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

Judul Karya Ilmiah : Sliding mode control for therapeutic pool model control system
 Jumlah Penulis : 5 Orang (**Munadi**, Henry Kristianto, M. Ariyanto, Ismoyo Haryanto, Hari Peni Julianti)
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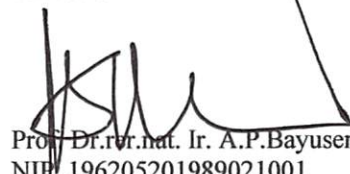
Semarang, 29 April 2020

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2. Ruang lingkup dan kedalaman pembahasan:

Prosiding ini mengajukan tentang desain system *sliding mode control* untuk mengendalikan temperature pada kolam terapi. Implementasi sliding mode control yang diimplementasikan pada model matematis kolam terapi telah disajikan dan ditulis dengan baik dan detail.

3. Kecukupan dan kemutakhiran data/informasi dan metodologi:

Prosiding ini mempunyai kemutakhiran metodologi yang sudah baik yaitu desain control menggunakan metode sliding mode control yang dapat mengendalikan suhu pada kolam terapi sehingga aman untuk digunakan ketika dilakukan terapi dalam kolam. Turnitin similarity index sebesar 6 %.

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Semarang, 29 April 2020
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NIP. 196205201989021001
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- Kecukupan dan kemutakhiran data/informasi dan metodologi:**
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Category number CFP1689Z-PRT; Code 127215

Sliding mode control for therapeutic pool model control system (Conference Paper)

Munadi^a [✉](#), Kristianto, H.^a [✉](#), Ariyanto, M.^a, Haryanto, I.^a, Julianti, H.P.^b

^aDepartment of Mechanical Engineering, Diponegoro University, Tembalang, Semarang, 50275, Indonesia

^bDepartement of Public Health and Preventive Medicine, Diponegoro University, Semarang, Indonesia

Abstract

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In this study we consider the robust control of a therapeutic pool model using Sliding Mode Control (SMC). Therapeutic pool is a warm water pool used for stroke therapy. It makes exercises for stroke patients easier than done outside water because of the water buoyant force which reduces human weight. The therapeutic pool which is designed in this study has two inlets and an outlet for drainage. The first inlet is for the hot water flow and the second is for the cold water flow. The two water flows are mixed in the therapeutic pool. The controlled variable is the mixed water temperature in therapeutic pool. Unsteady thermodynamics and mass balance are used to mathematically model the therapeutic pool. The SMC controller is designed to reject disturbances due to heat transfer from the mixed water to surrounding through the contacting surface between water and the free air stream. The usefulness of this technique is illustrated with a simulation. Desired temperature of therapeutic pool is successfully reached and maintained steady. The performance of SMC controller is compared to conventional PID (Proportional Integral Derivative) controller and the neural model of the conventional one. © 2016 IEEE.

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Topic: Speed control | Engines | Idle speed

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Author keywords

[robust](#) [SMC](#) [therapeutic pool](#)

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References (16)

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- 1 Montagna, J.C., Santos, B.C., Battistuzzo, C.R., Loureiro, A.P.C.
Effects of aquatic physiotherapy on the improvement of balance and corporal symmetry in stroke
(2014) *International Journal of Clinical and Experimental Medicine*, 7 (4), pp. 1182-1187. Cited 17 times.
<http://www.ijcem.com/files/ijcem0000023.pdf>

- 2 Kusumaastuti, P.
(2016) *Hidroterapi, Pulihkan Otot Dan Sendi Yang Kaku*
Accessed on Friday, April 10th
www.gayahidupsehat.com

- 3 Richter, H., Figueroa, F.
Sliding mode control of a thermal mixing process
Nasas Technology, Research , and Science

- 4 Richter, H.
Robust nonlinear control of a thermal mixing process
(2004) *Proceedings of the IEEE International Conference on Control Applications*, 2, pp. 1376-1381.
[View at Publisher](#)

- 5 Musmade, B.B., Munje, R.K., Patre, B.M.
Design of sliding mode controller to chemical processes for improved performance
(2011) *International Journal of Control and Automation*, 4 (1), pp. 15-32. Cited 20 times.
<http://serisc.org/journals/index.php/IJCA/article/download/152/144/>

