

**International Conference of  
Welding, Joining and Additive Manufacturing WJAM 2020  
28 JAN 2020 Kfar Maccabiah Hotel, Ramat Gan  
הכינס הבינלאומי לריתוך, חיבור והדפסה תלת ממדית  
28 בינואר 2020 | מלון כפר המכביה, רמת גן**

08:00-09:00	<b>Registration and gathering</b>			
09:00-09:30	<b>Welcoming</b>			
	<b>Eng. Ehud Noff</b> – Chairman of the Association of Engineers and Architects in Israel(AEAI)			
	<b>Dr. Emanuel Liban</b> - Chairman of The Israeli Society of Mechanical Engineers and Aerospace at AEAI			
	<b>Eng. Adi A. ATSITS, Adv.</b> – Chairman of The Israeli National Welding Committee at AEAI/ AEWICS CEO			
	<b>Dr. Amnon Shirizly</b> - Conference Chair- Additive Manufacturing , Rafael			
<b>Eng. Amichai Pesaach</b> – Conference Chair-Welding, Morex 71				
09:30-10:10	<b>Opening Lecture: AWS-Welding</b>			
10:10-10:50	<b>Opening Lecture: “A mature industrial ecosystem for DED additive manufacturing”</b>			
	<b>Dr. Filomeno Martina, WAAM3D Limited, Cranfield University, Cranfield, UK</b>			
10:50-11:20	<b>Coffee break and exhibition</b>			
	<b>AM (English)</b>	<b>AM (English)</b>	<b>Welding (English)</b>	<b>Welding (Hebrew)</b>
	<b>Morning chairs:</b>	<b>Morning chairs:</b>	<b>Morning chairs:</b>	<b>Morning chairs:</b>
	<b>Prof. Eli Aghion – BGU university</b>	<b>Prof. Gennady Ziskind – BGU university</b>	<b>Haim Daon</b>	<b>Yossi Elmalam</b>
	<b>Dr. Oded Amir - Technion</b>	<b>Dr. Eitan Tiferet – NRCN, Rotem Ind.</b>		
11:20-11:50	<b>Am26: Dimensional Accuracy and Fatigue Strength of H13 Components Produced</b>	<b>AM24: Large-Part Metal Additive Manufacturing: Industrial Adoption Trends and a Technical Overview</b>	<b>W12:Welding, a technology joining people</b>	<b>W1:Welds Repairs of Pressure Vessels based on API 510</b>
<b>KEYNOTE</b>	J. Tomas , M. Merkel Aalen University of	John O’Hara, Sciaky, Inc. USA.	Luca Costa, Incoming Chief Executive Officer, IIW	Jacky Bendayan Dayanson Shaked Ltd

	Applied Science, GERMANY.			
11:50-12:10	<b>AM25: Elucidate the best ARCAM Q20+ parameter's setup for AM of Ti64 based on Taguchi method</b>	<b>AM4: The current state of electron beam technology and application in additive manufacturing"</b>	<b>W13:Magnetic pulse welding and forming in industry</b>	<b>W2:Coated Electrodes for Welding of Stainless Steel with reduced emission of hexavalent chromium</b>
	O. Tevet, NRCN, ISRAEL.	Eberhard Wagner, pro-beam systems GmbH, GERMANY.	Victor Shribman, BMAX	Kiril Kiriyevesky -ZIKA
12:10-12:30	<b>AM17: Dream, Think, Make! – How to succeed in Additive Manufacturing</b>	<b>AM16: General situation of AM, for example in the field for medical, aerospace or mold and toolmaking.</b>	<b>W14:Characterization magnetic pulse welding of dissimilar additive manufacturing to wrought alloy</b>	<b>W3:Methodology of weld inspection sampling according to different standards.</b>
	Erwin Schulman, IAI, ISRAEL.	Andreas Margolf, TRUMPF GMBH, GERMANY.	Moshe Nahmany	Dr. Yossi Shoef – Gabi Shoef ltd
	<b>AM15: A Renishaw Perspective on AM,</b>	<b>AM32: Characteristics and advantages of combining 3d-laser printing and mechanical milling in one machine</b>	<b>W15:Cracking mechanisms in Weldments</b>	W4:Welding of large diameter pipes – a challenge
	Stephen Crownshaw, Renishaw UK	Roland Mayerhofer,O. R. Lasertechnologie GmbH, GERMANY.	David Kushnir	Shraga Yaron

