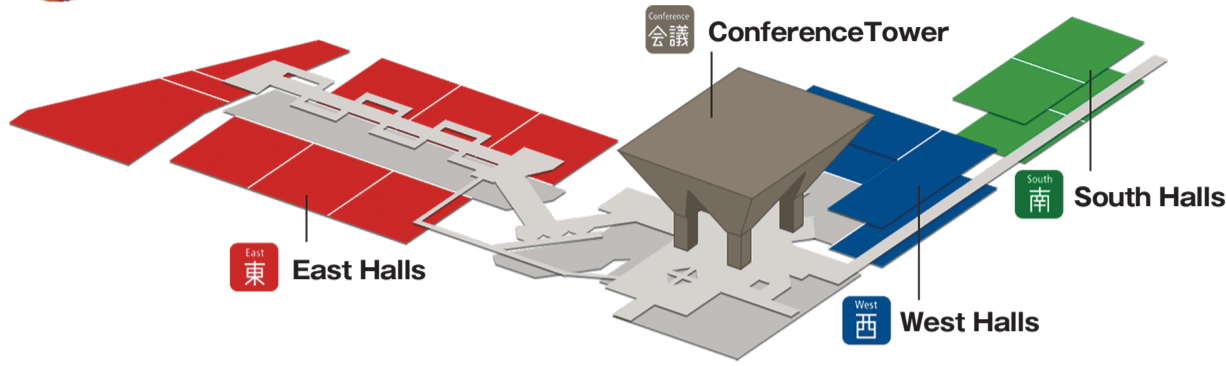




Official **JIMTOF2024**

The 32nd JAPAN INTERNATIONAL MACHINE TOOL FAIR

# MAP & DAILY NEWS



## TOPIC

### Evolution of Digital Technologies: Uses of Digital Twin and AI

Manufacturers, including those producing machine tools and machine parts, are seen actively using digital measures such as digital twin, which replicates the physical world in virtual spaces, and artificial intelligence (AI). High-precision simulations conducted on computers help in shortening development periods. Previously, simulations required prototypes to be created, but with digital technologies, the need for prototyping has been reduced, lowering both cost and effort. As worker shortage is becoming a serious social issue, the digitalization of development and manufacturing processes is set to accelerate.

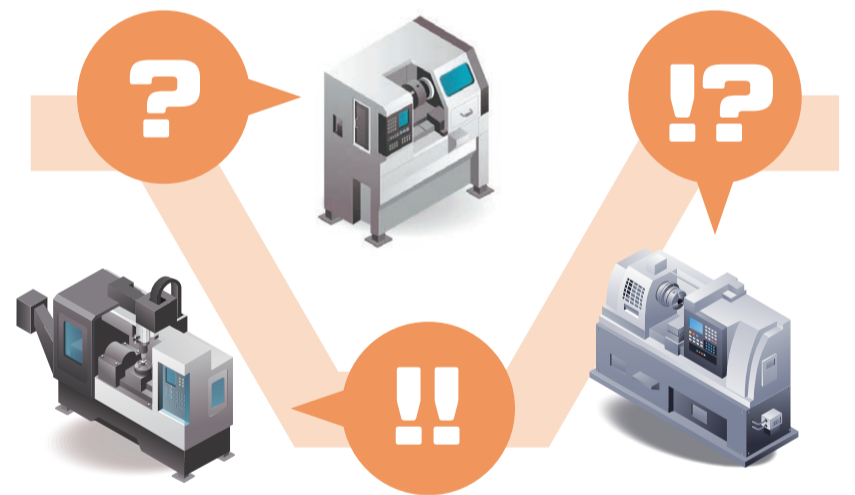


## See the Latest Digital Technology! Manufacturing That Is Close to Society



Continue to P22

## Look for it.



# JIMTOF2024



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JIMTOF 2024  
website here

November 5-10, 2024 (Tue-Sun)

Tokyo Big Sight ▶ East Hall 8 10:00-18:00\*

▶ South Hall 1 9:00-17:00\*

\*Nov. 10th until 4:00 p.m.

## DMG MORI MX MACHINING TRANSFORMATION

Also to be exhibited

**TAIYO KOKI**

**TECHNIUM**

**Magnescale**

**DMG MORI**  
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Tokyo Technology Week

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with the latest 5-axis machines  
and mill-turn centers

