

Joint Workshop TJMW&AWPT 2023 Program at a Glance

Date: December 13 (Wed), 2023

Thailand time		Speaker	Chair
12:30 - 13:00	Registration		
13:00 - 13:30	Opening Ceremony	Radchawadee Silapunt, KMUTT Kensuke Okubo, Okayama Prefectural Univ. Kenjiro Nishikawa, Kagoshima Univ.	
13:30 - 14:40	Plenary Session I	Akkarat Boonpoonga, KMUTNB Eigo Kuwata, Mitsubishi Electric Corporation, Japan	Radchawadee Silapunt, KMUTT Kensuke Okubo, Okayama Prefectural Univ.
14:40 - 14:50	Break		
14:50 - 15:20	WE1: Tutorial Session I	Naoki Hasegawa, Softbank	Nonchanutt Chudpooti, KMUTNB
15:20 - 15:50	WE2: Tutorial Session II	Nonchanutt Chudpooti, KMUTNB	Chen Chunping, Kanagawa Univ.
15:50 - 16:00	Break		
16:00 - 17:10	YE1: Young Engineers Session I (3min. Short Presentation: Part 1)		Naoki Hasegawa, Softbank
17:10 - 17:20	Break		
17:20 - 18:30	YE2: Young Engineers Session II (3min. Short Presentation: Part 2)		Denchai Worasawate, KasetsartUniv.

Joint Workshop TJMW&AWPT 2023 Program at a Glance

Date: December 14 (Thu), 2023

Thailand time		Speaker	Chair
9:30 - 10:00	Registration		
10:00 - 11:00	TH1: Technical Session I Passive Components	Paper ID: 101, 107, 104, 109	Kittisak Phaebua, KMUTNB
11:00 - 11:10	Break		
11:10 - 11:55	TH2: Technical Session II CMOS Circuits and Microwave Heating	Paper ID: 102, 103, 317	Shuhei Amakawa, Hiroshima Univ.
11:55 - 12:55	Lunch		
12:55 - 13:10	Sponsor Presentation		Kyoya Takano, Tokyo Univ. of Science
13:10 - 14:10	TH3: Technical Session III Wireless Power Transfer	Paper ID: 201, 202, 401, 409	Tsunayuki Yamamoto, National Institute of Technology, Tsuyama College
14:10 - 14:20	Break		
14:20 - 17:20	TH4: Student Design Competition		Kittisak Phaebua, KMUTNB Satoshi Yoshida, Ryukoku Univ.
17:20 - 17:30	Photo Session		
17:30 - 19:30	Banquet		

Joint Workshop TJMW&AWPT 2023 Program at a Glance

Date: December 15 (Fri), 2023

Thailand time		Speaker	Chair
8:30 - 9:00	Registration		
9:00 - 10:00	FR1: Technical Session IV LoRaWAN and Sensing	Paper ID: 105, 106, 108, 305	Suramate Chalermwisutkul, KMUTNB
10:00 - 10:20	Break		
10:20 - 12:20	YE3: Young Engineers Session III (Poster Presentation)		Kyoya Takano, Tokyo Univ. of Science
12:20 - 13:10	Lunch		
13:10 - 14:30	Plenary Session II	Kamol Kaemarungsi, NECTEC, Thailand Minoru Fujishima, Hiroshima University, Japan	Nay Chi, international student from KMUTT Kenjiro Nishikawa, Kagoshima Univ.
14:30 - 15:00	Award Ceremony		Naoki Shinohara, Kyoto Univ. Mamiko Inamori, Tokai Univ. Satoshi Yoshida, Ryukoku Univ.
15:00 - 15:10	Closing Session	Danai Torrungrueng, KMUTNB Toshihiko Hamasaki, Hiroshima Inst. of Tech.	