12:50-13:10	<b>AM8: Integrating additive manufacturing lattice structure and die casting module to create light weight hybrid Al component</b>	<b>AM9: Modelling and characterization of Pre-heating stage in electron beam additive manufacturing</b>	<b>W16: Adjustable Ring Mode Laser in the Key e-Mobility Welding Applications</b>	<b>W5:Importance of surface preparation before welding or brazing of aluminum</b>
	A. Leon, S. Fisch, Y. Sharon, Y. Bernachik, S. N.Reuveni, A. Shirizly and E. Aghion, Ben-Gurion University, ISRAEL	E. Landau, Rotem Ind, Ben-Gurion University, ISRAEL.	Jarno Kangastupa Coherent Inc., Finland	Dr. Ariel Grinberg, IAI
13:10-14:10	<b>Lunch / exhibition</b>			
	<b>AM (English)</b>	<b>AM (English)</b>	<b>AM (English)</b>	<b>Welding (Hebrew)</b>
	<b>Noon chairs:</b>	<b>Noon chairs:</b>	<b>Noon chairs:</b>	<b>Noon chairs:</b>
	<b>Mr. Gil Dagan - NRCN</b>	<b>Dr. Ehud Galun – MOD</b>	<b>Dr. Malki Pinkas , NRCN</b>	<b>Gal Amir</b>
	<b>Dr. Shmuel Osovski - Technion</b>	<b>Dr. Alex Diskin - IAI</b>	<b>Mr. Ohad Dolev - Rafael</b>	
14:10-14:40	<b>AM14: GE Additive The future of Additive Manufacturing In the aerospace and aviation - a GE vision</b>	<b>AM5: Mobile additive AND subtractive machining solution for fast repair and spare part creation</b>	<b>AM34: Deciphering the microstructure and residual stress effects on the mechanical behavior of additively manufactured metals</b>	<b>W6:Flame cutting safety</b>
<b>KEYNOTE</b>	GE Additive, SWEDEN	Marcus Witt, METROM, GERMANY	DR. Y. Morris Wang, Lawrence Livermore National Laboratory, USA	Amnon Bar Josef, Engineering Services, Safety and Welding LTD

14:40-15:00	<b>AM1: Application Discovery - Evaluating Real Use Cases for In-office Metal 3D Printing</b>	<b>AM2: Review of Advanced Ti Alloy ALM Process Development</b>	<b>AM10: Towards optimal dynamic response using AM based granular damping</b>	<b>W7:Stud welding in civil engineering works</b>
	Ilya Mirman, Desktop Metal, USA	O. Dolev Rafael Ltd. , ISRAEL	Yuval Harduf, Eyal Setter, Michael Feldman, Izhak Buchern RAFAEL, Technion, ISRAEL	Uri Newman
15:00-15:20	<b>AM7: Engineering Microstructure with Designed Energy Deposition Regimes of Electron Beam Melting</b>	<b>AM31: Lessons learnt from Additive Manufacturing of Fatigue driven Design of Business Jet Main Entrance Door Hinge</b>	<b>AM11: Validation and installation of Additively manufactured parts in the IAF,</b>	<b>W8:Validation of laser beam welding for Aerospace application</b>
	Y. Ganor, NRCN, Rotem Ind. ISRAEL.	Eduardo Ejgenberg, Alexander Diskin Israel Aerospace Industries Ltd, ISRAEL	Shai Oren, IAF, ISRAEL	Yoram Eisenberg, EI-SHAR
15:20-15:30	<b>Coffee break and exhibition</b>			
	<b>AM (English)</b>	<b>AM (English)</b>	<b>AM (English)</b>	<b>Welding (Hebrew)</b>
	<b>Afternoon chairs:</b>	<b>Afternoon chairs:</b>	<b>Afternoon chairs:</b>	<b>Afternoon chairs:</b>
	<b>Dr. Alex Landau – NRCN</b>	<b>Dr. Guy Ben-hemu - SCE</b>	<b>Dr. Yacov Iflah -NRCN</b>	<b>Serg Jorkin</b>
	<b>Mr. Erwin Schulman - IAI</b>	<b>Mr. Lior Zilberman - Elbit</b>	<b>Dr. Aleksey Kovalevsky -IIM</b>	

15:30-15:50	<b>AM21: Industrialization of metal printing à explaining the challenges from printing one part to scaling into full production e.g. how to mass produce with DMP Factory 500</b>	<b>AM20: Environmental Degradation of AM fabricated Structural alloys</b>	<b>AM19: Additive Manufacturing – Part Qualification for critical applications</b>	<b>W9:Resistance Welding- spot welding</b>
	3DSYSTEMS	Polina Metalnicov, Dan Eliezer , Guy Ben Hemu, ISRAEL	Yuval Gale, IAI, ISRAEL	Itzhak Newman
15:50-16:10	<b>AM3: Powder-Free Ceramic &amp; Metal AM</b>	<b>AM27: Raising Large Size Copper Parts enabling Advanced AM Applications</b>	<b>AM33: COMPOSITE WIRE FOR WELDING AND ADDITIVE MANUFACTURING: PURPOSE AND PROPERTIES</b>	<b>W10:Rare welding methods and welding in extreme conditions</b>
	Dror Danai, XJet, ISRAEL	Bernhard Kögl AMCM GmbH, GERMANY.	Ganna Stovpchenko, Ganna Polidhko, Aleksey Kovaslevsky “ELMET-ROLL”, Ukraine E.O. Paton Electric, Ukraine Technion, Israel	Peter Geltser - Metallabs Applied Metallurgy Ltd
16:10-16:30	<b>AM12: Applications of Infra-Red Camera on EBM Processes using Numerical Methods and Algorithms</b>	<b>AM13: Tungsten Additive Manufacturing –Application Success Story</b>	<b>AM28: Manufacturing of Copper with high electrical conductivity by Binder Jetting Printing and Electron Beam Melting</b>	<b>W11: Welded assembly Geometric Variation Specifications</b>

