

Table of Content



Conference Committee	ii
Welcoming Speech from Rector ITS	iv
Welcoming from Director of Post Graduate ITS	v
Welcome Speech from Chairman of ISST 2015	vi
List of Keynote Speaker	vii
List of Invited Speaker	viii
Sponsor	x
Table of Content	xi
Conference Schedule	xix
Abstract of Keynote Session	
Science and Technology of Light: Recent Developments and Future Directions <i>Azzedine Boudrioua</i>	KS1-1
Potential of e-Learning for Enhancing Graduate and Undergraduate Education <i>Tsuyoshi Usagawa, Kohichi Ogata</i>	KS2-3
Invited Session	
Research Opportunities in Japanese Universities and Tips for Scientific Publications <i>Siti Machmudah</i>	IS1-7
Utilization of Local Materials in Green Concrete Technology <i>Ridho Bayuaji</i>	IS2-13
An Overview of Ganoderma lingzhi Constituents on α -Glucosidase and Aldose Reductase Inhibitor Activity <i>Sri Fatmawati</i>	IS3-15
Green Concept in Engineering Practice <i>Totok R. Biyanto</i>	IS4-17
Parallel Session	
A-101 Simulation Bursting Effects to The Performance Vertical Axiz River Turbine using Computational Fluid Dynamics <i>Aank Suseno, Hantoro Ridho, Gunawan Nugroho</i>	A101-25
A-103 Economical Aspect of Heat Exchanger Cleaning Affected by Fouling <i>Mades Darul Khairansyah, Totok R. Biyanto</i>	A103-27
A-104 Cost Optimization in Scheduling on Cleaning Heat Exchanger <i>David Licindo, Renanto Handogo, Juwari Purwo Sutikno</i>	A104-29
A-107 QM/MM Dynamics of Proton Transport in Chitosan/Phosphotungstic Acid Composite Membrane for Direct Methanol Fuel Cell	A107-31

Table of Content



	<i>Linda Windia Sundarti, Lukman Atmaja, I Gusti Made Sanjaya</i>	
A-108	Enhancement Concentration of Bioethanol Through Packed Sieve Tray Distillation	A108-33
	<i>Fadlilatul Taufany, I G. N. Pranata Adi Putra, Rydho Jalu Nuringtyas</i>	
A-109	Impact of Biogas Purification System on Generated Power in Gas Engine Generator	A109-35
	<i>Fadlilatul Taufany, Bobby Rama Jaya R, Ardhiya</i>	
A-111	Simulation of Solar-Assisted Single Stage Absorption Chiller as Ice Maker Based on MATLAB	A111-37
	<i>Ridho Hantoro, Dwi Ganef Janesa</i>	
A-112	Determination Analysis of Dish Collector Focal Shape in Vertical and Horizontal Direction to Know Performances of Concentrating Solar Power System	A112-39
	<i>Dany Iman Santoso, Djatmiko Ichsan</i>	
B-113	Esterification of Waste Cooking Oil using Heterogeneous Catalyst: An Experiment for the Catalytic Chemistry Laboratory	B113-41
	<i>Nungky Purwasusanti, Ratna Ediati</i>	
B-114	Waste Power Plant Modeling Based Landfill Pretreatment and HCCI (Homogeneous Charge Compression Ignition) Generator Engine	B114-43
	<i>Wahyu Hendra W, Gunawan Nugroho</i>	
B-115	Model Based Controller with Internal Model Control (IMC) which Tuning by Set Point and Disturbance on Power Plant Based HYSYS	B115-45
	<i>Hendrik Elvian Gayuh Prasetya, Totok R. Biyanto</i>	
B-201	Evaluation of The Suitability of Urban Parks Based on The Characteristic of The Elderly's Needs in Surabaya	B201-47
	<i>Anindita Ramadhani, Endang Titi Sunarti Darjosanjoto, Murni Rachmawati</i>	
B-202	Waste Transportation System Optimization on Azzahara Material Recovery Facility (MRF) Bengkulu City	B202-49
	<i>Rendra Satria, Putu Artama, Joni Hermana</i>	
B-203	The Arrangement of Downtown Area as Effort to Represent Identity of Ambon [Case Study: A. Y. Patty Street Area]	B203-51
	<i>Kreisson Pisty Larwuy, Endang Titi Sunarti Darjosanjoto, Murni Rachmawati</i>	
B-206	The Partnership Benefits in Low-cost Apartment Implementation Program in Surabaya Metropolitan Area	B206-53
	<i>Muntoha M, Soemitro R.A.A, Rahmawati F</i>	
B-207	The Spatial Consequences of High-Rise Building Upon The Public Space of Basuki Rahmat Corridor, Surabaya	B207-55
	<i>Annisa Budhiyani Tribhuwaneswari, Endang Titi Sunarti Darjosanjoto, Murni Rachmawati</i>	
B-208	PVDF/TiO ₂ /PEG Hollow Fiber Membrane for Oily Wastewater Treatment at Various Concentration of Oily Wastewater	B208-57
	<i>Fithri Yatul Humairo, Chi Siang Ong, Nurul Widiasuti, Ahmad Fauzi Ismail, Shabrina Adani Putri, Juhana Jafar</i>	

