



# APMC 2007

December 11-14, 2007

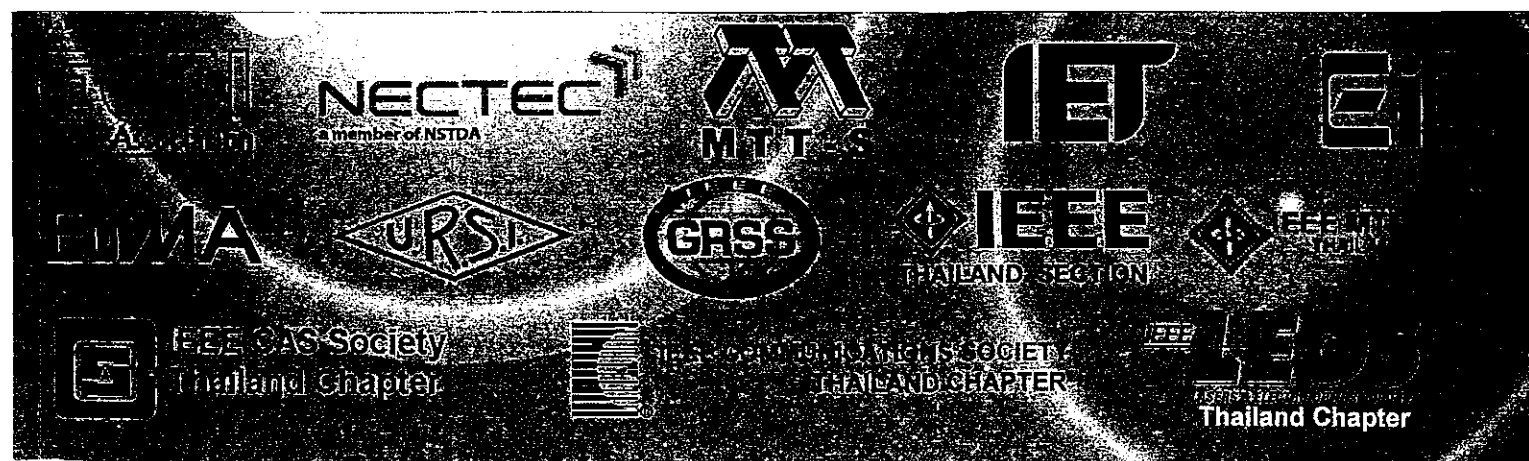
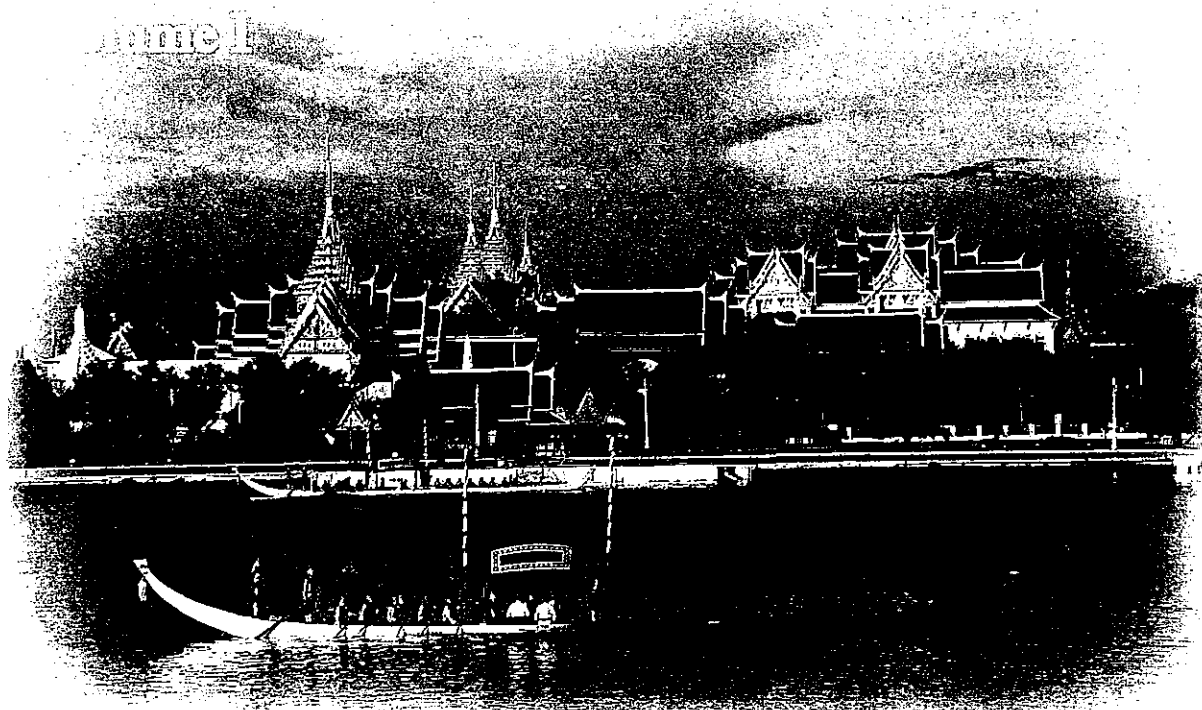
Bangkok, Thailand

