

Technical Session

Time Table

		Hall	venue A	venue B	venue C	venue D	venue E
Welcome	9:00-9:20	Welcome					
Keynote	9:20-10:00	Keynote					
Sessin 1	10:10-11:10		data process	control system	renewable	telecomm & network	environ-ment
Sessin 2	11:15-12:15						
Sessin 3	13:15-14:15				material		biometry
Sessin 4	14:20-15:20		power & energy	geotec & geograph	structure & fluid	education	
Sessin 5	15:25-16:25						
Company	16:30-17:15	company					

Additional keywords of Time Table:

data process	image analysis, sound, neural network, data mining, classification, transport
power & energy	power system, grid, hybrid, storage, inverter, converter, HEMS
control system	motor, automation, robotics, drone, circuit, nonlinear, bridge
geotec & geography	geology, vein, flood, terrain, disaster, geography, rural, culture, economy
renewable	natural energy, renewable energy, chemical reaction
structure & fluid	analysis and simulation of structure & fluid, thermal conductivity
telecomm & network	telecommunication, wireless, laser, security, cipher, routing, CPU
environment	radiation, bacteria, green campus, water, heavy metal, cotton, seed oil, N ₂

venue A

Technical Session

Data Processing

1-64

Session-1	10:10-11:10	Data Processing (1)	venue A
Chairperson	Wimol San-Um, <i>Thai-Nichi Institute of Technology, Thailand</i> Zin Mar Lwin, <i>MTU, Myanmar</i>		
		“Color image steganography using cryptography and Magic LSB Substitution Method (M-LSB-SM)”	
		.....Aye Thu Hlaing, Khin Myo Thant, <i>Mandalay Technological University, Myanmar</i>	1
		“Development of gamma column scanning by imaging technique with MCNP simulation”	
	Zin Bo Oo, Khaing Nyunt Myaing, Myo Zaw Htut, <i>Technological University(Kyauk Se)</i>	6
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	Jaturon Ngerplubpla, Wimol San-Um, <i>Thai-Nichi Institute of Technology, Thailand</i>	11

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“Vehicle tracking by using blob detection with MOG2 background subtractor and franeback optical flow”	17
..... Swe Swe Win, Wut Yi Win, Me Me Ko, <i>Mandalay Technological University, Myanmar</i>	
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..... Nwe New, <i>Computer University (Monywa), Myanmar</i>	
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..... Mi Mi Myint Phu, Yin Yin Aye, <i>Mandalay Technological University, Myanmar</i>	
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..... Nu War, May Phyo Oo, <i>University of Computer Studies (Banmaw)</i>	
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..... Shwe Sin Thein, <i>University of Computer Studies, Myanmar</i>	
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Technical Session	Power and Energy System	65-123
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Session-3	13:55-14:15	Power and Energy System (1)	venue A
Chairperson	Nguyen Huu Phuc, <i>Ho Chi Minh City Univ. of Tech., Vietnam</i> Wanna Swe, <i>MTU, Myanmar</i>		

“Comparative analysis of conventional inverter and five-level diode-clamped multilevel inverter for interfacing to 11 kV AC grid”	····· Yu Yu Khin, Wanna Swe, <i>Mandalay Technological University, Myanmar</i>	65
“Voltage mode control of two-phase interleaved boost converter with two separate input inductors”	····· Yin Yin Phyo, Tun Lin Naing, <i>Mandalay Technological University, Myanmar</i>	67

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	Wanna Swe, <i>MTU, Myanmar</i>		

