



הסימפוזיום ה-21 של קבוצות המיקרוגלים, האנטנות והמערכות האלקטרוניות  
**21st IEEE Israel AP/MTT & AES Chapters Symposium**  
*Developments and Challenges in Microwaves, Antennas and Radars*

Tuesday, May 15, 2007, Dan Panorama Hotel, Tel Aviv, Israel

## SCIENTIFIC PROGRAM

<b>Opening (Plenary) Session</b>		<b>Symposium Chairman: Shmuel Auster</b>
9:00-9:20	Welcome Address	<b>Shmuel Auster</b> , <i>Symposium Chairman</i> <b>Prof. Sigmond Singer</b> , <i>IEEE Section Chairman</i> <b>Prof. Nadav Levanon</b> , <i>AES Chapter Chairman</i>
9:20-10:10	Technology development for the US Army CERDEC (Communications Electronics R&D Center), (Including a comparison with commercial development and highlight of some advanced work with DARPA such as the TEAM (Technology for Efficient Agile Microsystems) Program, eg., Systems on a Chip) for C4ISR applications.	<b>Dr. Barry S. Perlman</b> , <i>Keynote Speaker</i> , <i>Associate Director for Technology/DARPA/HPC Programs US Army Research, Development and Engineering Command (RDECOM) Communications-Electronics R&amp;D Center (CERDEC)</i>
<b>10:10-10:30</b>	<b>Coffee Break</b>	

## Parallel Sessions

<b>MICROWAVES Session (Parallel Session 1)</b>		<b>Chairmen: Rafi Popovich, Danny Elad, Itzhak Shapir</b>
10:30-11:00	Perspectives and directions on growth of semiconductor FAB industry in India vis-à-vis technology realities and design space of RFIC/Mixed signal analog semiconductors	<b>Dr. Dhruves Biswas</b> <i>Special Invited Speaker</i> <i>Chief Technology Officer</i> <i>Indian Institute of Technology</i> <i>INDIA</i>
11:00-11:20	Common LO Effect on Added Phase Noise in RF Transceivers	<b>Dr. Ronen Holtzman</b> <i>Elisra Electronic Systems</i>
11:20-11:40	2 - 8 GHz 2W- Wide band power amplifier MMIC	<b>Doron Hamerman</b> , <b>Dr. Boris Mezhebovsky</b> , <i>Rafael</i>
11:40-12:00	Managing Flickering Noise and DC Noise in Synthesizers	<b>Lior Berkovich</b> , <i>Elta</i>
12:00-12:20	Wide band phase shifter MMIC	<b>Tsufit Magrisso</b> , <b>Nadav Buadanna</b> , <b>Rafael Weill</b> , <i>Rafael</i>
12:20-12:40	2-11 GHz – Wide band SP4T and SP6T MMICs	<b>Rafael Weill</b> , <i>Rafael</i> .
12:40-13:00	Degradations of Phase sensitive system performances due to temperature effects of coaxial cables and recent advances in technology	<b>Billy McGill</b> , <i>Vice President</i> <i>Times Microwave Systems, UK</i>
13:00-13:20	Mobile Radio Systems Techniques for Enhancing Energy Efficiency, Reducing Interference and Parasitic Radiation	<b>Prof. J. Gavan</b> <i>Holon Institute of Technology</i>
<b>13:20-14:20</b>	<b>Lunch</b>	



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<b>MICROWAVES Session (Continues)</b> <i>(Parallel Session 1)</i>		<b>Chairmen: Rafi Popovich, Danny Elad, Itzhak Shapir</b>
14:20-14:40	10W- X band Power amplifier MMIC	<b>Roman Shaulski, Dr. Boris Mezhebovsky,</b> <i>Rafael</i>
14:40-15:00	MIMO/SISO WLAN systems distortion effects	<b>Avi Biran,</b> <i>Intel WFEI group</i>
15:00-15:20	Single bias MMIC LNA at X-Band	<b>Dr. Josef Shohat, Gil Peshes, Rafi Popovich,</b> <i>Elta</i>
15:20-15:40	On the Stability of Linear and non Linear Microwave circuits- A Tutorial	<b>Dr. Danny Elad, IBM Haifa- HRL</b> <b>Dr. Anna Nazimov, Nadav Buadanna,</b> <i>Rafael</i>
<b>15:40- 16:00</b>	<b>COFFEE BREAK</b>	
16:00-16:15	Advanced packages for microwave and mm wave applications	<b>Dov Herstein,</b> <i>Rafael</i>
16:15-16:30	LTCC based building blocks for Ka band applications	<b>Dr. Danny Elad, Isaac Sarusi, Ido Aram, Evgeny Shumakher,</b> <i>Rafael</i>
16:30-16:45	Wide- band high efficiency power combiner in planar realization	<b>Oren Aharoni, Shaul Zoref, Meir Komisar, Dr. Anna Nazimov, David Kryger,</b> <i>Rafael</i>
16:45-17:00	Transmission Line Model for Distributed MIM Capacitor	<b>Itzhak Shapir,</b> <i>Rafael</i>