	M. Ezra, NRCN, ISRAEL	Dov Chaiat, TPT, ISRAEL	Vladimir Popov, Strokin Evgeny, Alexander Katz-Demyanetz, Aleksey Kovalevsky, Gary Muller, Menachem Bamberger IIM, Technion, ISRAEL	Gili Omri, TES-RnD
--	-----------------------	-------------------------	---	--------------------

### Poster List:

#	Title	Authors	affiliation
<b>AM100</b>	Static and dynamic mechanical response of am discrete patterns	<b>Daniel Levy</b> , Amnon Shirizly, Daniel Rittel	Technion, ISRAEL
<b>AM101</b>	Corrosion characteristics of carbon steel produced by incorporating additive manufacturing and wire arc facility	<b>Tomer Ron</b> <sup>1</sup> , Avi Leon <sup>1</sup> , Amnon Shirizly <sup>2</sup> , and Eli Aghion <sup>1</sup>	<sup>1</sup> Department of Materials Engineering, Ben-Gurion University, Beer-Sheva, <sup>2</sup> Rafael
<b>AM102</b>	Dynamic strength and failure of additively manufactured Ti-6Al-4V	<b>1V. Paris</b> , P. Fridman, E. Tiferet, S. Samuha, Z. Harpenes, A. Yossef-Hai	<sup>1</sup> Physics dept., NRCN, Israel
<b>AM103</b>	Acoustic anisotropy of Ti6Al4V additively manufactured using electron beam melting	<b>Tomer Sol</b>	a Department of Material Engineering, Ben-Gurion University of the Negev, Beer-

			Sheva, Israel b Department of Materials, Nuclear Research Center Negev, Beer-Sheva, Israel
<b>AM104</b>	The mechanical behavior of AM Ti6Al4V specimens containing controlled artificial voids under shear-dominant stress state	<b>Rafi Fadida</b> , Amnon Shirizly, Daniel Rittel	Technion, ISRAEL
<b>AM106</b>	Incremental solidification (toward 3D printing) of metal powders by a compact microwave applicator	<b>Amir Shelef</b> , Eli Jerby's	Tel Aviv University, ISRAEL
<b>AM107</b>	Dimension Extraction from 3D Scanned Hand Model for Prosthesis Design using Deep-Learning Methods	<b>Tzabar Dolev</b> , Anath Fischer	Technion, ISRAEL
<b>AM108</b>	Electron Beam and Laser Beam Welding of Additive Manufactured Ti6Al4V Products	<b>B. TAVLOVICH</b> , A. SHIRIZLY, AND R. KATZ	Technion, ISRAEL
<b>AM109</b>	Manufacturing of lead-free brass water taps by Binder Jetting Printing Technology	<b>Aleksey Kovalevsky</b> <sup>1</sup> Gary Muler <sup>1</sup> , Inbal Doron <sup>2</sup> Shlomo Pirutin <sup>2</sup> Alex Fleisher <sup>1</sup>	<sup>1</sup> IIM, Technion, Israel <sup>2</sup> Hamat Group Ltd. Israel



<b>AM110</b>	Advanced composite wire for welding and wire-fed additive manufacturing	<b>Ganna Stovpchenko</b>	E.O. Paton Electric Welding Institute of National Academy of Science of Ukraine, Kyiv, Ukraine
<b>AM111</b>	Additive manufacturing of massive parts by the ESR and ESR HYBRID processes	<b>L. Medovar<sup>1,2</sup>, G. Stovpchenko<sup>1,2</sup>, Ganna Polishko<sup>1</sup>, A. Sybir<sup>3</sup>, D. Kolomiets<sup>2</sup></b>	<sup>1</sup> E.O. Paton Electric Welding Institute of NASU, Kyiv, Ukraine <sup>2</sup> Engineering company "ELMET-ROLL" Kyiv, Ukraine <sup>3</sup> Ukrainian National Metallurgical Academy, Ukraine
<b>AM112</b>	Monte Carlo Simulations of electron beam's energy deposition during EBM AM processes	<b>Elroei Damri</b>	Nuclear Research Center (NRCN). Department of Nuclear Engineering, Ben-Gurion University
<b>AM18</b>	Additive Manufacturing – a "Holistic" approach	<b>Yuval Gale</b>	MBT Technologies, Israeli Aerospace Industries (IAI).