- 6 Munadi, Naniwa, T.
Experimental verification of adaptive dominant type hybrid adaptive and learning controller for trajectory tracking of robot manipulators
(2013) *Journal of Robotics and Mechatronics*, 25 (4), pp. 737-747. Cited 10 times.
http://www.fujipress.jp/finder/access_check.php?pdf_filename=ROBOT002500040020.pdf&frompage=abst_page&errormode>Login&pid=4811&lang=English
[View at Publisher](#)

- 7 Munadi, Akbar, M.A.
Simulation of fuzzy logic control for DC servo motor using Arduino based on MATLAB/Simulink
(2014) Proceedings of 2014 International Conference on Intelligent Autonomous Agents, Networks and Systems, INAGENTSYS 2014, art. no. 7005725, pp. 42-46. Cited 27 times.
ISBN: 978-147994802-4
doi: 10.1109/INAGENTSYS.2014.7005723
[View at Publisher](#)
-
- 8 Cengel, Y.A.
(2015) Heat Transfer: A Practical Approach, pp. 463-469. Cited 2016 times.
2nd ed
-
- 9 Itkis, U.
(1977) Control Systems of Variable Structure. Cited 865 times.
John Wiley
-
- 10 Utkin, V.I.
Survey Paper: Variable Structure Systems with Sliding Modes
(1977) IEEE Transactions on Automatic Control, 22 (2), pp. 212-222. Cited 3729 times.
doi: 10.1109/TAC.1977.1101446
[View at Publisher](#)
-
- 11 Utkin, V.I.
(1992) Sliding Modes in Control Optimization. Cited 4962 times.
Springer-Verlag
-
- 12 Xiao, T., Li, H.-X.
Sliding mode control design for a rapid thermal processing system
(2016) Chemical Engineering Science, 143, pp. 76-85. Cited 12 times.
<http://www.journals.elsevier.com/chemical-engineering-science/>
doi: 10.1016/j.ces.2015.12.021
[View at Publisher](#)
-
- 13 Chen, C.-T.
A sliding mode control strategy for temperature trajectory tracking in batch processes
(2012) IFAC Proceedings Volumes (IFAC-PapersOnline), 8 (PART 1), pp. 644-649. Cited 3 times.
ISBN: 978-390282305-2
doi: 10.3182/20120710-4-SG-2026.00003
[View at Publisher](#)
-
- 14 Slotine Jean-Jacques, E., Weiping, L.
(1991) Applied Nonlinear Control. Cited 14404 times.
Prentice Hall
-

- 15 Toms, T., Hepsiba, D.
Comparison of PID controller with a sliding mode controller for a coupled tank system
(2014) *International Journal of Engineering Research & Technology*, 3 (2).

- 16 Abbas, H., Asghar, S., Qamar, S.
Sliding mode control for coupled-tank liquid level control system

(2012) *Proceedings - 10th International Conference on Frontiers of Information Technology, FIT 2012*, art. no. 6424344, pp. 325-330. Cited 28 times.

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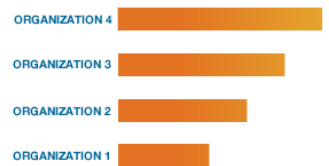
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Synopsis

Medium reservoir hydro electric power plant has been long serving as conventional renewable energy source in Indonesia, mostly in Jawa Island. Shortly after the independence of Republic of Indonesia, large hydro power plants began to be constructed for example Jatiluhur and Riam Kanan, followed by Sigura-gura, Cirata, Saguling, and several others more. Meanwhile small-sized and microhydro-run-of-river type hydro power plant has been developed since the early of 1970s through the joint corporation of ITB and Eindhoven University, this corporation developed turbine for microhydro power plant for load regulation. Some local industries, for instance PT. Hexa Pratama in Bandung, which have capacity to develop complete microhydro power plant system up to 300kW have been emerged after succesfully GTZ Programme back in the 1980s. Large hydro power plant is currently undergoing construction phase, it is expected that in 2019 Upper Cisokan pumped storage power plant with capacity of 1040 MW will be integrated with Jawa-Bali Interconnection System. Simple pico-hydro power plants are also constructed in several remote areas in Indonesia.