<b>ANTENNAS Session</b> <i>(Parallel Session 2)</i>		<b>Chairmen: Yael Kaldor Prof. Reuven Shavit, Prof. Yosi Pinhasi</b>
10:30-10:50	The Multilevel Fast Multipole Method (MLFMM) applied to electrically large structures.	<b>Jens Eberhard,</b> <i>CST, Germany</i> <b>Dr. Emmanuel Leroux,</b> <i>CST, Italy</i>
10:50-11:10	Antennas and Antennas Test Ranges at Elta: 30 years of parallel development	<b>Dr. Claude Samson,</b> <i>Elta</i>
11:10-11:30	Low profile traveling wave antenna	<b>Dr. Menachem Naor,</b> <i>Rafael</i>
11:30-11:50	RF and Antenna Challenges for Mobile WiMAX	<b>Israel Koffman,</b> <i>VP Marketing</i> <i>Runcom Technologies Ltd.</i>
11:50-12:10	On The Significance of Return-Loss in Antenna Measurements	<b>Noah Isman,</b> <i>Systems and R&amp;D VP</i> <i>Orbit F/R Engineering Ltd</i>
<b>12:10- 13:20</b>	<b>Lunch</b>	
13:20-13:40	Loaded Quasi Spiral Antenna	<b>Dr. Laurent Habib,</b> <i>Elta</i>
13:40-14:00	UWB Printed Antennas	<b>Dr. Ely Levine,</b> <i>AFEKA Engineering College of Tel Aviv and Fields and Waves Ltd Rehovot.</i>
14:00-14:20	Constitutive Parameters Extraction for Single & Double Negative Metamaterials and Validation of Negative Refraction	<b>Yair Hollander, Prof. Reuven Shavit</b> <i>Ben-Gurion University of the Negev</i>
14:20-14:40	Imaging with THz at stand-off distances (20-30 meter) The State of the Art	<b>Prof. Asher Yahalom, Yosef Pinhasi, Yehoshua Socol, Ben Paz &amp; Gil Kidron</b> <i>The College of Judea and Samaria</i>
14:40-15:00	Fast Analysis of Dual Reflector Antennas	<b>Prof. Amir Boag,</b> <i>Tel-Aviv University</i> <b>Prof. Christine Letrou,</b> <i>INT-Evry France</i>
<b>15:00- 15:20</b>	<b>Coffee Break</b>	



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<b>Radar Session</b> <i>(Parallel Session 3A)</i>		<b>Chairman: Prof. Nadav Levanon</b>
10:30-11:00	Applying a modern 2D spectral estimation method to SAR imaging.	<b>Dr. Eli Yadin, D. Olmar, O. Oron, Dr. Ronit Nathanson, Elta</b>
11:00-11:25	Evaluation of Array Elements and beamformers for wide bandwidth phased arrays.	<b>Ruth Rotman, Yaniv Israel, Yehuda Green, Elta</b> <b>Prof. Moshe Tur, Tel-Aviv University</b>
11:25-11:50	Test range for targets signature evaluation	<b>Arie Raziel, MOD</b>
11:50-12:15	The TECSAR design and the modified BFPO algorithm.	<b>Dr. Ury Naftaly, Elta</b>
12:15-12:40	Non-coherent pulse compression - concept and waveforms.	<b>Prof. Nadav Levanon, Uri Peer</b> <i>Tel-Aviv University</i>
12:40-13:05	Application of advanced radar techniques to the detection of concealed weapons.	<b>Dr. Nathan Weiss, Elta</b>
13:05-13:30	Multilevel Algorithms for Radar Imaging	<b>Prof. Amir Boag, Tel-Aviv University</b>
<b>13:30-14:30</b>	<b>Lunch</b>	

<b>RFICs Session</b> <i>(Parallel Session 3B)</i>		<b>Chairmen: Dr. Shye Shapira</b> <b>Yair Shemesh</b>
14:20-14:40	Integrated Dual Channel MIMO Transceiver implemented in TSL18RF process	<b>Reuven Holzer, Dror Regev</b> <i>Tower Semiconductor Ltd.</i>
14:40-15:00	ESD-Protection Considerations in RF-CMOS VLSI Chips	<b>Sharon Levin, Ira Naot, Dror Regev, Boris Mishori, Alex Kozhekin, Israel Rotshtein, Tower Semiconductor Ltd.</b>
15:00-15:20	Predictive electro-magnetic modeling of CMOS on-chip metal inductors	<b>Alex Kozhekin, Sharon Levin, Alon Parag, Ira Naot, Dr. Shye Shapira, Ofer Tamir, Boris Mishori, Dror Regev</b> <i>Tower Semiconductor Ltd.</i>
<b>15:20-15:40</b>	<b>COFFEE BREAK</b>	
15:40-16:00	WiFi RFICs Evolution and Design Strategies.	<b>Yair Shemesh, Intel</b>
16:00-16:20	Fully Differential and Three-Port Amplifiers Stability and Measurements of Mismatched RFCMOS Amplifiers.	<b>Nikolay Telzhensky, Intel</b>
16:20-16:40	Passive CMOS Mixers Design Considerations in Direct Conversion RFICs.	<b>Tzvi Maimon, Intel</b>
16:40-17:00	Hi power Broadband SiC and GaN transistors for Military and Commercial applications.	<b>Yossi Yuran, CEO, Ultram Technologies</b>



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<b>Posters Session</b>		<b>Chairman: Dr. Haim Matzner</b>
11:30-12:30	Comparison active and passive mm-wave images: in-door experiments in W-band	<b>Prof. Boris Kapilevich</b> , <i>Head of MW/MMW/THz Group, Israeli Center for Radiation Sources and Applications</i>
	Investigation of a compact twin-horns antenna	<b>Uri Beladev, Yaniv Mizrahi</b> , <i>The Jerusalem College of Engineering</i> <b>Eli Gelbart, Dr. Haim Matzner</b> , <i>Holon Institute of Technology</i>
	Paired-strips line 6th order high pass filter	<b>Sami Misan, Reut Haviv, Dr. Haim Matzner and Dr. Motti Haridim</b> , <i>Holon Institute of Technology</i>
	Investigation of a linear microstrip array fed by a ridged waveguide	<b>Andrey Tarnopolsky, Dr. Haim Matzner</b> , <i>Holon Institute of Technology</i>