Table of Content



B-209	The Effects of Mechanical Milling and Nb-Based Additives on the Kinetics Sorption Properties of 2LiBH4-MgH2 <i>Farhanah Marwan, Raphaël Janot, Jean-Noël Chotard</i>	B209-59
C-210	PVDF/PEG/TiO2 Hollow Fiber Membrane for Lead(II) Removal <i>Shabrina Adani Putri, Fithri Yatul Humairo, Chi Siang Ong, Nurul Widiastuti, Juhana Jaafar, Ahmad Fauzi Ismail</i>	C210-61
C-213	Characteristics of Fishermen Communities in The Coastal of East Balikpapan <i>Tiara Irawanti, Eko Budi Santoso, and Haryo Sulistyarto</i>	C213-63
C-214	Spatial Modelling Of Religious Tourism Development Strategy with Special Reference of Aer Mata Cemetery Bangkalan Madura, Indonesia <i>Katherine E.D.P. Permanasari, Endang Titi Sunarti Darjosanjoto, Murni Rachmawati</i>	C214-65
C-216	3D Seismic Tomography Imaging of Taiwan Substructure <i>Susi Anggraini Diah Ningrum, Bagus Jaya Santosa</i>	C216-67
C-217	The SFA-LSSVM as a Decision Support System for Mitigating Liquefaction Disasters <i>Julian Pratama Putra Thedja, Jui-Sheng Chou, Tri Joko Wahyu Adi</i>	C217-69
C-218	The Effect of Green Building Application to Property Value <i>Fitri Rahmawati, Christiono Utomo, Purwanita Setijanti</i>	C218-71
D-301	A Review on User Perception of Desktop and Mobile Service Website Using Webqual and User Experience Approach <i>Rizqiyatul Khoiriyah, Apol Pribadi Subriadi</i>	D301-73
D-302	Kinect Depth Image Processing for Hand Motion Recognition using Neural Network Backpropagation <i>Syamsiar Kautsar, Purwadi A. Darwito</i>	D302-75
D-303	Self Tuning Sliding Mode Control for Quadrotor Waypoint Tracking <i>Swadexi Istiqphara, Trihastuti Agustinah, Ali Fatoni</i>	D303-77
D-304	Analysis of N-nitrosodipropylamines Carcinogenic Compound to Meat-Processing using Headspace-Single Drop Microextraction-Gas Chromatography-Flame Ionization Detector (HS-SDME-GC-FID) <i>Teguh Hari Sucipto, Ganden Supriyanto, Yanuardi Raharjo</i>	D304-79
D-305	An analysis of e-commerce adoption for small and medium enterprises in Indonesia <i>Fauzan Fahruzzaman, Apol Pribadi Subriadi</i>	D305-81
D-306	Braille Character Recognition Using Artificial Neural Network <i>Joko Subur, Tri Arief Sardjono, Ronny Mardiyanto</i>	D306-83
D-307	Implementation of Navigation Target Seeker Mobile Robot Based on Pattern Recognition with Fuzzy Kohonen Network (FKN) Methods <i>Aditya P. P. Prasetyo, Katjuk Astrowulan, Ali Fatoni</i>	D307-85
D-309	Parsing Indonesian Syntactic with Recursive Neural Network	D309-87