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“Develop a switching function model and experimental validation of three-phase step-wave inverter between 120° and 180° conduction”	····· Nandar Htin Win, Tun Lin Naing, <i>Mandalay Technological University, Myanmar</i>	87
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Chairperson	Nguyen Huu Phuc, <i>Ho Chi Minh City Univ. of Tech., Vietnam</i>		
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Chairperson	Kunanon Kittipute, <i>Thai-Nichi Institute of Technology, Thailand</i> Wiut Yee Win, <i>MTU, Myanmar</i>		
“Simulation of design and construction of quadcopter with EDF in Mandalay”			
·····	Mya Hnin Su, Aung Bhone Pyi,	<i>Myanmar Aerospace Engineering University, Myanmar</i>	124
“Simulation of development of tri-copter in Mandalay”			
·····	Mya Hnin Su, Aung Bhone Pyi,	<i>Myanmar Aerospace Engineering University, Myanmar</i>	126
“Object tracking method for unmanned aerial vehicles based on visual feedback”			
·····	Kazuki Nagahata, Riku Tatsuta, Keita Yoshida, Yoshimichi Ito, and Isao Iyoda,	<i>Osaka Electro-Communication University, Japan</i>	128
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·····	Nang Yi Phoo Thet, Myint Thein, Htay Htay Win,	<i>Mandalay Technological University, Myanmar</i>	130
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·····	Lu Mai, Maung Maung Latt, Kyaw Zin Latt,	<i>Mandalay Technological University, Technological University (Taungoo), Myanmar</i>	136
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·····	Mo Mo Aung, Saw Aung Nyein Oo,	<i>Mandalay Technological University, Myanmar</i>	139
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Chairperson	Kunanon Kittipute, <i>Thai-Nichi Institute of Technology, Thailand</i> Wiut Yee Win, <i>MTU, Myanmar</i>		
“Wheel speed calculation for twin spherical balls robot”			
·····	Ei Ei Wai Myo Win, Aung Ko Win, Aung Myat San,	<i>Mandalay Technological University, Myanmar</i>	145
“A unified periodically forced macroscopic oscillator model based on signal and system theory”			
·····	Kunanon Kittipute, Wimol San-Um and Pramote Wardkien,	<i>Thai-Nichi Institute of Technology, King Mongkut's Institute of Technology, Thailand</i>	151
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·····	Soe Nay Lynn Aung, Akimenko D.A.,	<i>Mandalay Technological University, Myanmar, Bauman Moscow State Technical University (Kaluga Branch), Russia</i>	156
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·····	Tin Tin Nwet,	<i>University of Computer Studies (Sittway), Myanmar</i>	160
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·····	Thaw Tun Ko,	<i>Mandalay Technological University, Myanmar</i>	163
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	Zin Maw Tun, Tun Lin Naing, <i>Mandalay Technological University, Myanmar</i>	168
“PID based trajectory tracking control of autonomous mobile robot”			
	Me Me Ko, Kyaw Thiha, Swe Swe Win, <i>Mandalay Technological University, Myanmar</i>	174
“Designing a typical class AB audio amplifier and analysing the effect of DC power supply on crossover distortion”			
	Thit Waso Khine, May Nwe Myint Aye, <i>Technological University (Lashio), Mandalay Technological University, Myanmar</i>	180

Technical Session Geotechnical Engineering and Geography 184-229

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Chairperson	Atsushi Okuno, <i>Green Planets Co. Ltd., Japan</i> Su Su, <i>MTU, Myanmar</i>		
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	Thin Thin Soe, Nay Chi Htun, <i>Pyay Technological University, Myanmar</i>	184
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	Rujira Chaysiri, Chalwalit Jeenanunta, Nimesha Priyangi Senanayake Ihala Gamage, Sirindhorn <i>International Institute of Technology, Thammasat University, Thailand</i>	188
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“Accuracy assessment of land cover change using GIS (case area: Pyin Oo Lwin Township)”			
	Htet Ne Oo, Thett Oo Eain, <i>University of Technology (Yatanarpon Cyber City), Myanmar</i>	191
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	Masanori Homma, Vu Van Khoa, Shigeru Takayama, <i>Ritsumeikan University, Japan</i>	197
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	Kohei Tanaka, Shigeru Takayama, <i>Ritsumeikan Univ., Japan</i>	199
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	Aye Mya Thein, Kyaw Zaya Htun, Zin Mar Lwin, <i>Mandalay Technological University, Myanmar</i>	201

“Developing regional flood frequency curve for Ayeyarwaddy basin”

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Chairperson	Masanobu Nagata, <i>Ichinoseki Tech. High Sch., Japan</i> Su Su, <i>MTU, Myanmar</i>		

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…… Myat Soe Phyu, *Mandalay Technological University, Myanmar* 211

“Geotechnical assessment of rock mass and potential failures in stope mining at NPGPGL underground gold mine, Myanmar”
…… N. Naung, H. Shimada, T. Sasaoka, A. Hamanaka, S. Wahyudi and M. Pisith,
Kyushu University, Japan 215

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“The significance of colonial built heritage in Pyin-Oo=Lwin's urban area, Myanmar”
…… Than Htay Oo, *Mandalay Technological University, Myanmar* 223

“Paleontology of the Nan Un – Kong Tha area, Hsipaw Township, Northern Shan State”
…… Swe Hnin Maung, Khaing Khaing San, Zar Ni Swe,
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Technical Session **Renewable Energy** 230-268