• Registration required for admission.  
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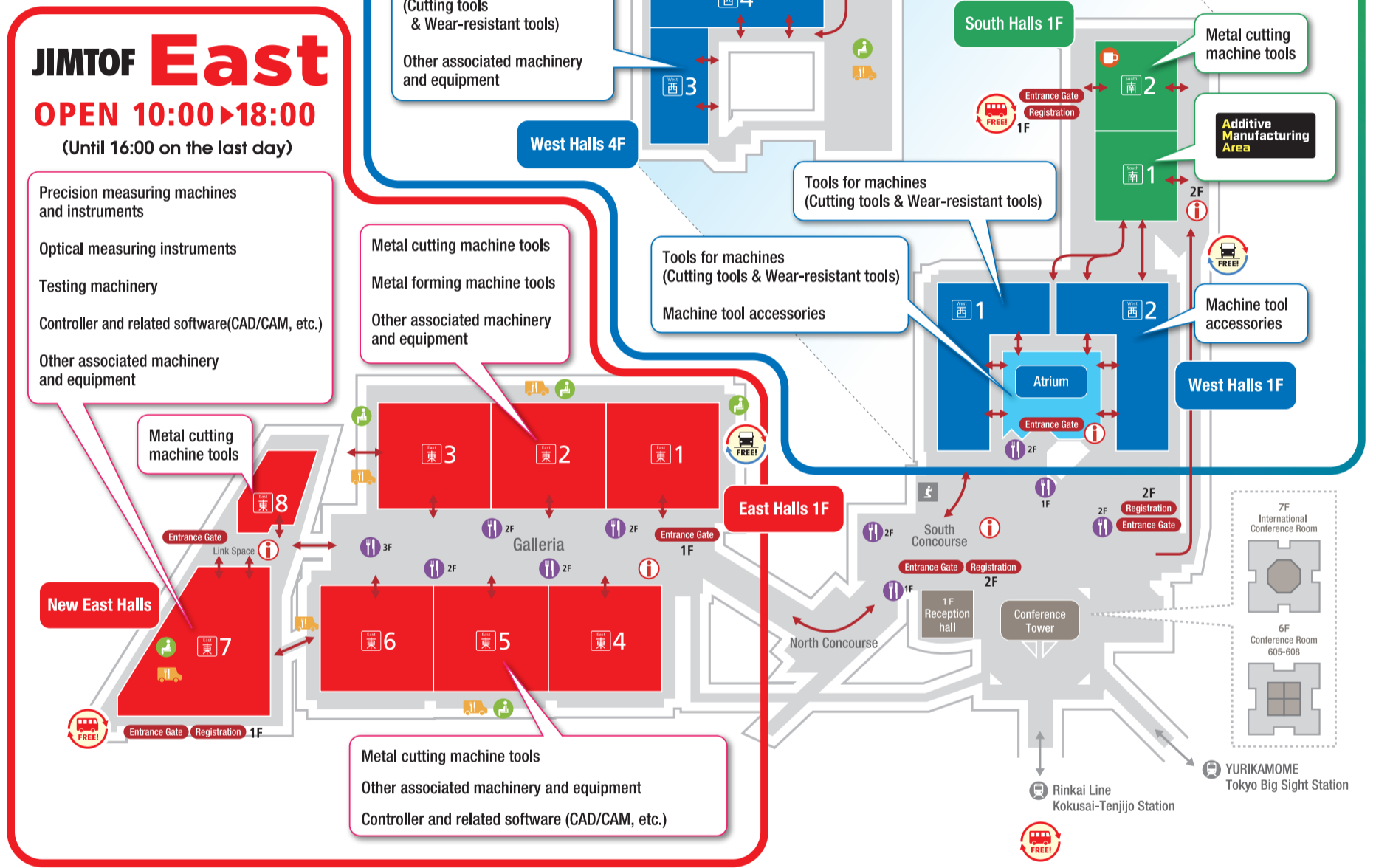
Tokyo Global Headquarters: 2-3-23 Shiomi, Koto-ku, Tokyo, Japan Second Headquarters / Nara Product Development Center: 2-1 Sanjohonmachi, Nara City, Nara

# DMG MORI



# Floor Plan

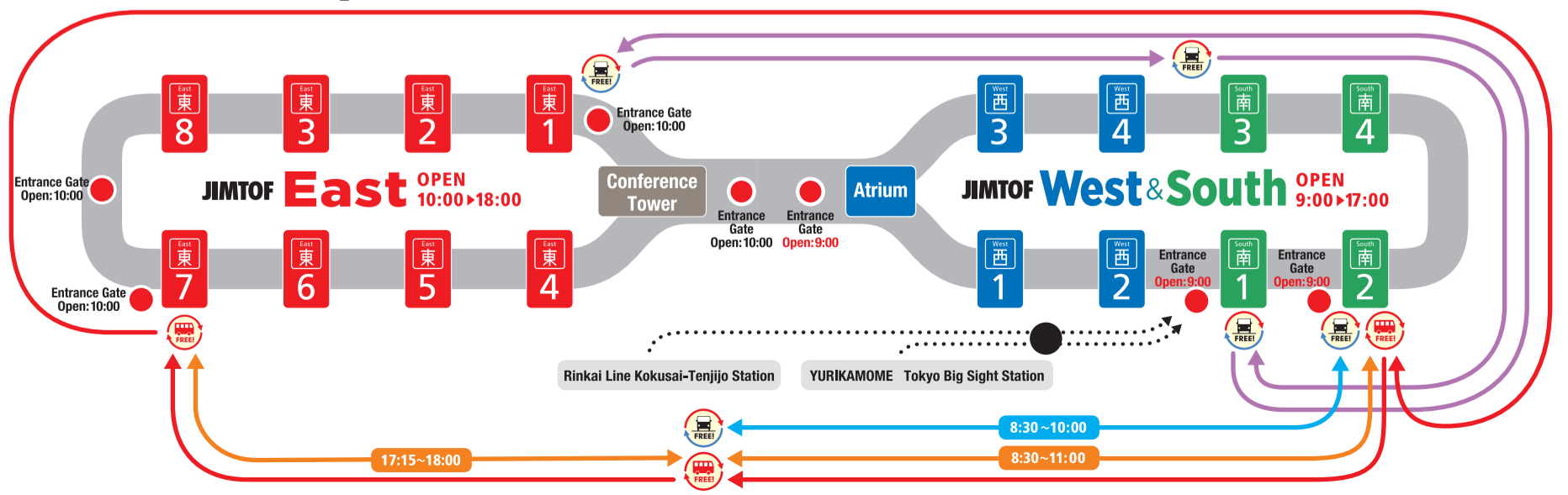
- Restaurants
- JIMTOF Food Festival
- JIMTOF Café
- Rest Area
- Prayer Room
- Information
- Shuttle Bus
- Jumbo Taxi Touring the Venue



