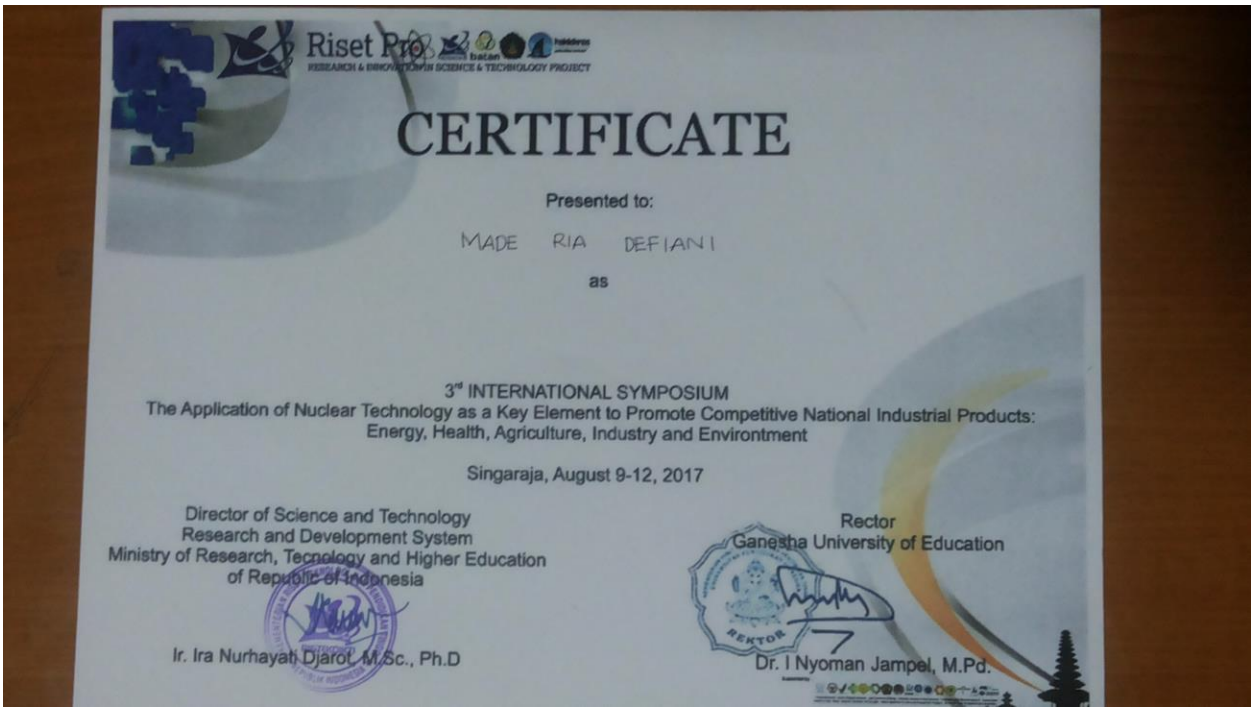

Riset Pro
RESEARCH & INNOVATION IN SCIENCE & TECHNOLOGY PROJECT

CERTIFICATE

Presented to:

MADE RIA DEFIANI

as

3rd INTERNATIONAL SYMPOSIUM
The Application of Nuclear Technology as a Key Element to Promote Competitive National Industrial Products:
Energy, Health, Agriculture, Industry and Environtment

Singaraja, August 9-12, 2017

Director of Science and Technology
Research and Development System
Ministry of Research, Tecnology and Higher Education
of Republic of Indonesia

Ir. Ira Nurhayati Djarot, M.Sc., Ph.D

Rector
Ganesha University of Education

REKTOR

Dr. I Nyoman Jampel, M.Pd.

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BOOK OF ABSTRACTS

3rd INTERNATIONAL SYMPOSIUM

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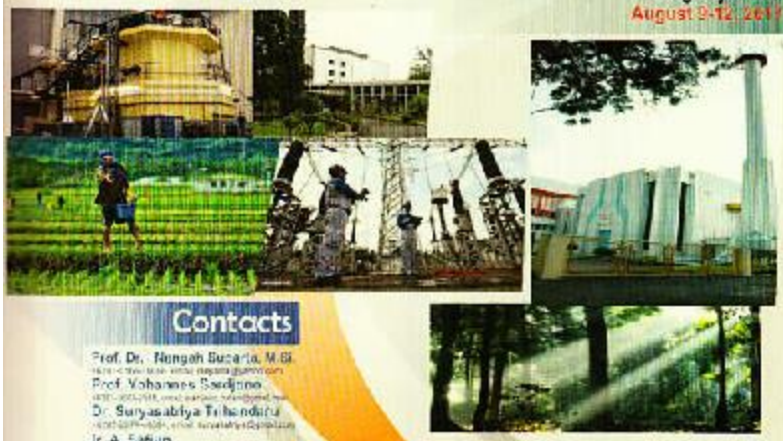