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Chairperson	Hironari Nozaki, <i>Aichi Univ. of Edu., Japan</i> Htay Htay Win, <i>MTU, Myanmar</i>		

“Research for fabrication of lithium ion capacitor by new pre-doping method”
…… Tetsuroh Hisada, Shouji Usuda and Isao Iyoda, *Osaka Electro-Communication University* 230

“Research for fabrication of lithium-ion capacitor by vertical doping method”
…… Kiyoto Shiiba, Tetsuroh Hisada, Shouji Usuda and Isao Iyoda,
Osaka Electro-Communication University 234

“Research for fabrication and application of lithium iron phosphate battery (LiFePO4 battery)”
…… Hiroki Ikeda, Shouji Usuda and Isao Iyoda, *Osaka Electro-Communication University* 237

“Fuel from plastic wastes by pyrolysis process”
…… Tin Tun Lwin, Moe Thanda Kyi, *Myanmar Aerospace Engineering University, Myanmar* 241

“An automatic pressure control method to continuous hydrogen generation system”
…… Yu Cherry Aung, Ichijo Hodaka, *University of Miyazaki, Japan* 243

“Development of an apparatus for observation of fundamental biomass reaction”
…… Moe Thanda Kyi, Reiji Noda,
Myanmar Aerospace Engineering University, Myanmar, Gunma University, Japan 245

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Chairperson	Hironari Nozaki, <i>Aichi Univ. of Edu., Japan</i> Htay Htay Win, <i>MTU, Myanmar</i>		
“Terrain characteristic function for prediction of wind farm power generation”			
·····	Shoshi Inoue, Toshiyuki Nagoshi, Mayumi Yoshioka, Kaei Washino and Satoshi Itou, <i>Hokkaido University of Education, Iwate University, Nagoya University, Gifu Shotoku Gakuen University</i>		247
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·····	Ei Mon Zaw, Aung Ze Ya, <i>Yangon Technological University, Myanmar</i>		263

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Chairperson	Atsushi Okuno, <i>Green Planets Co. Ltd., Japan</i> Chaw Su Su Hmwe, <i>MTU, Myanmar</i>		
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·····	May Nwe Myint Aye, Than Htike Aung, <i>Mandalay Technological University, Myanmar</i>		269
“Polymer encapsulation of calcium sulfoaluminate (CSA) cement”			
·····	Yaminn Lwin, Tint Tint Kywe, <i>Yangon Technological University, Myanmar</i>		273
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“Analysis on temperature-dependent band gap variation of solar cell materials”			
·····	Su Myat Paing, Tin Tin Hla, <i>Mandalay Technological University, Myanmar</i>		282
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Chairperson	Jaturon Ngernplubpla, <i>Thai-Nichi Institute of Technology, Thailand</i> Nilar Aye, <i>MTU, Myanmar</i>		
“Numerical study on flow characteristics of axial flow hydro turbine”			
·····	Nandar Win, Myat Myat Soe, <i>Mandalay Technological University, Myanmar</i>		291

“Design and analysis of loopwing horizontal axis wind turbine blade based on solidity and airfoil profile” Aye Aye Aung, Myat Myat Soe, <i>Mandalay Technological University, Myanmar</i>	297
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“Structural analysis of compressor impeller for turbocharger” Ni Ni Hlaing, Htay Htay Win, <i>Mandalay Technological University, Myanmar</i>	313
“Structural analysis of car's wheel rim under different materials and speeds” May Zon Than Oo, Htay Htay Win, Aung Ko Latt, <i>Mandalay Technological University, Myanmar</i>	320

Session-5	15:25-16:15	Structure and Fluid (2)	venue C
Chairperson	Jaturon Ngernplubpla, <i>Thai-Nichi Institute of Technology, Thailand</i> Nilar Aye, <i>MTU, Myanmar</i>		
“Numerical analysis of influence of Helmholtz resonator in cancelling low frequency noise” Thiha Zaw, Aminudin Abu, Oo Kyaw Nyein, Sanda Pyae Sone, <i>Universiti Teknologi Malaysia, Malaysia</i>	326	
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“Experimental investigation of horizontal axis wind tunnel” Myat Myat Soe, <i>Mandalay Technological University, Myanmar</i>	333	
“Health monitoring of a long span steel arch bridge”	..... San Yu Khaing, <i>Mandalay Technological University, Mandalay, Myanmar</i>	336	
“Identification of fracture critical members and redundancy analysis in steel truss bridge” Wai Wai Tun, San Yu Khaing, <i>Mandalay Technological University, Myanmar</i>	338	

venue D

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Chairperson	Chadaporn Keatmanee,, <i>Thai-Nichi Institute of Technology, Thailand</i> Nan Aye Aye Htwe, <i>MTU, Myanmar</i>		
“Study of spectrum utilization using wireless VLAN” Khin Kyu Kyu Win, Soe Lin Phyo, Ye Yint Moe, <i>Yangon Technological University, Myanmar</i>	342	