No Photography in halls No Smoking on site  
Please smoke in the predetermined smoking areas.

# Route Map

Jumbo Taxi Touring the Venue 10:00~17:00 Shuttle Bus 11:00~17:15






# Contents

- Floor Plan.....2
- Today's Program November 6(Wed.).....3
- Exhibitors List .....4-5
- Exhibitors List / AM Area Exhibitors List.....6
- The Latest Status of Social Implementation  
of Japanese 3D Printers .....7
- East Hall 1•2•3 Map .....8-9
- East Hall 4•5•6 Map ..... 10-11
- East Hall 7•8 Map ..... 12
- JIMTOF FOOD FESTIVAL & JIMTOF Café..... 13
- West Hall 1•2 Map ..... 14-15
- West Hall 3•4 Map ..... 16
- IMEC2024(The 20th International Machine Tool  
Engineers' Conference)Poster Session ..... 17
- South Hall 1•2 Map ..... 18
- South Hall 3•4 Map ..... 19
- Digital Technologies Supporting Manufacturing..... 20
- Evolution of Digital Technologies:  
Uses of Digital Twin and AI..... 22-23
- The road to the establishment of the new Academic Area /  
Machine Tool Examination ..... 24
- Event Calendar..... 26
- Lectures / Seminars..... 27
- Lectures / Seminars in AM Area ..... 28-29
- Exhibitor Workshops ..... 30
- Exhibitor Workshops / AM Area Exhibitor Workshops ..... 31
- Academic Area Newly established in South Hall 4 ..... 32

## Today's Program November 6 (wed.)

 Reception Hall, Conference Tower 1F

**13:00 - 14:15**

**【Special Lecture】**  
Monozukuri manufacturing is about Developing People

 Additive Manufacturing Area Organizers Main Stage

**13:00 - 16:15**

AM Seminar  
by Japan Machine Tool Builders' Association



**JIMTOF**  
**MAP & DAILY NEWS**  
will be released daily during JIMTOF2024!  
Back issues up to today are also available at Information.  
Please note that numbers are limited.





# Exhibitors List

How to find the Booth No.



