

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

08:00-09:00	Registration and gathering			
09:00-09:30	Welcoming			
	Eng. Ehud Noff – Chairman of the Association of Engineers and Architects in Israel(AEAI)			
	Dr. Emanuel Liban - Chairman of The Israeli Society of Mechanical Engineers and Aerospace at AEAI			
	Eng. Adi A. ATSITS, Adv. – Chairman of The Israeli National Welding Committee at AEAI/ AEWICS CEO			
	Dr. Amnon Shirizly - Conference Chair- Additive Manufacturing , Rafael			
	Eng. Amichai Pesaach – Conference Chair-Welding, Morex 71			
09:30-10:10	Opening Lecture: “Codes, Standards, and Talent. The American Welding Society at 100”			
	Robert W. Roth, President & CEO, American Welding Society (AWS)			
10:10-10:50	Opening Lecture: “A mature industrial ecosystem for DED additive manufacturing”			
	Dr. Filomeno Martina, WAAM3D Limited, Cranfield University, Cranfield, UK			
10:50-11:20	Coffee break and exhibition			
	AM (English)	AM (English)	Welding (English)	Welding (Hebrew)
	Morning chairs:	Morning chairs:	Morning chairs:	Morning chairs:
	Prof. Eli Aghion – BGU university	Prof. Gennady Ziskind – BGU university	Haim Daon	Yossi Elmalam
	Dr. Oded Amir - Technion	Dr. Eitan Tiferet – NRCN, Rotem Ind.		
11:20-11:50	Am26: Dimensional Accuracy and Fatigue Strength of H13 Components Produced	AM24: Large-Part Metal Additive Manufacturing: Industrial Adoption Trends and a Technical Overview	W12:Welding, a technology joining people	W1:Welds Repairs of Pressure Vessels based on API 510

KEYNOTE	J. Tomas , M. Merkel Aalen University of Applied Science, GERMANY.	John O’Hara, Sciaky, Inc. USA.	Luca Costa, Incoming Chief Executive Officer, IIW	Jacky Bendayan Dayanson Shaked Ltd
11:50-12:10	AM25: Elucidate the best ARCAM Q20+ parameter’s setup for AM of Ti64 based on Taguchi method	AM4: The current state of electron beam technology and application in additive manufacturing”	W13:Magnetic pulse welding and forming in industry	W2:Coated Electrodes for Welding of Stainless Steel with reduced emission of hexavalent chromium
	O. Tevet, NRCN, ISRAEL.	Eberhard Wagner, pro-beam systems GmbH, GERMANY.	Victor Shribman, BMAX	Kiril Kiriyevesky -ZIKA
12:10-12:30	AM17: Dream, Think, Make! – How to succeed in Additive Manufacturing	AM16: General situation of AM, for example in the field for medical, aerospace or mold and toolmaking.	W14:Characterization magnetic pulse welding of dissimilar additive manufacturing to wrought alloy	W3:Methodology of weld inspection sampling according to different standards.
	Erwin Schulman, IAI, ISRAEL.	Andreas Margolf, TRUMPF GMBH, GERMANY.	Dr. Moshe Nahmany	Dr. Yossi Shoef – Gabi Shoef Ltd
	AM15: A Renishaw Perspective on AM,	AM32: Characteristics and advantages of combining 3d- laser printing and mechanical milling in one machine	W15:Cracking mechanisms in Weldments	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	AM8: Integrating additive manufacturing lattice structure and die casting module to create light weight hybrid Al component	AM9: Modelling and characterization of Pre-heating stage in electron beam additive manufacturing	W16: Adjustable Ring Mode Laser in the Key e-Mobility Welding Applications	W5:Importance of surface preparation before welding or brazing of aluminum
	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	Lunch / exhibition			
	AM (English)	AM (English)	AM (English)	Welding (Hebrew)
	Noon chairs:	Noon chairs:	Noon chairs:	Noon chairs:
	Mr. Gil Dagan - NRCN	Dr. Ehud Galun – MOD	Dr. Malki Pinkas , NRCN	Gal Amir
	Dr. Shmuel Osovski - Technion	Dr. Alex Diskin - IAI	Mr. Ohad Dolev - Rafael	
14:10-14:40	AM14: GE Additive The future of Additive Manufacturing In the aerospace and aviation - a GE vision	AM5: Mobile additive AND subtractive machining solution for fast repair and spare part creation	AM34: Deciphering the microstructure and residual stress effects on the mechanical behavior of additively manufactured metals	W6:Flame cutting safety
KEYNOTE	Pär Arumskog, 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	AM1: Application Discovery - Evaluating Real Use Cases for In-office Metal 3D Printing	AM2: Review of Advanced Ti Alloy ALM Process Development	AM10: Towards optimal dynamic response using AM based granular damping	W7:Stud welding in civil engineering works
	Ilya Mirman, Desktop Metal, USA	Ohad Dolev Rafael Ltd. , ISRAEL	Yuval Harduf, Eyal Setter, Michael Feldman, Izhak Buchern RAFAEL, Technion, ISRAEL	Uri Newman
15:00-15:20	AM7: Engineering Microstructure with Designed Energy Deposition Regimes of Electron Beam Melting	AM31: Lessons learnt from Additive Manufacturing of Fatigue driven Design of Business Jet Main Entrance Door Hinge	AM11: Validation and installation of Additively manufactured parts in the IAF,	W8:Validation of laser beam welding for Aerospace application
	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	Coffee break and exhibition			
	AM (English)	AM (English)	AM (English)	Welding (Hebrew)
	Afternoon chairs:	Afternoon chairs:	Afternoon chairs:	Afternoon chairs:
	Dr. Alex Landau – NRCN	Dr. Guy Ben-hemu - SCE	Dr. Yacov Iflah -NRCN	Serg Jorkin
	Mr. Erwin Schulman - IAI	Mr. Lior Zilberman - Elbit	Dr. Aleksey Kovalevsky -IIM	