Table of Content



	<i>Karisma Trinanda Putra, Djoko Purwanto, Ronny Mardiyanto</i>	
D-310	The Design of e-learning (share.its.ac.id) course “Sistem Pengendalian Otomatis” to Support Effective Learning Outcomes	D310-89
	<i>Syamsul Arifin, Aulia Siti Aisjah, Nurlita Gamayanti, Tutug Dhanardono, Yaumar, Yusuf Bilfaqih</i>	
D-311	Design Fuzzy Disturbance Observer with Neuro-Fuzzy Invers Model for Parallel Hybrid Electric Vehicle Speed Controller	D311-91
	<i>Yoga Alif Kurnia Utama, Trihastuti Agustina, Josaphat Pramudijanto</i>	
E-312	The Fusion of Smartphone Sensors for Indoor 3D Position and Orientation Estimation	E312-93
	<i>Hani Ramadhan, Charles Lenay, Dominique Lenné</i>	
E-313	Automatic Detection of Proliferative Diabetic Retinopathy with Hybrid Feature Extraction Based on Scale Space Analysis and Tracking	E313-95
	<i>Wilda Imama Sabilla, Rully Soelaiman, Chistine Faticah</i>	
E-314	Prioritizing Usability Factors for Website Usability Improvement: A Case Study of Student Information System of Brawijaya University	E314-97
	<i>Niken Hendrakusma Wardani, Apol Pribadi Subriadi</i>	
E-315	Filmless Hospital with PACS as a Workflow Controller, Case Study: National Hospital Surabaya	E315-99
	<i>Romeo, Febriliyan Samopa</i>	
E-316	Solving Course Timetable Problem by using Integer Linear Programming (Case Study IE Department of ITS)	E316-101
	<i>Fakher Shwan Rafeek, Nurhadi Siswanto</i>	
E-317	Signal Enhancement by Single Channel Source Separation	E317-103
	<i>B. T. Atmaja, Dhany Arifianto</i>	
E-318	A Hybrid Approach Support Vector Machine (SVM) – Neuro Fuzzy For Fast Data Classification	E318-105
	<i>Elsen Ronando, M. Isa Irawan, Erna Apriliani</i>	
E-319	Comparative Study on Data Mining Methods in Structural Reliability Prediction	E319-107
	<i>Willy Husada, I-Tung Yang, Tri Joko Wahyu Adi</i>	
E-320	Distortion Inspection System Development of Rearview Mirror using Radial Line Method Based on Image Processing	E320-109
	<i>Detak Yan Pratama, Apriani Kusumawardhani, Aulia M T Nasution, Andi Rahmadiansyah, Achmadi</i>	
E-322	Sliding Mode Control System of Single Phase Buck-Boost Inverter with Buffer Inductor	E322-111
	<i>Purwadi Agus Darwito, Arief Abdurrakhman, Almas Fachrullah</i>	
F-402	Calculation Method to Analyze Concordance Between Supply and Demand of Bus Public Transport For Morning Commuter Trip at Gubeng Station	F402-113
	<i>Jos Oktarina Pratiwi, Hitapriya Suprayitno</i>	
F-404	Managing Risk of Lean Manufacturing Concept Implementation Approaching by Delphi and HOR	F404-115