**A**

- W1042 A.L.M.T. Corp.
- W4025 A.L.M.T. Corp.
- E6023 ABICO R&D CO.,LTD.
- E5052\*\* ABSOLENT AB
- W3079 ACCU-CUT INDUSTRIAL CO., LTD
- E7090\* ACO CO.,LTD.
- E7090 ACO JAPAN.CO.,LTD.
- E7062 ACS CO.,LTD.
- W3065 Adachi Sogyo Co., Ltd.
- E7133 Adcole LLC/Adcole Far East Co.,Ltd
- W1017 AFC Japan Corporation
- E2008\*\* Affolter Group SA
- E1088\* AGATHON AG
- S3038 AHG PRECISION INDUSTRY LTD.
- E4054 Ai solutions Co.,Ltd
- E6028 Aichi Sangyo Co.,LTD
- E1037\* aichi welding
- E2006\* AirLoc Ltd.
- E5040\* Aitronix.Co.ltd
- W2034 Akamatsu Electric Mfg.Co.,Ltd.
- E7097 AKATSUKI MFG.CO.,LTD
- E7089 AKIYAMA SEIKO CO.,LTD.
- W1075\*\* ALESA AG
- E7080 ALFA MIRAGE Co.,LTD
- E3003\*\* Alfred H. Schütte GmbH & Co. KG
- E1088\* Alicona Imaging GmbH
- E7111\* Alicona Imaging GmbH
- E1037 ALPHA LASER JAPAN CO., LTD.
- E1080 ALPSTOOL CO., LTD.
- W2009 ALPSTOOL CO., LTD.
- E1072 AMADA CO.,LTD.
- E7033 Amano Corporation
- E7012 Ametek co.ltd
- E4011 ANCA Machine Tools Japan
- E7118 AnyDesign,INC
- W1075\*\* APPLITEC MOUTIER SA
- E7092 AQUA CHEMICAL CO.,LTD
- W4074 AQUA SYSTEM CO.,LTD
- W4002 ARAI SHOKAI.CO.,LTD.
- WA021 AREUSE Co.Ltd.
- E1025\* ARUM
- W4061 ARYUNG MACHINERY IND. CO., LTD.
- W2015 ASA Electronics Industry Co.,Ltd.
- S3092 A-Safe K.K.
- W4018 Asahi Diamond Industrial Co.,Ltd.
- W3048 Asahi Shoko Co., Ltd.
- W3003 ASAHI SHO-KO-SHA CO,LTD
- E7149 ASANUMA GIKEN CO.,LTD
- W4062 ASK CORPORATION
- E1015 ASTEC Co., Ltd.
- E7104 ATAGO CO.,LTD.
- W4044 Atsuchi Tekko co.,LTD.
- W3113\* ATSUMI KOGYOU CORPORATION
- E1055 Authentec Co., Ltd.
- W3100 AUTOCAM TECHNOLOGY CO., LTD.
- E5009 Autodesk Inc.
- S3034 AUTOGRIP MACHINERY CO., LTD.
- E7009 AWA SPINDLE CO.,LTD.
- S3085 AXELENT JAPAN KK
- WA019 Ayabo Corporation
- W4078\* Azbil Corporation
- W4078 Azbil TA Co.,Ltd
- S3077 AZUMANEJI CO.,LTD.

**B**

- S3063 B AND K CO LTD
- W2041 B.C TECH co.,LTD
- S3007 BAOTN INTELLIGENT LUBRICATION TECHNOLOGY (DONGGUAN) CO.,LTD
- E5019 Beckhoff Automation K.K.
- W4038 Beijing Grish Hitech Co., Ltd.
- E4001 Beiping Machine (Zhejiang) Co Ltd
- S3090 BEISIT ELECTRIC TECH (HANGZHOU) CO., LTD
- W3113\* BELLBLUE
- W3062 BICTOOL JAPAN CO., LTD.
- W2049 BIG DAISHOWA SEIKI CO.,LTD.
- E6027 Blaser Swisslube Japan Co., Ltd.
- E1067 BLESS INC.
- E1089\* Blohm Jung GmbH
- E5052\*\* BLUE PHOTON Technology & Workholding Systems LLC
- E1019 Blue Star R&D Co.,Ltd.
- E7132 Blum-Novotest K.K
- W1066\*\* botek Präzisionsbohrtechnik GmbH
- E6010 bp Japan K.K.
- W4059 Brinkmann Pumps, K.H. Brinkmann GmbH & Co KG
- E5045 Broadleaf Co., Ltd.
- E6044 Brother Industries, Ltd.
- E7111\* Bruker Japan K.K.
- W1051 BTT.co.,LTD
- E2049\*\* BUFFOLI TRANSFER S.p.A.
- W3097 BUNRI Inc.
- E1073 Bystronic Japan, Ltd.

**C**

- E4048 C&G SYSTEMS INC.
- E7047 CADDi inc.
- W4055 Camel Precision Co., Ltd.
- S3050 Campower International Precision Machinery Co., Ltd
- E5031 CAMTUS INC.
- E3004 Captain Industries, inc.
- W3022 Carmex Precision Tools LTD
- E2008\* Cary SA
- W1076 CemeCon K.K.
- W3113 Central Japan Parts Processing Association
- W1005 CERATIZIT Japan Corporation
- E1065 cgkcorporation
- E5042 CGTech
- W4083-8 CHAIN HEADWAY CO., LTD.
- E7115 Champ Casting Industry Co., Ltd.
- W3076 CHAMPDIA Co., Ltd
- E7137 Changchun Rongde Optics Co.,Ltd.
- W3007 Changzhou North Carbide Tool Co.,Ltd
- E6040 CHANGZHOU SHUANGYANG TOOLS CO LTD
- E1016 Chemic Co., Ltd.

