

SILPAKORN UNIVERSITY
Science and Technology Journal
SUSTJ

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Instructions to Authors

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Types of contributions

Short communications, Research articles, Review articles

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Materials and Methods, Area Descriptions, Techniques

Results

Discussion

Conclusion

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Book

Feldmann, H. (2004) *Forty Years of FEBS*, Blackwell Publishing Ltd., Oxford.

Chapter in a book

Langer, T. and Neupert, W. (1994) Chaperoning mitochondrial biogenesis. In *The Biology of Heat Shock Proteins and Molecular Chaperones* (Morimoto, R. I., Tissieres, A. and Georgopoulos, C., eds.), pp. 53-83. Cold Spring Harbor Laboratory Press, Plainview, New York.

Article in a journal

Hammerschlag, F. A., Bauchan, G., and Scorza, R. (1985) Regeneration of peach plants from callus derived from immature embryos. *Journal of Natural Products* 70(3): 248-251.

Hammerschlag, F. A., Bauchan, G., and Scorza, R. Regeneration of peach plants from callus derived from immature embryos. *Journal of Natural Products* (in press).

Article on the web

Lee, K. (1999) Appraising adaptive management. *Conservation Ecology* 3(2). [Online URL:www.consecolo.org/Journal/vol3/iss2/index.html] accessed on April 13, 2001.

Proceedings

MacKinnon, R. (2003) Modelling water uptake and soluble solids losses by puffed breakfast cereal immersed in water or milk. In *Proceedings of the Seventh International Congress on Engineering and Food*, Brighton, UK.

Patent

Yoshikawa, T. and Kawai, M. (2006) Security robot. U.S. Patent No. 2006079998.

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Special issue from OR-Net 2011 Conference

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Foreword

In the special issue of Silpakorn University Science and Technology Journal (SUSTJ), six invited papers were selected from the 8th National Operations Research Conference 2011 (OR-Net 2011) held in Bangkok in September 2011. These papers were extended and had been reviewed according to SUSTJ process. This conference was very successful with over sixty papers submitted and presented during the period of September 8-9, 2011. Papers presented at the conference came from all parts of Thailand and encompassed many areas of operations research, logistics and manufacturing management, as well as applied statistics.

The first paper is a co-authored article by Pichpimon Kanchanasuttisang and Pongchanun Luangpaiboon with the title ***“Flexible Printed Circuit Process Improvement via Interchangeable Linear Constrained Response Surface Optimisation Models”***. The authors present a collection of experimental design and mathematical programming techniques for quality improvement in automotive electronic parts. Their paper improved the quality and performance of FPC by measurement via the relationship of the etched rate of acid solution and circuit width, one of the key failure and break down to LED of lighting vehicles.

Article number two entitled ***“Parameter Setting for Rod Push Production Process on Multiple Responses: A Case Study in Motorcycle Parts Factory”*** by Erawin Thavorn and Prapaisri Sudasna-na-Ayudhya presents the appropriate setting of parameters in the production process of Rod Push which have impacts on quality characteristics such as diameter and surface roughness. Central composite design was used to examine Rod Push produced by CNC with 5 controllable process factors including three factors from rough-cutting process (spindle speed, feed rate, and depth of cut) and two factors from finish-cutting process (spindle speed and feed rate).

The third paper is authored by Prachuab Klomjit and Paisan Chantasoponno. Their paper is entitled ***“The Study of Suitable Factors for Welding on Canned Food by Design of Experiment Method”***. In their co-authored article, the authors aim to use the proper conditions for high quality by experimental design method. The main factors included the electric current, a spring pressure, and a size of copper wire and overlap. The response variable included welding strength, welding flexibility, and welding thickness.

The fourth article is by Surasit Rawangwong, Jaknarin Chatthong, Julaluk Rodjananugoon, and Worapong Boonchouytan and is entitled ***“A Study of Proper Conditions in Face Milling Palmyra Palm Wood by Computer Numerical Controlled Milling Machine”***. The purpose of this article is to investigate the effect of main factors on the surface roughness (Ra) in Palmyra Palm wood face milling process by computer numerical controlled (CNC) milling machine and using shell end mill cutting tools 6 edges. It was found from the experiment that the factors affecting surface roughness were feed and speed, with tendency for reduction of roughness value at lower feed rate and greater cutting speed. Therefore, in the facing Palmyra Palm wood, it was possible to determine a face milling condition by means of the equation $Ra=0.954+20.4 \text{ feed}+0.00126 \text{ speed}$.

In the fifth article entitled “*Optimisation Using a Central Composite Rotatable Design for Lacquer Production Process*”, is co-authored by Chanpen Anurattananon, Suchavadee Pattanavatcharakul, and Mani Soyetch. The objective of this research is to study the controllable factors affecting the Lacquer quality and to find out the optimal conditions of the controllable factors by Central Composite Rotatable Design.

The sixth article is co-authored by Kanjana Thongsanit, Ronnakit Wattanamano, and Patipat Hongsuwan, and is entitled “*The Development of Mathematical Model for a University Course Timetabling Problem*”. Their paper aims to arrange the course timetable properly according to the limited resources, i.e. number of classrooms, loading capacity of classroom, periods, and number of teachers. The main objectives are 1) the lowest expenses generating; and 2) the least extra-period spending.

This special issue of SUSTJ provides responses and discussions that expand our knowledge in the field of operations research, logistics and manufacturing management, as well as applied statistics. Finally, we would like to thank cooperation from all committee and participants for successfully organising the OR-Net 2011 conference.

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