15:30-15:50	TBD	AM20: Environmental Degradation of AM fabricated Structural alloys	AM19: Additive Manufacturing – Part Qualification for critical applications	W9:Resistance Welding- spot welding
		Polina Metalinikov, Dan Eliezer , Guy Ben Hemu, ISRAEL	Yuval Gale, IAI, ISRAEL	Itzhak Newman
15:50-16:10	AM3: Powder-Free Ceramic & Metal AM	AM27: Raising Large Size Copper Parts enabling Advanced AM Applications	AM33: COMPOSITE WIRE FOR WELDING AND ADDITIVE MANUFACTURING: PURPOSE AND PROPERTIES	W10:Rare welding methods and welding in extreme conditions
	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	AM12: Applications of Infra-Red Camera on EBM Processes using Numerical Methods and Algorithms	AM13: Tungsten Additive Manufacturing –Application Success Story	AM28: Manufacturing of Copper with high electrical conductivity by Binder Jetting Printing and Electron Beam Melting	W11: Welded assembly Geometric Variation Specifications

	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
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Poster List:

#	Title	Authors	affiliation
AM100	Static and dynamic mechanical response of am discrete patterns	Daniel Levy , Amnon Shirizly, Daniel Rittel	Technion, ISRAEL
AM101	Corrosion characteristics of carbon steel produced by incorporating additive manufacturing and wire arc facility	Tomer Ron ¹ , Avi Leon ¹ , Amnon Shirizly ² , and Eli Aghion ¹	¹ Department of Materials Engineering, Ben-Gurion University, Beer-Sheva, ² Rafael
AM102	Dynamic strength and failure of additively manufactured Ti-6Al-4V	1V. Paris , P. Fridman, E. Tiferet, S. Samuha, Z. Harpenes, A. Yossef-Hai	¹ Physics dept., NRCN, Israel
AM103	Acoustic anisotropy of Ti6Al4V additively manufactured using electron beam melting	Tomer Sol	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
AM104	The mechanical behavior of AM Ti6Al4V specimens containing controlled artificial voids under shear-dominant stress state	Rafi Fadida , Amnon Shirizly, Daniel Rittel	Technion, ISRAEL
AM106	Incremental solidification (toward 3D printing) of metal powders by a compact microwave applicator	Amir Shelef , Eli Jerby's	Tel Aviv University, ISRAEL
AM107	Dimension Extraction from 3D Scanned Hand Model for Prosthesis Design using Deep-Learning Methods	Tzabar Dolev , Anath Fischer	Technion, ISRAEL
AM108	Electron Beam and Laser Beam Welding of Additive Manufactured Ti6Al4V Products	B. TAVLOVICH , A. SHIRIZLY, AND R. KATZ	Technion, ISRAEL
AM109	Manufacturing of lead-free brass water taps by Binder Jetting Printing Technology	Aleksey Kovalevsky ¹ Gary Muler ¹ , Inbal Doron ² Shlomo Pirutin ² Alex Fleisher ¹	¹ IIM, Technion, Israel ² Hamat Group Ltd. Israel

AM110	Advanced composite wire for welding and wire-fed additive manufacturing	Ganna Stovpchenko	E.O. Paton Electric Welding Institute of National Academy of Science of Ukraine, Kyiv, Ukraine
AM111	Additive manufacturing of massive parts by the ESR and ESR HYBRID processes	L. Medovar^{1,2} , G. Stovpchenko ^{1,2} , Ganna Polishko ¹ , A. Sybir ³ , D. Kolomiets ²	¹ E.O. Paton Electric Welding Institute of NASU, Kyiv, Ukraine ² Engineering company "ELMET-ROLL" Kyiv, Ukraine ³ Ukrainian National Metallurgical Academy, Ukraine
AM112	Monte Carlo Simulations of electron beam's energy deposition during EBM AM processes	Elroei Damri	Nuclear Research Center (NRCN). Department of Nuclear Engineering, Ben-Gurion University
AM18	Additive Manufacturing – a "Holistic" approach	Yuval Gale	MBT Technologies, Israeli Aerospace Industries (IAI).
AM35	Investigation of the Structure and Properties of Products Obtained at Electron xBeam 3D Metal Printer Using Titanium Alloy Wire	A. Tunik , D. Kovalchuk, L.Adeeva, S.Stepanyuk, S. Grigorenko	E.O. Paton Electric Welding Institute of National Academy of Science of Ukraine, Kyiv, Ukraine