“A dual-sense circularly-polarized printed monopole antenna for GPS and wireless communications”	..... Zaw Myo Lwin, Thae Su Aye, <i>Technological University (Kyaukse), Myanmar,</i> <i>University of Technology (Yatanarpon Cyber City), Myanmar</i>	344
“Analysis and design approach for hexagonal ring monopole MIMO antenna in vehicular communication system”	..... Khaing Wai Pyone, Chaw Myat New, Saw Aung Nyein Oo, <i>Mandalay Technological University, Myanmar</i>	346
“Design and simulation of a single ice-cream corn antenna for UWB receiver”	..... Aye Aye Khine, <i>Technological University (Yamethin), Myanmar</i>	351
“Performance analysis of campus RSSI measurements”	..... Aung Hnin Parn, Myo Myint Maw, Phyo Thu Zar Tun, <i>Mandalay Technological University, Myanmar</i>	356
“Empirical outdoor propagation model for sub-urban: A case study Patheingyi Township in Mandalay” Kyaw Zayar Lin, Myo Myint Maw, <i>Mandalay Technological University, Myanmar</i>	360

Session-2	11:15-12:15	Telecommunication (2)	venue D
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Chairperson Chadaporn Keatmanee,, *Thai-Nichi Institute of Technology, Thailand*
Nan Aye Aye Htwe, *MTU, Myanmar*

“Accuracy of indoor localization based on ZigBee wireless sensor networks”	..... Cho Cho Htwe, Myo Myint Maw, <i>Mandalay Technological University, Myanmar</i>	365
“Design and optimization of Ka/Ku-band multibeam high throughput satellite system in Myanmar”	..... Ei Ei Khin, <i>Technological University (Thanlyin), Myanmar</i>	370
“Escalating the performance of thin client with overclocking method”	..... Win Win Aung, Khin Thanda Soe, <i>University of Computer Studies, Monywa: University of Computer Studies, Mandalay, The Republic of the Union of Myanmar</i>	374
“Design on low frequency RFID reader using NI Multisim ”	..... San Hlaing Oo, Khin Trar Trar Soe, Zaw Min Naing, <i>Myanmar Aerospace Engineering University, Myanmar, Technological University (Kyaing Tong), Myanmar</i>	380
“Simulation of calculating performances for Dijkstra's algorithm, rumor algorithm and greedy forwarding algorithm in communication”	..... Khine Thazin Min, <i>Computer University, Mandalay, Myanmar</i>	387
“An efficient network monitoring and management system” Shune Lai Kay Khaing, May Zin Oo, <i>Mandalay Technological University, Myanmar</i>	389

Session-3	13:15-14:15	Telecommunication (3)	venue D
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Chairperson Chadaporn Keatmanee,, *Thai-Nichi Institute of Technology, Thailand*
Nan Aye Aye Htwe, *MTU, Myanmar*

“A new cipher algorithm using A.J cipher and remainder theorem”	..... Aye Zarchi Minn, Hein Min Latt, <i>Yangon Technological University, Myanmar,</i> <i>Kobe Institute of Computing, Japan</i>	394
“Data security system based on enhanced encryption algorithm and proposed image steganographic approach with random pixel selection process”		

.....	May Htet, <i>Mandalay Technological University, Myanmar</i>	396
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.....	San San Nwe, Khaing Khaing Soe, Mya Mya Htay, Nay Aung Aung, Tin Tin Thein, <i>University of Computer Studies (Pakokku), Myanmar</i>	402
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.....	Win Zaw Hein, Khin Sandar Linn, <i>Mandalay Technological University, Myanmar</i>	407
“Secure message transmission using AES”		
.....	Ei Phyu Sin Win, <i>Technological University (Monywa), Myanmar</i>	415
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.....	Zwe Thi Ha, <i>Technological University (Mandalay), Myanmar</i>	418