- S3002 Chen Ying Oil Machine Co., Ltd.
- W4083-6 CHENG FENG CASTING FACTORY CO., LTD.
- W2065\* Chengdu Kilwood and CLT Co.,Ltd.
- W3068 Chengdu Metcera Advanced Materials Co., Ltd
- E3007 CHIA LERN CO., LTD.
- S3036 CHIAO FONG MACHINERY CO.,LTD.
- E4003-3 CHIEN WEI PRECISE TECHNOLOGY CO., LTD.
- E2047 CHIN HUNG MACHINERY CO.,LTD
- E3038 China Chamber of Commerce for Import and Export of Machinery and Electronic Products
- W3082 CHINA TAIZHOU SHAOSHI TOOLS CO.,LTD
- E4032 CHING TAI COG MACHINE CO., LTD.
- W3047 CHN-TOP SCI & TECH CO.,LTD
- W1062 ChuangXin Japan Co.,Ltd.
- W1050 CHUKYO CO.,LTD.
- E4014 CHUNG PU LASER Co.,LTD.
- E7077 CHUO PRECISION INDUSTRIAL CO.,LTD.
- E5021\*\* Cimple Technology Inc.
- W1032 CIMSOURCE Japan Co., Ltd.
- E5034 CITIZEN MACHINERY CO., LTD.
- E2024 CKB Corporation
- E7022 CKB Corporation
- W4052 CKD CORPORATION
- W3083 Clavis Japan Corporation
- W1034\*\* Co.,Ltd QMC
- E4031 Cogentech International Ltd.
- E7088 Cognex K.K
- W1078 Cominix Co.,Ltd.
- E4021 Connet Co., Ltd.
- E5022 Computer Engineering & Consulting Ltd.
- S3005\*\* Conprofe Technology Group Co., Ltd.
- S3046 COOL TECH LTD.
- E7075 CORETECH Co.,LTD.
- W3086 CORTOOL MANUFACTURING GROUP
- E3016 COSEN MECHATRONICS CO., LTD
- W4005 Cosmotech Co., Ltd.
- W2059 COYO CORPORATION
- W4003 create engineering corporation
- W3025 Cresstech Corporation
- E2008\* Crevoisier SA
- S3087 CSA GROUP JAPAN LTD
- S3012 CSC BEARING CO LTD
- W1033 CY CARBIDE JAPAN CO.,LTD.
- W3046 Cyber RC Co.,Ltd.

**D**

- W3017 Da Shiang Automation Industrial Co., Ltd
- W3050 daido kogyo kaisha
- E7017 DAI-ICH SOKUHAN WORKS CO.
- WA015 DAIICHSANGYO CO., LTD
- W4058 DAIKIN INDUSTRIES, LTD.
- E6043 DAINICHI KINZOKU KOGYO CO.,LTD
- E6029\* Daisei Co.,Ltd.
- W4037 Daiwa Rabin Co., Ltd.
- S3015 DAIYA SEIKI Co., Ltd.
- E4056 Data Design Co., Ltd.
- S3090\* DENKA ELECTRON
- W4083-14Derstrong Enterprise Co., Ltd.
- W4004 deta International
- W3103 detron Machine Co., Ltd.
- WA025 DEUBLIN JAPAN
- W3027 DHF Precision Tool Co., Ltd.
- S3049 DI CHUN IRON WORK CO., LTD.
- W4083-5 DI KU DIAMOND ENTERPRISES CO., LTD.
- E7003 DIATEST JAPAN LTD
- W1072\* DIAVAC LIMITED
- W1043 DIJET INDUSTRIAL CO., LTD
- WA006\* DINE,INC
- W1066\*\* DIXI Polytool S.A.
- W3060 DKSH Market Expansion Services Japan K.K.
- E4009\* DKSH Market Expansion Services Japan K.K.
- E8004 DMG MORI Precision Boring Co.,LTD.
- E8001 DMGMORI CO.,LTD.
- W1072\* DONG SUNG LASER CO.,LTD.
- E6031 DONG YING HYSEN WATER PROCESSING TECHNOLOGY CO.,LTD
- W3014 DONGGUAN MING ZE HARDWARE MACHINETY CO., LTD.
- W3008 DONGGUAN ZHONGJI RONGYAO METAL CUTTING TOOLS CO.,LTD
- E2003\* Dontyne Systems Limited
- E5029\* DP Technology Japan
- W3101 DTR CORPORATION
- W2006 DURIMITEZ Co. Ltd
- E1033 DURMAZLAR MAKINA SAN VE TIC A.S
- WA001 DYC Co., Ltd.
- E5052 Dynamic Tools Corporation

**E**

- E2006\* e+a Elektromaschinen und Antriebe AG
- E3009 EASTERN TECHNICS Corp.
- E1084 EBA KOGYO CO.,LTD
- W4083-11ECHAINTOOL PRECISION CO., LTD.
- E5041 Edgecross consortium
- E6042 EGURO.LTD.
- W3002 EIKO ELECTRIC INDUSTRIAL CO.,LTD.
- W1003 EIKOSHA CO.,LTD.
- E7106 EISEN CO., LTD.
- E7038 Eishin International Co.,LTD.
- S3019 Eishin Techno Co.,Ltd.
- E3029 Elenix Corporation
- E7075\* ELGOJAPAN
- W1068 EMUGE FRANKEN K.K.
- E4007 ENEOS Corporation
- E3040\* ENSHU INDUSTRIAL Co.,Ltd
- E3040 ENSHU Limited.
- E2033\* EPLAN
- E1035 E-PLAN Co.,Ltd
- E2024\* Ernst GROB AG
- E6005 EROWA NIPPON LTD.
- E2006 Esco S.A.
- E5038 Essor Precision Machinery Inc.
- W3009 EST TOOLS CO.,LTD
- E7060 EUCHNER Co.,Ltd.
- E1025\*\* Eureka Robotics, Co., Ltd.
- E1088 EUROTECHNO Inc.