Joint Workshop TJMW&AWPT 2023, Technical Session Program

Dec. 14, TH1: Technical Session I: Passive Components

Chair: Kittisak Phaebua, KMUTNB

Thailand Time	Paper ID	Presentation Title	Authors
10:00 - 10:15	101	A Compact Dual-Band Frequency Reconfigurable MIMO Antenna for 5G/WLAN/Wi-MAX Applications	Surendra Kumar Gupta, Amit Bage (NIT Hamirpur, India)
10:15 - 10:30	107	THz Metamaterial Sensor for Possible Influenza A Virus Detection	Amit Bage, Surendra Kumar Gupta (NIT Hamirpur)
10:30 - 10:45	104	Reflection Phase of Mushroom-Type Metasurface Reflector with Multi- and Single-Via Structures	Taisei Urakami (NAIST), Tamami Maruyama (NIT (KOSEN), Hakodate College), Shim Nishiyama, Manato Kusamizu, Akira Ono (NIT (KOSEN), Kagawa College), Takahiro Shiozawa (Toyo Univ.)
10:45 - 11:00	109	A Study on Input/Output Coupling Methods of Constant Absolute Bandwidth Tunable Filters	Naohiro Tsujimoto, Toshio Ishizaki (Ryukoku Univ.)

Dec. 14, TH2: Technical Session II: CMOS Circuits and Microwave Heating

Chair: Shuhei Amakawa, Hiroshima Univ.

Thailand Time	Paper ID	Presentation Title	Authors
11:10 - 11:25	102	A Study on Kv and FTR Trade-off for 28-GHz Band VCO with Variable Inductor Using Switched Resistor	Naoto Tamura, Kiyotaka Komoku, Nobuyuki Itoh (Okayama Pref. Univ.)
11:25 - 11:40	103	A 180-370-GHz Wide-Bandwidth Marchand Balun with Lateral Ground Wall - Realized in 40-nm CMOS Process -	Zhen Yan, Satoshi Tanaka, Takeshi Yoshida, Minoru Fujishima (Hiroshima Univ.)
11:40 - 11:55	317	Microwave sintering for sustainable society	Keiichiro Kashimura (Chubu univer.)

Dec. 14, TH3: Technical Session III: Wireless Power Transfer

Chair: Tsunayuki Yamamoto, National Institute of Technology, Tsuyama College

Thailand Time	Paper ID	Presentation Title	Authors
13:10 - 13:25	201	Method of Moments Electromagnetic Field Analysis for Wireless Power Transfer Efficiency Improvement using Reverse-Coil Configuration for Magnetic Field Coupled WPT	Akari Kamada, Tamami Maruyama, Nore Ebita, Masashi Nakatsugawa (NIT, Hadakot College), Masaya Tamura (Toyohashi University of Technology), Noriharu Suematsu (Tohoku University)
13:25 - 13:40	202	LED Illumination Experiment through Energy Harvesting using Novel Capacitance Loaded Loop Rectenna	Noa Ebita, Tamami Maruyama, Akari Kamada, Masashi Nakatsugawa (NIT, Hakodate College), Masaya Tamura (Toyohashi University of Technology), Noriharu Suematsu (Tohoku University)
13:40 - 13:55	401	Novel compact rectenna array by integrating power-receiving and waveguide elements with loaded inductor	Tamami Maruyama, Noa Ebita, Akari Kamada, Hiroto Ishiguro, Masashi Nakatsugawa (NIT, Hakodate College), Masaya Tamura (Toyohashi University of Technology), Noriharu Suematsu (Tohoku University)
13:55 - 14:10	409	2.45 GHz Rectifier Using Copper Tape and Large Chip Inductor for handmade Capability	Satoshi Yoshida (Ryukoku Univ.)