Table of Content



	<i>Wiwin Widiasih, Putu Dana Karningsih, Udisubakti Ciptomulyono</i>	
F-405	The Significant of Cobit Mapping Business Goal 12 and IT Goal 19 (Case Study: Stikom Surabaya)	F405-117
	<i>Siti Mukaromah, Apol Pribadi Subriadi</i>	
F-406	Method for Assessing Implementation of Design Build Project Delivery System in Indonesian Road Infrastructure Projects (Cases Study : Balai Besar Pelaksanaan Jalan Nasional V)	F406-119
	<i>Asri Maharani, Hitapriya Suprayitno, Herry Budianto</i>	
F-407	Business Process Anomaly Detection using Multi-Level Class Association Rule Learning	F407-121
	<i>Fernandes Sinaga, Rryanarto Sarno</i>	
F-408	Performance Improvement of Business Process Similarity Calculation using Word Sense Disambiguation	F408-123
	<i>Endang Wahyu Pamungkas, Rryanarto Sarno, Abdul Munif</i>	
F-410	The Influence of Product and Facade Design towards its Selling Price	F410-125
	<i>Immanuel Mbake, Christiono Utomo, Purwanita Setijanti</i>	
F-411	The Market Opportunities of Hotel Investment in Semarang	F411-127
	<i>Nadiar Pratiwi, Christiono Utomo, Purwanita Setijanti</i>	
G-501	Computational Fluid Dynamics Analysis Into The Improvement of Seakeeping Characteristics of a Fast Craft Using Axe-Bow	G501-129
	<i>Romadhoni, IKAP Utama, Binbin LI</i>	
G-502	Analysis of Spatial Characteristic of Maritime Weather in Java Sea Water	G502-131
	<i>Rachmad Andri Atmoko, Aulia Siti Aisjah, Gunawan Nugroho</i>	
G-503	Vessel Collision Avoidance System (VCAS) Based on AIS Data	G503-133
	<i>Arinta Y. Wardani, A.A. Masroeri, Aulia S. Aisjah</i>	
G-504	Design of Tracking System and Disturbance Rejection using Neural Networks for Autonomous Underwater Vehicle	G504-135
	<i>Abdul Muis Prasetya, Trihastuti Agustinah, Joko Susila</i>	
G-507	Analysis of The Dynamic Stability Positioning Control System of Semisubmersible	G507-137
	<i>Aulia Siti Aisjah, Eko Budi Djatmiko, Riza Aris Hikmadiyar, Nur Kholis</i>	
G-601	Acoustic Performance of Live Music Café as Broadcasting Studio Concept at Shop Houses in Surabaya	G601-139
	<i>Prilya Lutvitania Pradita, Ima Defiana, Wiratno Argo Asmoro</i>	
G-602	HAZOP Study Based ANFIS Layer of Protection Analysis on Unit Kiln PT. Semen Indonesia Factory Tuban	G602-141
	<i>Henry Prasetyo, Ali Musyafa</i>	
G-604	Design of Model Predictive Torque Control (MPTC) for Speed Control 3 Phase Induction Motor with Robust Stator Flux Observer	G604-143
	<i>Halim Mudia, Mochammad Rameli, Rusdhianto Efendi</i>	

Table of Content



H-605	Effects of Acetic Anhydride toward Degree of Substitution on Acetylation Method of Sago Starch (<i>Metroxylon sp</i>) from Papua <i>Yuliya Andriani Nanggewa, Adi Setyo Purnomo, Surya Rosa Putra</i>	H605-145
H-606	Study Interpretation Phenomenon Vibration Magneto-Mechanical Fesi Sheets for Magnetic Transformer <i>Mukhamad Aziz, Vincent Lanfranchi, Nicolas Buiron</i>	H606-147
H-608	Aliphatic Biomarker Coal of Seram Island, Maluku Province <i>Jein Jelsi Lamia, R.Y. Perry Burhan</i>	H608-149
H-610	Effect of Phospotungstic Acid Toward Composite Membrane for DMFC Application <i>Sri Endang Suharini, Dian Permana, Lukman Atmaja</i>	H610-151
H-611	Effect of Calcium Carbonate as Filler at the Chitosan/CaCO ₃ Composite Membrane <i>Retno Rahayu Dinararum, Dian Permana, Lukman Atmaja</i>	H611-153
H-612	Isolation of Antioxidant Compounds from <i>Mangifera indica</i> L. Leaves <i>Fitria, Sri Fatmawati, Taslim Ersam</i>	H612-155
H-613	Organic Geochemistry Study of Aliphatic Fraction of Bontang Coal, East Borneo <i>Titik Andriani, R. Y. Perry Burhan</i>	H613-157
H-614	Design of Temperature Measurement System Design Process on The Process of Drying Madura Tobacco Leaves <i>Humadillah Kurniadi Wardana, Endarko</i>	H614-159
H-615	Synthesis of Polymeric Membrane for Desalination Process <i>I Made Pendi Adi Merta, Deffry Danius Dwi Putra, Siti Nurkhamidah, Yeni Rahmawati, Fadlilatul Taufany</i>	H615-161
H-616	Synthesis of Nickel(Ni) Doped HKUST-1 using Solvothermal Method with Addition of Acetic Acid as Modulator <i>Farhan Fikri Safii, Ratna Ediati</i>	H616-163
I-617	Silica-Coated Mesoporous Carbon as Solid Dessicant in Gas Dehydration Process <i>Fadlilatul Taufany, Fahmi, Nurhamidah</i>	I617-165
I-618	Simulation Study of Parameter Estimation Two-Level GSTARX-GLS Model <i>Andria Prima Ditago, Suhartono</i>	I618-167
I-619	Work Function Modulation with Self-assembled Monolayers: Effect of Dipole Moment on Packing Density <i>Nia Nurfitria, Yu-Tai Tao, Ding-Chi Huang</i>	I619-169
I-620	Conceptual Model Cognitive, Affective, Physical, and External Factor for Individual Information Technology Acceptance <i>Anfazul F. Azizah, Tony Dwi Susanto</i>	I620-171
I-621	Simulation of Generalized Space-Time Autoregressive with Exogenous Variables Model with Variable of Type Metric	I621-173