**APMC 2007**  
Dec. 11-14 Bangkok Thailand

2007 Asia-Pacific Microwave Conference

## PROCEEDINGS

“Technology Convergence: Microwave for Life Sciences”



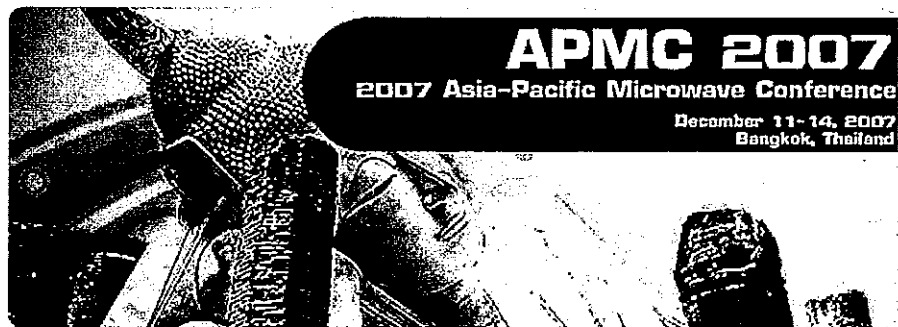
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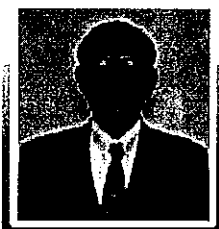
**MENU**

- About APMC
- Call for Papers
- Message from General Chair
- Message from TPC
- Keynote Speakers
- Organizing Committee
- Awards Committee
- International Advisory Committee
- Technical Program Committee
- Registration
- Technical Program
- Tutorial
- Exhibition
- Venue & Transportation
- Accommodation
- Banquet
- Special Session
- IET Special Issue
- Bangkok & Tour

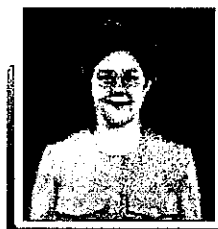
**Instructions**

- Author Instructions
- Author Information
- Final Submission

**Message from the Technical Program Chairs**



Prayoot  
Akkaraekthalin



Taptim  
Angkaew



Athikom  
Roeksabutr

The APMC 2007 Technical Program Chairs

It is our great pleasure to welcome you to the 19th Asia-Pacific Microwave Conference (APMC 2007). The objective of the APMC 2007 is to continue and accelerate the momentum of researching in microwave areas and bring together researchers from Asia-Pacific region as well as other parts of the world to discuss and exchange experiences. The conference theme of ♦Technology Convergence: Microwave for Life Sciences♦ reflects microwave technology usages in our ways of live through consumer products and advanced communications.