- E7111 EUROTECHNO Inc.
- W1049\* Everloy Shoji Co., Ltd.
- S3003 EVER-ON CORPORATION
- E7074 EVIDENT Corporation
- E1089\* EWAG | Fritz Studer AG EWAG Zweigniederlassung
- S3064 EXACT MACHINERY CO LTD
- E4037 Exstream Corp.

**F**

- W1010 F.P.TOOLS CO.,LTD
- E1062 FABACE Co.,Ltd.
- E7041 Fact Base
- E5006 FACT Co., Ltd
- E7008 Fagor Automation Japan K.K.
- S2001 FANUC CORPORATION
- E7119 FARO Japan, Inc.
- E4010\* FAST CORPORATION
- E5052\*\* FILTERMIST INTERNATIONAL LTD.
- E6032 FIRST GIKEN CO.,LTD.
- W2004 FIRSTEC CORPORATION
- E1066 Fladder Danmark A/S
- E6045 Flow Japan Corporation
- E5047 FNS Co.,Ltd.
- W3026 Fodbits (Weihai) Precision Technology Co., Ltd.
- E4020 Foshan Huibaisheng Laser Technology Co Ltd
- E5052\*\* Franz KESSLER GmbH
- E1061 FREEBEAR CORPORATION
- E1089\* Fritz Studer AG
- W4030 FSK Inc.
- E8002 FUCHS JAPAN LTD.
- E7040 Fuji AI Precision Co., Ltd.
- W1070 FUJI BC ENGINEERING CO., LTD.
- E6021 FUJI CORPORATION
- W1047 Fuji Die Co.,Ltd
- E1002 Fuji Honing Industrial Co., Ltd.
- W4010 Fuji Industries Co.,LTD.
- E7142 Fuji Manufacturing Co.,Ltd.
- E3031 FUJI SANGYO CO., LTD.
- E1032 fuji shoji
- E7020 FUJI TOOL Co., LTD.
- E4012 FUJI-DENSHI
- W3056 FUJIGEN KOGYO CO.,LTD.
- E7141 FUJIKIHAN CO.,LTD.
- E1071 FUJIKIKO Co.,Ltd.
- E1007 FUJIMOTOYUKA
- W1019 FUJISEIKO LIMITED
- E6001 Fukuda Corporation
- W3049 FUKUDA SEIKO CO.,LTD.
- E1017 FUNASAW CO.,LTD
- W4016 FUNIK ULTRAHAD MATERIAL CO.,LTD.
- W4048 Fuqing Rihon Abrasives Co Ltd
- W4028 Fuqing RongMa Grinding Wheel Co, Ltd
- WA029 FURUKAWASEIKI CO.,LTD
- W2043 futamura machines & tools co.,Ltd.

**G**

- W3058 Ganzhou Grandsea Cemented Carbide Co.,Ltd
- E3042\* GAZIRU, Inc.
- E2024\* Gehring Technologies GmbH + Co. KG
- W3042 Gemtool Co., Ltd.
- E5021 GENETEC CORPORATION
- E4053 GENIO Solutions co.,Ltd.
- W3111\*\* Georg Schlegel GmbH & Co. KG
- W3115 German Tech Precision Manufacturing Co., Ltd
- E2002 GF Machining Solutions
- E2024\* GFU Maschinenbau GmbH
- S3054 GIFU ENTERPRISE CO.,LTD
- W3113\* GIFUPURO CORPORATION
- S3001 GIZIN INTERNATIONAL CO., LTD.
- E6008 Gleason Asia Co., LTD.
- W4001 GLOBAL DIAMOND CO.,LTD.
- S3033 GLOBAL PARTS CORP.
- E1025\* G-NET CORPORATION
- E7055 GODO SOLUTION
- W1009 GOLDEN EGRET CARBIDE JAPAN CO., LTD.
- S3053 GONG YANG MACHINERY CO., LTD
- E3003 GOSHO Co., Ltd.
- E7046 GRAVOTECH K.K.
- S3069 Green Plus Co., Ltd.
- W1045 GREENTOOL CO.,LTD.
- E6037 Grind Master Machines Pvt. Ltd.
- E4003-2 GRINTIMATE PRECISION INDUSTRY CO., LTD.
- E4006 GROB Japan K.K.
- E5026 Grundfos Pumps K.K.
- S3048 GSA TECHNOLOGY CO., LTD.
- S3052 G-TEN Precision Co.,Ltd.
- S3100 Guangdong Autofor Precision Intelligent Technology Corporation Co.,Ltd
- W3072 Guangdong DaoFu Precision Technology Co Ltd
- S3023 Guangdong Hippsc Technology Co Ltd
- W3078 GUANGDONG HUASHENG NANOTECHNOLOGY CO LTD
- E6015 Guangdong Ligong Technology International Co., Ltd.
- E1064 Guangdong Longxin Laser Intelligent Equipment Co., Ltd
- W1016 Guhring Japan Co.,Ltd.
- E7135 Guillin Gemred Sensor Technology Co., Ltd
- E2040 GUNKYO,INC.
- W3020 Guohong Tools System (Wuxi) Co.,Ltd.
- E1012 Gutenberg.co.ltd
- E4024 GWEIKE TECH CO LTD