Table of Content



	<i>Reza Mubarak, Suhartono</i>	
I-623	Interfacial Properties and Foamability of Amphiphilic Molecules <i>Stella Widyaningtyas, Audrey Drelich, Isabelle Pezron</i>	I623-175
I-624	Study of Morphology of Film Reduced Graphene Oxide from Coconut Shell Kusuma Wardhani Mas'udah, Fahmi Astuti, Darminto	I624-177
I-625	Prediction of Ternary Vapor-Liquid Equilibria for Alcohols + Glycerol + Water Systems to Enhance the Quality of Glycerol as Biodiesel Side Product <i>Eviana D. Setiawati, Asalil Mustain, Gede Wibawa</i>	I625-179
I-626	Energy Profile of Faster-than-Light Particles : A New Approach to The Special Theory of Relativity <i>Matradji, Tutug Dhanardono, Heri Justiono</i>	I626-181
I-627	Fault Diagnosis of Rotating Machinery based on Acoustic Emission using PARAFAC-Source Separation <i>Anindita Adikaputri Vinaya, Dhany Arifianto</i>	I627-183
I-628	Vibration Effect on the SMS Fiber Structure <i>Ika Puspita, Ayu Kusumawardhani, Sekartedjo, A. M. Hatta</i>	I628-185
J-629	Study of The Correlation Between Contact Angle Values with The Polarity of Liquids <i>Muhammad Alwi Syahara, Fredy Kurniawan, Wahyu Anggriawan</i>	J629-187
J-631	Performance Test of Double Crosses Membrane Contactor for Simultaneous Absorption-Desorption Of CO ₂ Using Diethanolamine <i>Yeni Rahmawati, Toto Iswanto, Muhammad Rifa'i</i>	J631-189
J-632	Effect of Sodium Hidroksida (NaOH) in Bitumen Separation Process from Asbuton in Hot Water <i>Afan Hamzah, Dita Ahmeta Ferdiansyah, Siti Nurkhamidah, Susianto</i>	J632-191
J-633	Synthesis and Cytotoxicity of 4-Allyl-2-methoxyphenyl propionate <i>Lingga Kamadatu, Mardi Santoso</i>	J633-193
J-634	Microbend in an SMS Fiber Structure <i>Fitri Rahmah, Sekartedjo, Agus Muhamad Hatta</i>	J634-195
J-635	Aromatic Hydrocarbons of Wondama Coal, Papua Barat <i>Christoffel S. I. Maweikere, R. Y. Perry Burhan</i>	J635-197
J-636	Effect Of Glutaraldehyde Concentration Variation Toward Properties and Performance of Composite Membrane (Chi-Mmt) for DMFC Application <i>Sudir Umar, Dian Permana, Lukman Atmajah</i>	J636-199
J-637	Photochemistry in CuInS ₂ Quantum Dots/Polyoxometalate System <i>Azzah Dyah Pramata, Tetsuya Kida</i>	J637-201
J-638	Surface Functionalization of Upconversion Nanoparticle for Biological Usage <i>Devi Wahyuningtyas, Hsien-Ming Lee, Hua-De Gao</i>	J638-203

Table of Content



J-639	Prediction of Ceramic's Mechanical Properties Based on Sintering Temperature Using Neural Network <i>Zulkifli, Detak Yan Pratama, Dyah Sawitri, Purwadi Agus Darwito</i>	J639-205
J-640	Stability Control Design of Sigma Class Ship Firing Mode using Fuzzy Gain Scheduling-PID <i>Ii Munadhif, Aulia Siti Aisjah, A.A. Masroeri</i>	J640-207