For this year conference (APMC2007) a large number of 829 contributed papers were totally submitted. The technical program committee, including 12 sub-group chairs and approximately 200 reviewers around the world, has worked very hard in the process of peer review and paper selection to accept papers in the program due to their high professional quality. Finally, an outstanding program of about 624 contributed papers (407 and 217 papers for oral and poster presentations, respectively) from 28 countries is comprehensively offered at the conference. In addition, there are 15 papers being invited and 8 special papers (for special sessions) being offered. Consequently, the conference program is divided into 9 different track fields, which consist of 79 regular sessions, 2 special sessions, and 3 poster sessions. This conference promises to be an inspiring and insightful experience containing a breadth of information on its theme.

We would like to deeply thank all the committee members and chairs who voluntarily invest their own time selecting papers and arranging such a successful and memorable conference. We also thank all keynote speakers as Prof. Sitthichai Pookaiyaudom, Dr. Peter Staecker, Dr. Shingo Ohmori, and Prof. Raj Mittra, to make the conference interesting and colorful. In addition, special thanks must go to Dr. George Heiter and Dr. Jeffrey Pond for managing the TPMS program supported from IEEE-MTT-S, and also thanks to IET for arranging the special issue on APMC2007. We also express our sincere appreciation to all sponsors for their great support. Of course, sincere thanks must finally go to all authors, without whom the conference would not occur, who make contribution of their papers to the conference.

Thank for your participation in APMC2007 and welcome to Bangkok, Thailand. Please have a great time and use this opportunity to meet more people and make yourself known by exchanging experiences and both technical and non-technical information. We finally hope that the conference will acquaint you with the most up to

date of microwave and related technologies.

Prayoot Akkaraekthalin  
Tuptim Angkaew  
Athikom Roeksabutr



For further information, please contact:  
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14:20-14:40	<b>WE- P1-G5</b>	<b>Practical Consideration of Dual-Feed Switched-Beam Patch Antennas in a Phased Array Design</b> Jukkrit Tagapanij, Monai Krairiksh <i>King Mongkut's Institute of Technology Ladkrabang, Bangkok, Thailand</i>	177
14:40-15:00	<b>WE- P1-G6</b>	<b>New Radio Source Localization using Array Antennas based on Fingerprinting Techniques in Outdoor Environment</b> Panarat Chertanomwong, Jun-ichi Takada <i>Tokyo Institute of Technology, Tokyo, Japan</i> Hiroyuki Tsuji, Derek Gray <i>National Institute of Information and Communications Technology, Yokosuka, Japan</i>	181

**Session WE-P1-H**  
**Front-End and Antenna technologies**  
**Room H 13:00-15:00**  
**Wednesday, December 12**

Chairs : J. Mazierska, *Massey University, New Zealand, James Cook University, Australia*  
L. Hu, *Suzhou Entry-Exit Inspection and Quarantine Bureau, China*

13:00-13:20	<b>WE- P1-H1</b>	<b>Superconducting Technology: Development of a CDMA Base Station Cryogenic Front End Receiver</b> A. Knack <i>Cryoelectra GmbH, Germany</i> Massey University, Institute of Information Sciences and Technology, New Zealand Townsville, Australia J. Mazierska <i>Massey University, Institute of Information Sciences and Technology, New Zealand</i> James Cook University, <i>Electrical and Computer Engineering, Australia</i> H. Piel <i>Cryoelectra GmbH, Germany</i>	187
13:20-13:40	<b>WE- P1-H2</b>	<b>MIM CRLH Series Mode Zeroth Order Resonant Antenna (ZORA) implemented in LTCC Technology</b> A. Rennings, T. Liebig, P. Waldow <i>IMST GmbH, Germany</i> C. Caloz <i>Ecole Polytechnique, Canada</i>	191
13:40-14:00	<b>WE- P1-H3</b>	<b>Interference Analysis of 2.4 GHz RF Transceivers Using ZigBee Standard in Multiple Integrated Laser Engagement System (MILES)</b> Seung-Joo Yee, Sang-Hyun Chun, Jong-Hyun Kim <i>Kwangwoon University, Seoul, Republic of Korea</i> Chan-Joo Lee <i>Shin Heung Colleague, Seoul, Republic of Korea</i>	195