**H**

- E2009\*\* Haas Factory Outlet Japan
- W3088 HABOR PRECISION INC.
- E5027 HAIMER JAPAN K.K.
- E2035 HAINBUCH Japan K.K.
- E4038 HAKUSANKIKO Co.,Ltd.
- E3026 HAMAI CO.,LTD
- E4003-5 HAN JIE MACHINERY CO., LTD.
- E7101 Hangzhou Deepvision Technology Co, Ltd.
- E1011 Hann Kuen Machinery & Hardware Co., Ltd.
- W2003 HANSUNG GT Co.,Ltd
- E5052\*\* Hantop Intelligence Tech.
- E7096 Hanyang Filters and Engineering Corp.
- E7150 Harbin Pioneer M&E Technical Development Co., Ltd
- E2008\*\* Hardinge Kellenberger AG
- E4037\*\* Hardinge Kellenberger AG

- E7069 HARTING K.K.
- E5014\* HARU Technique Laboratory Inc.
- E1044 HASEGAWA MACHINE WORKS LTD
- S3042 HATSUTA SEISAKUSHO CO., LTD.
- E5025 HAWE Japan Ltd.
- S3079 HAYAMI MACHINE TOOL CO.,LTD.
- E4008 heian corporation
- E1069 HEICO
- E7123 HEIDENHAIN K.K.
- E1006 Heiwa Technica Co., Ltd.
- W4017 HENAN BELLO NEW MATERIAL CO., LTD
- W3010 Henan CA-Diamond Material Co.,LTD.
- W3077 Henan E-Grind Abrasives Co Ltd
- W3052 Henan Lerui Powerise Tools Co., Ltd.
- W4028\* HENAN XINYUAN SUPERHARD MATERIAL CO LTD
- S3094 Henan Yuxing Carbon Material Co.,Ltd.
- W4083-16HER BERT ENTERPRISE CO., LTD.
- E7116 Hexagon Metrology K.K.
- W3023 HeYe Special Steel Co.Ltd
- W3033 HG TECHNOLOGY CO., LTD.
- W3055 HICUT CO.,LTD.
- E2006\* Hikari Trading Co.,LTD.
- E4034\*\* HIPA Photoics Japan
- E7067 HIRAKOA HYPER TOOLS, INC.
- E1030 HIROCHIKU CO.,LTD.
- E7138 Hirox Co.,Ltd.
- W2014 Hishiko Corporation
- E2009\*\* HI-TAK CO.,LTD
- W2051 HIWIN CORPORATION
- E7126 HME Co., Ltd.
- W1075\*\* Hommel-Keller Präzisionswerkzeuge GmbH
- W1002 Honda Plus Co., Ltd.
- E1026 Honma Precision Metalworking Co.,Ltd.
- W3036 HONSBURG METALLSAEGER GMBH
- W2025\* HORIKOSHI
- E1036 Horitec Co.,Ltd.
- E4049 HORKOS CORP
- W1065 HORN, Paul Horn GmbH
- W3090 HOSEA PRECISION CO., LTD.
- E5032\* HOUGHTON JAPAN CO., LTD.
- E4043 HOWA MACHINERY,LTD.
- E1068 HSG LASER CO.,LTD.
- E5048 HTT Tiefbohrtechnik GmbH
- W3030 HUNAN BOYUN-DONGFANG POWDER METALLURGY CO.,LTD
- W4083-2 HWE DER MACHINERY AND HARDWARE PTY LTD.
- W4067 HYDAC CO.,LTD.

