the Lokon Volcano Eruption using GPS TEC data from GNSS satellites for optimal decision on a disaster mitigation
4	Dolfie P. Pandara Buldan Muslim Guntur Passau Ferdy Mans Mananohas Kristian Ango	Analysis of seismo-ionospheric relationship using cross wavelet transformation for detection of The Lokon explosive activity as an optimally mitigation effort
5	Gerald Tamuntuan Hanny F. Sangian Guntur Pasau Silvia J. Fajar Abdul Hafidz La Ode Safiuddin	Preliminary Rock Magnetic Study on the Quaternary Tuff Originated from Two Different Episodes of Tondano Volcano Eruption

**CLASS : SOPUTAN**

Nr.	Authors	Title
1	Latumakulita, L. A Salaki, D. T Montolalu, C. E. J. C Rindengan, A. J	An Intelligent Prediction System for Bidikmisi Scholarship Selection Process Using Artificial Neural Network

**POSTER**

**CLASS : LOKON**

Nr.	Authors	Title
1	Antonius P. Rumengan Veibe Warow Fitje Losung Wendy Alexander Tanod Elvi S. Mandiangan Darus S. J. Paransa Carolus P. Paruntu Desy M. H. Mantiri	Study Of Pigment Beta Carotene From Mangrove Leaf Rhizophora Mucronate
2	Henky Manoppo Reiny A. Tumbol Cindy C. Mudeng Novelia Pangalila	Isolation of probiotic and its use to improve growth and feed efficiency of carp ( <i>Cyprinus carpio</i> L)
3	Ockstan J. Kalesaran Cyska Lumenta Sartje Lantu	Nacre Characterization of Freshwater Bivalve <i>Sinanodonta woodiana</i> (Lea, 1834)
4	F Fatimah J M Tungadi V S Kamu S Gugule P A Kaurong T E Tallei	Processing Optimization of Bakasang from Skipjack Fish ( <i>Katsuwonus pelamis</i> ) Viscera Using Surface Response Methods

## Processing Optimization of Bakasang from Skipjack Fish (*Katsuwonus pelamis*) Viscera Using Surface Response Methods

F Fatimah<sup>1)</sup>, J M Tungadi<sup>2)</sup>, V S Kamu<sup>1)</sup>, S Gugule<sup>3)</sup>, P A Kaurong<sup>2)</sup>, T E Tallei<sup>4)</sup>.

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### INTRODUCTION

Skipjack fish is very popular in North Sulawesi and many of them are exported to foreign countries both in raw and processed forms. One of side products of Skipjack fish is viscera. Field analysis showed that there were many of Skipjack fish processor did not utilize the viscera. The viscera were only discarded on river. This practices posed serious risk on river ecosystem. One way to utilize this fish viscera is to process them into a bakasang (fermented fish sauce). When processing bakasang traditionally, the viscera were fermented inside bottles with the addition of salt and let them fermented spontaneously for several days until they turn into liquid. The main source of the heat to assist the fermentation is the sun. However, in this process is not controlled appropriately, the temperature, salt, and time of fermentation can cause oxidation reactions [1]. This study was aimed to determine the optimum conditions of Bakasang processing from Skipjack fish viscera based on Surface Response Methode with Central Composite Design (CCD) using Thiobarbituric Acid (TBA) as the oxidation reaction parameters.

### RESULT AND DISCUSSION

This research was conducted using a CCD experimental design with 3 independent variables: temperature (x1), salt content (x2) and fermentation time (x3). The CCD provides 20 treatments consisting of 8 quadratic points, 6 central points and 6 axial points. Each treatment was carried by testing the level of the MDA of Bakasang obtained from the reaction between samples in the form of TBA. The optimization results are presented in figures 1a-1c.



# Certificate



*is awarded to*

**FETI FATIMAH**

*as*

**PRESENTER**

The 4th INTERNATIONAL CONFERENCE ON OPERATIONS RESEARCH 2019

Theme:

“Policies and Optimal Decisions on Energy and Environment”

Which was Held at Faculty of Mathematics and Natural Sciences, Sam Ratulangi University - Manado

19-20 September 2019

President of IORA  
Prof. Dr. H. Sudradjat Supian, M.Sc.

Dean of Faculty of Mathematics and Natural Sciences, Sam Ratulangi University  
Prof. Dr. Benny Pinontoan, M.Sc.

Chairman of The Committee  
Dr. Nelson Nainggolan, M.Si.