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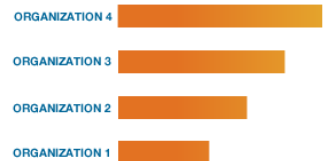
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I. Introduction

Network-on-Chip (NoC) [1] provides a flexible and extensible inter-core-communication infrastructure for many-core system-on-chips. However, due to multiple number of routers a packet has to traverse between a source and destination cores, as well as each individual router buffering, NoC-based systems can suffer from significant communication latency. Reducing NoC communication latency is important as many-core based applications are highly sensitive to inter-core communication latency. However, designing a low latency NoC router can be a challenge.

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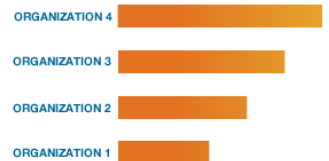
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Abstract: Summary form only given. Traditionally CCTV security and surveillance systems are meant for deterrent rather than for prevention where these systems will simply record scenes as viewed by video cameras regardless whether there is any activity or not. In the event of some criminal prosecution procedures, these recorded videos may be served as evidence in the court of law. The 9/11 incident has changed the way on how these video-based surveillance systems are being employed. More automated functions and "smart" algorithms have been incorporated into such systems so that these systems can detect moving object, identify to some degree what the object is and possibly tracking its movement. However, the problems of object identification, recognition, and tracking are far from being solved. The London bombing and the recently Boston bombing are proof that automatic system failed to identify the suspect. In fact, it took hundreds of man hours for the authority to finally identify the criminals. In this talk we will look at emerging smart vide-based surveillance systems. The talk will not focus on any particular model, or system or algorithms. Instead, the talk will concentrate on what are the opportunities and challenges faced by the existing systems. In particular, we will be exploring these from the perspective of image processing. Thus the talk will serve

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Abandon/Stolen Recognition, and Crowd Detection. It is hoped that this talk will motivate and inspire many other young researchers particularly from the ASEAN region to take more serious effort in this exciting field.

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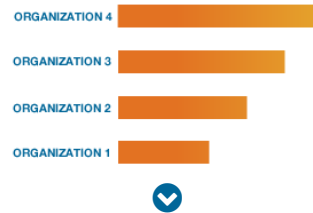
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The therapeutic pool is not rare to find in many health facilities all over the world. Therapeutic pool is used by stroke patients to do rehabilitation exercises in warm water. The type of exercise is formulated according to [1]. As it can be summarized, the main parameters are exercise types, the sequences, intensities, break time, warming up and cooling down. The mixed water temperature is also important, which is noted in [2], the convenient temperature range is from 31–34 °C. The problem of controlling amount of hot and cold water to produce a mixture having a desired temperature is familiar to everyone. In example, the problem appears as in [3], [4] which multivariable SMC controller is used [5]. In this paper we analyze the problem of obtaining mixed water temperature by modelling the therapeutic pool with differential equations. The differential equations are derived from the thermodynamics principle and mass balance equation.

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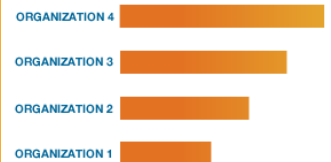
Comparison between the Canonical Correlation Analysis and the Support Vector Machines as classification algorithms in an SSVEP-based Brain-Computer Interface

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Abstract: Electroencephalography (EEG) which is the electrical signal recorded by the sensors attached on the human scalp to detect brain activities has been the emerging trends in digital signal processing. As compared to processing other types of digital data such as speech or audio signals, EEG signal processing is more challenging. However, EEG signals have practically found a wide range of important applications. In this paper, we propose a design of a brain-computer interface (BCI) using EEG's P300 component to a control application. First, we use the Emotiv EPOC headset to capture the raw EEG signals. Then, we adopt a classification algorithm by invoking support vector machine along with the selected extracted features to classify the two-class EEG trials (with and without P300 component). The algorithm is developed to help people express their selection of one among four commands. The experimental results are provided evaluate the classification accuracy.

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I. Introduction

Brain-computer interface (BCI) systems are designed for people with difficulties in communication or with severe motor disabilities to express the thoughts by using their bare EEG signals. On top of that, the P300 wave, which is an event-related-potential (ERP) of EEG or say in another way, a specific component of our brain signals, is used in many BCI systems thanks to its clear distinctively observable characteristics among the noisy background of EEG signals. The P300 is an endogenous component of EEG signals elicited by human's brains in the process of decision making. P300's clearly positive voltage peak usually occurs typically approximately at 300 milliseconds after stimulus onset presented by the so-called 'oddball paradigm', in which the low-probability target stimuli are mixed with high-probability non-target ones. Each stimulus is implemented on the computer screen by visual flashing (or intensification) its symbol image. Four images corresponding 4 controlled devices are shown in the screen, on which the subject would focus their eyesight at only one image as their intention, and it is implicitly known as his or her target stimuli, while the other 3 images are the non-target ones. The subject is presented with two categories of stimulus (target and non-target), and he or she is instructed to visually focus on the target stimuli to determine his or her intention.