Dec. 15, FR1: Technical Session IV: LoRaWAN and Sensing

Chair: Suramate Chalermwisutkul, KMUTNB

Thailand Time	Paper ID	Presentation Title	Authors
9:00 - 9:15	105	Adaptive NDF Classification for SF Allocation in Arbitrary Node Distribution in LoRaWAN	Phanupong Tempiem, Rardchawadee Silapunt (KMUTT)
9:15 - 9:30	106	Long Range Wide Area Mesh Network Routing in High Signal Attenuation Environment using Prim's Algorithm	Patimapon Soynoi, Phanupong Tempiem, Rardchawadee Silapunt (KMUTT)
9:30 - 9:45	108	A Study of Fruit Sweetness Monitoring with Reflection coefficient	Jirakit Losamlit, Paiboon Yoiod (RSU)
9:45 - 10:00	305	Periodic Motion Detection Using Frequency Analysis of Wi-Fi Received Signal Strength	Koichiro Sakaguchi, Mitsuyoshi Kishihara, Kensuke Okubo (Okayama Prefectural U

Joint Workshop TJMW&AWPT 2023, Young Engineers Session Program

Dec. 13, YE1: Young Engineers Session I

Chair: Naoki Hasegawa, Softbank

Thailand Time	Paper ID	Presentation Title	Authors
15:53 - 15:56	301	A Study on Coaxial-Probe-Based Measurement Method for Evaluating EM-parameters of Absorbers on a Cylinder Surface	Sho Kato, Chun-Ping Chen, Takaharu Hiraoka, Tetsuo Anada (Kanagawa Univ.)
15:56 - 15:59	302	Feasibility Study on Dualband Electromagnetic Coupling-Type Microwave Heating Systems	Shimpei Katsuta, Tomohiko Mitani, Naoki Shinohara (Kyoto Univ.)
15:59 - 16:02	303	A Study of Linearity Improvement for 920-MHz Fully-Integrated LNAs Operating in the Moderate Inversion Region	Mitsuki Miyake, Kiyotaka Komoku, Nobuyuki Itoh (Okayama Prefectural Univ.)
16:02 - 16:05	304	Complex permittivity measurements of high-frequency substrates using a 60 GHz band circular empty cavity	Ryo Sakata, Takashi Shimizu (Utsunomiya Univ.)
16:05 - 16:08	306	Design and Characterization of All-dielectric Metasurface Reflector for mmWave Automotive Radar Antennas	Muhammad Uzair (King Mongkut's University of Technology North Bangkok), Guilla François, Dirk Heberling (RWTH Aachen University), Suramate Chalermwisutkul (King Mongkut's University of Technology North Bangkok)
16:08 - 16:11	307	Properties of Scattering Matrices Required for Formulating 4-port TRL	Kazuya Ogata, Shuhei Amakawa (Hiroshima Univ.)
16:11 - 16:14	308	A New Fourth-order Box-Coupling Microstrip BSF with Simultaneous Excitation of Multiple Resonators	Koya Hirota, Masataka Ohira, Zhewang Ma (Saitama Univ.)
16:14 - 16:17	309	A Study on CRLH-TL Using Gyrator and Series Capacitor -- For an Even Number of Unit Cells --	Tomohiro Maruyama, Nozomu Fujikawa, Koichiro Sakaguchi, Mitsuyoshi Kishihara, Kensuke Okubo (Okayama Pref Univ)
16:17 - 16:20	310	Outphasing angle variation of various class-operations on outphasing amplifiers	Daisuke Yasunobu, Kenjiro Nishikawa (Kagoshima Univ.)
16:20 - 16:23	311	28 GHz band highly efficient GaAs rectenna MMIC with an impedance transformed loop antenna	Akinobu Kobayashi, Tsukasa Hirai, Yuya Hirose, Naoki Sakai, Kenji Itoh (Kanazawa Univ.)
16:23 - 16:26	312	A 28 GHz band SOI-CMOS highly sensitive rectenna MMIC with an impedance transformed loop antenna	Yudai Tondokoro, Naoya Kakutani, Akinobu Kobayashi, Tsukasa Hirai, Naoki Sakai, Kenji Itoh (Kanazawa IT.)
16:26 - 16:29	313	Diode current model with the forward current saturation	Ryohei Takaya, Yuya Hirose, Naoki Sakai, Kenji Itoh (Kanazawa IT)
16:29 - 16:32	314	Finger width optimization of the 0.18 um GaAs E-pHEMT Gated anode diode for millimeter wave rectification	Yusuke Sato, Yuya Hirose, Naoki Sakai, Kenji Ito (Kanazawa IT)
16:32 - 16:35	315	A Study of Dielectric Constant Measurement Using Planar LCR Resonant Circuit	Rena Suetsugu, Takuichi Hirano (Tokyo City Univ.)
16:35 - 16:38	316	Multi Beam RFID Tag Antenna for Indoor Localization	Jawad Ali (King Mongkut's University of Technology North Bangkok), Adam Narbudowicz (Trinity College Dublin), Kamol Kaemarungsi (National Science and Technology Development Agency), Suramate Chalermwisutkul (King Mongkut's University of Technology North Bangkok)