Technical Session	Education	423-452
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Chairperson	Satoshi Itou, <i>Gifu Shotoku Gakuen Univ., Japan</i> Phyoe Wai Htun, <i>MTU, Myanmar</i>		
“An introduction to a web-enhanced classroom in teaching language: A flipped classroom”			
.....	Kay Thi Soe, <i>Technological University (Mawlamyine), Myanmar</i>		423
“Teaching listening skill using video technology in language classrooms”			
.....	Hninyu Mon, <i>University of Computer Studies, Panglong, Myanmar</i>		430
“Teaching language to engineering students in Technological University (Bamaw) in Myanmar: Translation approaches in English”			
.....	Daw Shun Mya Mya, <i>Technological University Banmaw, Myanmar</i>		432
“SNS for writing and reading in Japanese between Japanese students and international students”			
.....	Hironari Nozaki, <i>Aichi University of Education, Japan</i>		434
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.....	Htet Hlaing Nyein, <i>Computer University (Pakokku), Myanmar</i>		436
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.....	Win Thandar Aung, Nyein Nyein Ei, Yi Yi Mon, <i>University of Computer Studies, Monywa, Myanmar</i>		440

Session-5	15:25-15:45	Education (2)	venue D
Chairperson	Satoshi Itou, <i>Gifu Shotoku Gakuen Univ., Japan</i> Phyoe Wai Htun, <i>MTU, Myanmar</i>		
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.....	Masanobu Nagata and Shoshi Inoue, <i>Iwate Prefectural Ichinoseki Technical High School, Hokkaido University of Education, Japan</i>		447
“Comparative performance analysis of classification techniques for students grading”			
.....	Thaung Myint Htun, Zaw Tun, <i>University of Computer Studies(Sittway), Myanmar</i>		450

venue E

Technical Session **Environment Science and Technology** 543-500

Session-1	10:10-11:10	Environment (1)	venue E
Chairperson	Kaei Washino, <i>Gifu Shotoku Gakuen Univ., Japan</i> Khin Khin Lay <i>MTU, Myanmar</i>		
“Renewable energies – A chance for closed mines”			
·····	Dipl.Ing. Karl Kleineberg, <i>TH Georg Agricola Bochum, Germany,</i> <i>University of Applied Sciences, Myanmar</i>		453
“Green Campus concept for Technological University (Mandalay)”			
·····	Zin Zin Moe, <i>Technological University (Mandalay), Myanmar</i>		459
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“Role of uncultured bacteria in wastewater treatment systems”			
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“Physiochemical treatment for wastewater discharged from bean vermicelli industry”			
·····	Shinn Thant, April Nway Nway Htet, Mu Mu Aung, Chaw Su Su Hmwe, <i>Mandalay Technological University, Myanmar</i>		479
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·····	Ohn Mar Aye, Soe Soe Win, <i>Technological University (Sagaing), Technological University (Mandalay), Myanmar</i>		482
“Low cost drinking water treatment system for rural community”			
·····	Soe Win Than, <i>Myanmar Aerospace Engineering University, Myanmar</i>		488
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·····	Chaw Su Hnin, <i>Technological University (Sagaing), Myanmar</i>		490
“Investigation of radon concentration in some caves of Yay Ta Gon hill”			
·····	Thin Thin Kywe, <i>Technological University (Mandalay), Myanmar</i>		494
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“Effect of plasticizer on the surface property and taste sensing property of artificial lipid membrane”			
.....	Saurav Kumar, Anupma Sharma, Amol P. Bhondekar, Sunita Mishra, <i>Academy of Scientific and Innovative Research (AcSIR), India</i>		501
“Segmentation and classification of skin cancer from skin lesions”			
.....	Ohn Mar Lwin, Thin Lai Lai Thein, <i>Technological University (Sagaing), University of computer studies yangon, Myanmar</i>		505
“Utility of wearable electro-oculogram for evaluating readability”			
.....	Kaei Washino, Satoshi Itou, Harumi Oishi and Shoshi Inoue, <i>Gifu Shotoku Gakuen University,</i> <i>Hokkaido University of Education, Japan</i>		510
“Autonomous exercise by active human interface on wearable system”			
.....	Junki Amano, Shigeru Takayama, <i>University of Ritsumeikan, Japan</i>		514
“Quantitative examination of QRS detection algorithms”			
.....	Aung Soe Khaing, <i>Technological University (Mandalay), Myanmar</i>		516
“Extraction of human behavior information from movie with camera by image analysis”			
.....	Itou Satoshi, Otsuka Yoko , Washino Kaei and Inoue Shoshi, <i>Gifu Shotoku Gakuen University,</i> <i>Hokkaido University of Education, Japan</i>		520