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2018 IEEE International Conference on High Voltage Engineering and Application (ICHVE)

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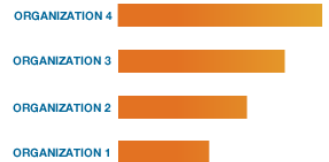
A review of modeling ageing behavior and condition monitoring of zinc Oxide Surge Arrester

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Abstract:

Third harmonic resistive leakage current and thermal imaging was commonly used as tool for monitoring and assessing the zinc oxide surge arrester condition. However, the measuring of leakage current on-site is highly influenced by electromagnetic interference (EMI) and caused difficulty to get accurate measurement. Thermography technique can be used to measure temperature of ZnO arrester without interfered by the EMI. However, temperature images resulted from thermal camera were difficult to analyze due to lack of additional information. This paper proposes thermal image temperature correlation with third harmonic resistive leakage current to monitor condition of ZnO arrester. The condition of ZnO arrester classifies as normal, suspicious and faulty based on its third harmonic resistive leakage current. Statistical features of thermal image histogram together with the third harmonic resistive leakage current were used. The multilayer perceptron (MLP) neural network was used to classify the condition of ZnO arrester. The result shows that accuracy of classification is approximately 97 %, which is highly encouraging.

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I. Introduction

Surge arresters have been widely used to protect distribution and transmission transformers against lightning, switching overvoltage [1]. The non-linear voltage-current characteristic of surge arrester [2] lead they function as high impedances at normal operating voltages and become low impedances during overvoltage condition to release surge current from line to ground. The evolution of arrester technology has been characterized by the gradual improvement. Several different types of arresters are available such as gapped silicon carbide (SiC) and non-gapped zinc-oxide (ZnO). The performance of gapped arresters is determined by electrical and thermal properties of the ZnO block. Compared with SiC arresters, ZnO offer a protection closer to the ideal. However, the ZnO arresters are contain no gaps, the high leakage current can flow through the varistors at normal voltage level, which causes power losses and heat of ZnO elements. This condition may lead to the risk of thermal runaway [3] resulting in extensive damage of the ZnO arresters.

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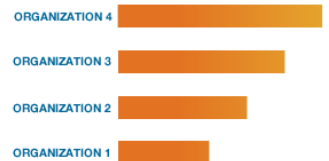
2011 IEEE 11th International Conference on Data Mining Workshops
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Abstract: Digital watermarking has been recognized as an effective technique to protect intellectual property by embedding secret information into the digital products. This paper presents a new watermarking technique for digital image applications by using the contourlet domain. The contourlet transform is a powerful tool to capture singularities along smooth object boundaries with different elongated shapes and directions that helps the watermarking technique to achieve high performance. Specifically, the host image is decomposed into subbands by using the contourlet transform. Then, the mid frequency subbands are chosen to embed watermark with suitable embedment factors. The peak signal-to-noise ratio (PSNR) and normalized correlation (NC) are used to evaluate the performance of the algorithm. Simulations on different images are carried out to evaluate the invisibility and robustness of the proposed scheme. The experimental results show that the proposed method outperforms the others in terms of invisibility and robustness for the lossy JPEG compression.