16:38 - 16:41	318	A Parasitic-Element Loaded Wideband Filtering Antenna with Flat Gain in 40% Frequency Bandwidth	Ken Sakiyama, Masataka Ohira, Zhewang Ma (Saitama Univ.)
16:41 - 16:44	319	A D-band Broadband CMOS Power Amplifier Using Differential nMOSFETs with Low Nodal Quality Factors	Shun Beppu, Kyoya Takano (Tokyo Univ. of Science)
16:44 - 16:47	320	Design and Simulation of 233.1 GHz Frequency Multiplier-by-6 Chain in 0.13- μ m SiGe BiCMOS	Naoya Tajima, Kyoya Takano (Tokyo Univ. of Science)
16:47 - 16:50	321	Active Combiner with Cascode Circuit	Leshan Xu, Satoshi Tanaka, Takeshi Yoshida, Minoru Fujishima (Hiroshima Univ.)
16:50 - 16:53	322	300-GHz Double-Balanced Up-Conversion Mixer With Improved Conversion Gain Using Substrate Bias Effect in 40-nm CMOS Technology	Hayato Yagi, Kyoya Takano (Tokyo Univ. of Science)
16:53 - 16:56	323	50 GHz Power Divider in 40 nm CMOS Technology	Motohiro Kanno, Kyoya Takano (Tokyo Univ. of Science)
16:56 - 16:59	324	A 77 GHz Rectifier Using Transmission Line-Based Tank Circuit for Impedance Matching	Thet Pai Oo, Suramate Chalermwisutkul (TGGS), Muh-Dey Wei, Renato Negra (HFE I
16:59 - 17:02	325	A Non-contact Microwave Sensor System for Characterizing a Binary-liquid Mixed Concentration	Kyu Kyu Swe (KMUTT), Somporn Sriwattanapol (RMUTSB)