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Gibberellin acid induced germination of *Impatiens balsamina* mutan seeds exposed by Oryzalin and Gamma Radiation

Defiani, M.R., Astarini, I.A., Sudatri, N.W., Kriswiyanti, E., Wiratmini, N.I., Probonini, N.W., Astiti, N.P.A.
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ABSTRACT - Garden balsam is an exotic flowering plant. Gamma ray (0,5,10,15 Gy) and oryzalin (0.00 0.01 and 0.02 %) were applied to seedlings M4 for increasing variation in flower colour and morphology of *Impatiens balsamina*. Some mutant plants were difficult to germinate and required special treatment to enhance the plants' multiplication. Gibberellin (GA₃) can induce germination of the mutant seed. Immersion in GA₃ for 24 hours improved the percentage of seed germination and the growth of seedlings was vigorous. Oryzalin and gamma radiation enhanced flower morphology. In addition, the reproductive phase was inhibited after treatment of 5 Gy and 0.01 % oryzalin, 10 Gy and 0.01% oryzalin and 15 Gy and 0.02%. Control plants started flowering at 10 weeks after planting but treatment plants began flowering at mostly 12 weeks after planting.

Keywords: germination, seedlings, Gibberellin, garden balsam

Geothermal Energy for Electricity Generation in Indonesia

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[1]Pascasarjana Institut Teknologi Yogyakarta
[2]Center for Science and Technology Accelerator BATAN

ABSTRACT- Geothermal energy is counted as a type of renewable energy, which means the availability is not affected by the lack of source and the increasing price of fossil oil. Environmental friendliness is also one of the advantages of geothermal energy. Not all countries have the potential of geothermal energy, only countries traversed by the ring of fire have the geothermal energy resource. As one of the countries that is traversed by the world's ring of fire, Indonesia hence holds geothermal potential, which is indicated by the existing 117 active volcanoes spread across the country. Indonesia's geothermal energy potential is estimated at about 40% of the world's geothermal energy potential or about 28,617 MW. However, only about 4.5% is being utilized as electrical energy in the country. The government of Indonesia is continuously working towards increasing the capacity of geothermal power plants. It is planned to install more geothermal power plants in Indonesia that will amount up to 9500 MW by 2025

Keywords: Geothermal, Electricity, Energy, Renewable Energy

Copula Modeling in Analysis of Depen... Production and Rainf...

Dodan Kusnandar[1*], Naomi Nessyana Debataraja...
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*Corresponding author: dkusnand@...

ABSTRACT - Copula is a method that examines the re...
variables. Copula is characterized as a nonparam...
benefits, i.e., it is independent to the assumption of ...
nonlinear relationship among variables, and is co...
distribution. This study investigates the relationship o...
the copula approach. The method is applied to the...
production and the amount of rainfall. The results sh...
copula is the best model for rainfall and oil palm pro...

Keywords: Relationship, Correlation coefficient, Ar...
Copula, Maximum Likelihood Estimation

Feasibility Study of Energy at Kuwaru O... Future New Renewable Energy (Case Stu... Bantul, D. I Yogyakarta, Ind...

Timur Pinadi Santoso [1] Yohannes Sardjono [2] Chafid...
[1]Postgraduate of Institute of Technolo...
[2]Center for Science and Technology Acc...

ABSTRACT - The problem of climate change was inves...
conference in Hamburg, Germany on July 7–8, 2017, ...
life and other organisms. Indonesia, one of the bigge...
thousands of islands which could potentially be un...
some land. In addition, climate change will lead t...
abrasion, and genetic changes. One way to control cli...
renewable energy, such as the utilization of sea wa...
into electrical energy using ocean waves converted ar...
potential of ocean waves in the world, especially in ...
(ESDM, 2015). Along the south coast of Java to Nusa T...
of 10 - 20 kW / meter, while on the west coast of...
reached 41 kW / meter, reached 6.3 million km² (BID...
As wave energy, the Indonesian sea also has the pot...
energy such as ocean heat. To increase the contribut...
renewable energy, and this can be a mixed energ...