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Contents

I. Introduction

The rapid development of the Internet has resulted in new challenges in protecting copyrighted digital products. Watermarking is a potential technique to resolve this problem. In watermarking technique, by inserting hidden information into an digital product, the extracted hidden information can be used to protect the copyright ownership of the digital product. It is desired that the extra information is embedded should cause imperceptible degradation of digital host product. Then, the watermarking in the transform domain is of great importance. The wavelet transform has much success in many signal processing and communication applications such as it is used as the key transform for the new image-compression standard, JPEG-2000 [22]. However, wavelets provide an optimal representation for these signals in a certain sense for example: one-dimensional piecewise smooth signals [21] [4]. In addition to the 1-D bases, wavelets in 2-D are good at capturing the discontinuities at edge points, but will not capture the smoothness along the contours well [4]. Like signals, the orientation of signals is limited when the signals are processed by separable wavelets. Thus, we need a power tool to represent signals in higher dimensions. Here are some well-known systems that provide multi-scale and directional image representations, for example: 2-D Gabor wavelets [5], the cortex transform [6], the steerable pyramid [7], 2-D directional wavelets [8], brushlets [9], complex wavelets [10], and the contourlet transform [4]. However, the contourlet transform is flexible for multi-resolution, local, and directional image expansion using contour segments. The contourlet transform has an important feature that previous systems do not have. It allows a different number of directions at each scale and achieves nearly critical sampling. In addition, the contourlet transform can be implemented by iterated filter banks and, thus, it offers low computational complexity. Motivated by the advantages of the contourlet transform, we will focus on the image watermarking technique in the contourlet domain.

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Energy efficiency beamformers for K-user MIMO interference channels with interference alignment

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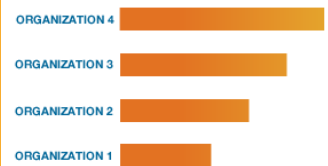
2018 IEEE Global Conference on Signal and Information Processing (GlobalSIP) Published: 2018

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In this paper, we present an optimal beamforming design for multi-user multiple-input multiple-output (MIMO) interference channels. Different from the conventional methods which are based on the sum-rate maximization or the sum mean square error minimization, this paper focuses on maximizing the energy efficiency (EE) of the system. We seek the optimal beamformers which maximize the EE of the system subject to the per-user power constraint while guaranteeing the quality of service of each user in terms of the user rate. Such a design problem is originally formulated as a nonlinear and nonconvex optimization which is difficult to solve directly. To tackle the mathematical challenges associated with nonlinear nonconvex fractional programming design problem, the proposed method employs interference alignment (IA) to cancel inter-user interference and, then develop an iterative algorithm to cope with the fractional programming. The numerical results demonstrate that the proposed method outperforms the existing methods in terms of the achievable EE.

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I Introduction

Research on multi-user multiple-input multiple-output (MIMO) interference channels has been of great interest since interference channels include a majority of wireless communication models [1], [2]. In such systems, multiple terminals share the same frequency at the same time and, therefore, inter-user interference makes the channel capacity degradation. Optimal designs of the precoding and postcoding matrices for interference channels are mathematically challenging due to the nonconvexity associated with the optimization problems. Extensive studies have focused on designing the transmit beamformers to maximize the sum-rate of the systems [1], [3]. Alternatively, the mean square error (MSE) minimization has been studied for the transceiver designs in MIMO broadcast channels [4] and in interference channels [5]. It was shown in [6] that the weighted MSE minimization is equivalent to the sum-rate maximization when the weights are optimally chosen. Recently, interference alignment (IA) has been an emerging technique for interference mitigation in wireless networks [2], [7], [8]. In IA schemes, the transmitters cooperate each other to align their signals into a reduced dimension subspace at the unintended receivers and reserve the interference-free subspaces for the desired signals. Due to its effectiveness in dealing with interference, IA has been applied in various wireless networks [9]–[12].

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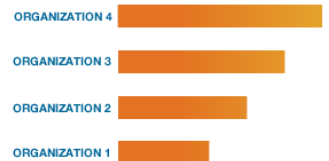
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The existing blind noise estimation called cyclic prefix based noise estimation without knowledge of a priori signal is simulated along with input of DVB-T and the multipath channel ITU-T pedestrian model A. The simulation is done by means to know NMSE and noise uncertainty over time observation with varied SNR. The NMSE shows a very good result and close to the result of the previous research. The corresponding noise uncertainty is simulated in order to observe the performance of detection of spectrum sensing. It has the result that such limitation of detection called SNR wall will not occur. Based on the research, the estimator is expected to be applied along with spectrum sensing in cognitive radio network.

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 **Contents**

I. Introduction

Cognitive radio appears to be one of the solutions of the limitations of existing spectrum. Cognitive radio evolved from a software defined radio (SDR) [1]. In order to become cognitive radio, SDR developed with the ability to manage and optimize the spectrum and network resources to generate an electromagnetic source used for the benefit of telecommunication users.

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