Thailand Time	Paper ID	Presentation Title	Authors
17:13 - 17:16	326	The Nondestructive Humidity Measurement System for Cordyceps militaris	Nay Chi (KMUTT), Somporn Sriwattanapol (RMUTSB)
17:16 - 17:19	327	Complex Natural Resonance-Based Chipless RFID Sensor for Soil Humidity Measurement	Sirisak Nongpromma (KMUTNB), Akkarat Boonpoonga (KMUTNB)
17:19 - 17:22	328	FMCW RADAR based Human Recognition using only Doppler information	Patipon Petchtone (Kasetsart University), Denchai Worasawate (Kasetsart University)
17:22 - 17:25	329	A Novel Electromagnetic Near-field Interpolation Method for Spherical Near-field to Far-field Transformations	Kitiphon Sukpeechea, Titipong Lertwiriayaprapa, Danai Torrungrueng, Kittisak Phaebua (KMUTNB)
17:25 - 17:28	330	Electromagnetic Absorption of Natural Rubber Latex Composites Based on Conductive Carbon Black and Fe ₃ O ₄	Kiadtisak Salayong, Titipong Lertwiriayaprapa, Danai Torrungrueng, Kittisak Phaebua (KMUTNB)
17:28 - 17:31	331	Novel Dual-Band Impedance Matching Circuits Implemented by Complementary Compact Microstrip Resonant Cells (CCMRCs)	Sangwon Kittiwittayapong, Kittisak Phaebua, Titipong Lertwiriayaprapa, Danai Torunggruneng, Prayoot Akkaraekthalin (KMUTNB)
17:31 - 17:34	332	Diffraction from an Arbitrary Impedance Wedge	Montree Saowadee, Titipong Lertwiriayaprapa (KMUTNB)
17:34 - 17:37	402	Influence of salinity on contactless power transmission in seawater	Taisei Furuhashi, Hiroyuki Tanaka, Haruki Sugino, Keigo Uehara, Mamiko Inamori (Tokyo Univ.)
17:37 - 17:40	403	Study of 5.8 GHz Low-Loss Phase Shifter with Inductive Reactances	Tsuyoshi Kajiwara, Bo Yang, Naoki Shinohara, Tomohiko Mitani (Kyoto Univ.)
17:40 - 17:43	404	Battery Charging Performance with 920-MHz Si-SBD Rectifier Designed for Touch-Probe Sensor used in Machine Tool	Gen Taguchi, Naoya Kishimoto, Kaito Hayashi (Nagoya Inst. of Tech.), Yusuke Wasada, Isana Morita (Metrol Co., Ltd.), Akio Wakejima (Nagoya Inst. of Tech.)
17:43 - 17:46	405	Simulation Study on Antenna Placement Methods of Array Antenna with Circular Polarization for Long-Distance Microwave Wireless Power Transfer -- Analysis of Array Antennas for Experimental Verification --	Koutarou Matsumoto, Tomohiko Mitani, Shinohara Naoki (Kyoto Univ.)
17:46 - 17:49	406	Study on the Improvement of Cross-Coupling in Wireless Power Supply Systems Using Multiple Transmission Coils	Keigo Kimura (NAIST), Quang-Thang Duong (OIT), Minoru Okada (NAIST)
17:49 - 17:52	407	A multi-stage stacked type microwave rectifier for step-downed DC voltage	Yuya Hirose, Naoki Sakai, Kenji Itoh (Kanazawa IT.)
17:52 - 17:55	408	A Design Approach to Realizing of a Perfectly Balanced Arc-shaped CRLH Waveguide at 2.45 GHz Band for a Microwave Snow Melting System	Takeo Kobashi, Keto Togawa, Tsunayuki Yamamoto (NIT, Tsuyama College), Tamaru Maruyama (NIT, Hakodate College)
17:55 - 17:58	101	A Compact Dual-Band Frequency Reconfigurable MIMO Antenna for 5G/WLAN/Wi-MAX Applications	Surendra Kumar Gupta, Amit Bage (NIT Hamirpur, India)
17:58 - 18:01	102	A Study on Kv and FTR Trade-off for 28-GHz Band VCO with Variable Inductor Using Switched Resistor	Naoto Tamura, Kiyotaka Komoku, Nobuyuki Itoh (Okayama Pref. Univ.)

18:01 - 18:04	103	A 180-370-GHz Wide-Bandwidth Marchand Balun with Lateral Ground Wall - Realized in 40-nm CMOS Process -	Zhen Yan, Satoshi Tanaka, Takeshi Yoshida, Minoru Fujishima (Hiroshima Univ.)
18:04 - 18:07	104	Reflection Phase of Mushroom-Type Metasurface Reflector with Multi- and Single-Via Structures	Taisei Urakami (NAIST), Tamami Maruyama (NIT (KOSEN), Hakodate College), Shim Nishiyama, Manato Kusamizu, Akira Ono (NIT (KOSEN), Kagawa College), Takahiro Shiozawa (Toyo Univ.)
18:07 - 18:10	105	Adaptive NDF Classification for SF Allocation in Arbitrary Node Distribution in LoRaWAN	Phanupong Tempiem, Rardchawadee Silapunt (KMUTT)
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