**I**

- W1066\*\* IBAG Switzerland AG
- E2023 ibaraki grinding wheel
- W4036 ICHIGUCHI corporation
- W3111\*\* icotek GmbH & Co.KG
- W4008 IDEC CORPORATION
- W4063 idemitsu kosan company ltd
- E7058 ifm efector co., ltd.
- E3005 igus k.k.
- WA002\* IHI Bernex AG
- WA002 IHI Corporation
- WA002\* IHI Hauser Techno Coating B.V.
- WA002\* IHI Machinery and Furnace Co., Ltd.
- E4050 IKEGAI Corporation
- W4083-10IKEHARA CO., LTD.
- E1076 IKURASEIKI CO.,LTD.
- W3084 IL JIN TOOL TECH CO.,LTD
- W4009 ILJIN JAPAN Co.,Ltd
- E1085 IMAHASHI MFG. CO.,LTD
- W2002 IMAO CORPORATION
- E2008\* IMM Maschinenbau GmbH
- E5007 IMPROBE Co., Ltd
- S3026 INCOM Company LTD.
- W3044 INCOS INC
- E2008\* INDEX-Werke GmbH & Co. KG Hahn & Tessler
- W3041 IND-SPHINX PRECISION LTD. (Unit-B)
- S3028 industria Co.,Ltd.
- S3055 INNGRIT INC.
- W2065 INNOTECH CO.,LTD
- E7083 Innovalla Metrology
- W3045 INPLUS Co.,Ltd
- E5046 Integra Research Co. Ltd.,
- W4019 INTERNATIONAL DIAMOND INC.
- E1051 IRINOKIKO Co., Ltd.
- E1089\* Irpd AG
- E7144 Isamu Paint Co., Ltd
- E5017 ISBE GmbH
- W1044 ISCAR JAPAN LTD.
- E2014 ISHII HYOKI Co.,LTD.
- E5032\* ISHIKAWA Tool Grind Co.,Ltd.
- E1034 Itaca Japan Inc.
- E6006 ITOCHU MACHINE-TECHNOS CORP.
- E5018 ITOCHU Techno-Solutions Corporation
- E7082 itp Co., Ltd.
- E1054 IWAMA Co., Ltd.
- S3058 Iwamoto Kogyo Co.,Ltd.
- E6012 IWASHITA INDUSTRIAL CO.,LTD.
- WA014 IWATA SAW MFG CO.,LTD.
- W1034\*\* IWATA TOOL (THAILAND) CO., LTD.
- W1034 IWATA TOOL Co.,Ltd.
- WA026 IZUMI CORPORATION
- WA032 IZUMI SANGYO CO.,LTD.
- W1067 IZUSHI AND CO., LTD

**J**

- W2018 JAPAN AUTOMATIC MACHINE CO., LTD.
- W1031 Japan Coating Center Co., Ltd
- E1017\*\* Japan Cutting Laboratory Co.,Ltd
- E7001 JAPAN GAUGE CO., LTD.
- S3011 japan industrial publishing co.,Ltd
- S3060 Japan Machine Tools Distributors Association
- E7013 Japan Precision Measuring Instruments Manufacturers Association
- E4045 Japan speed shore
- W1007 JAPAN WOLFRAM CO.,LTD.
- E5028 JBM Engineering Corporation
- S3095 JCM JAPAN CO.,Ltd.
- E7029 Jeil Mtech Co.,Ltd



For more information, access to [www.jimtof.org](http://www.jimtof.org)



W3094 JETON R/D & MFG. INC  
 W3092 JFLO MACHINE TOOL ACCESSORIES  
 W3096 Jiachen Precision Co., Ltd.  
 W3109 Jiangsu Swift Machinery Technology Co Ltd  
 E6047 Jiangsu Weize Intelligent Technology Co.,Ltd.  
 E1070 Jiangyin Apupu Machinery co., Ltd.  
 W3065\* JIN LI CHENG CUTTINGTOOL Co., Ltd.  
 E4028 Jinan Bodor CNC Machine Co Ltd  
 W3099 JINAN XINLEI PRECISION MACHINERY CO LTD  
 E6009 JINN FA MACHINE INDUSTRIAL CO., LTD.  
 E5051 JIUH-YEH PRECISION MACHINERY CO., LTD.  
 E4003-1 JOEN LIH MACHINERY CO., LTD.  
 S3078 JOHNNAN Corporation  
 E7048 JOHOKU CHEMICAL CO.,LTD  
 E6046 JSK CO.,LTD.  
 E3015 JTEKT CORPORATION  
 W4014 JTEKT GRINDING TOOLS CORPORATION  
 E3014 JTEKT MACHINE SYSTEMS CORPORATION  
 W2047 JTEKT MACHINE SYSTEMS CORPORATION

**K**

E7063 K.MECS Automation Inc.  
 E2009\*\* K.T.System Co., Ltd.  
 W2032 KABUTO.MFG.CO.,LTD  
 E1046\*\* KADIA Produktion GmbH + Co  
 E6030 Kagaku keiki kenkyusho inc  
 W4026 KAIFENG BESCO SUPERABRASIVES CO LTD  
 E2038 KAI OH&CO.,LTD.  
 W3016 KAMIYA SAW & KNIFE Mfg.Co.,Ltd.  
 W3102 KAMO SEIKO CORPORATION  
 W1046\* Kamogawa Co., Ltd  
 E1025\* KAN MANUFACTORY CO.,LTD.  
 E7072 Kan Mechanical Industry, Inc  
 W1024 KANEFUSA CORPORATION  
 AM103 Kanematsu KGK Corp.  
 W2030 KANETEC CO.,LTD.  
 W1052 KANEX HAMONO KOGYO CO.,LTD  
 E2010 KANTO BUSSAN CO.,LTD  
 W2062 KANTO SEIKI Co.,LTD  
 E3023 KANZAKI KOKYUKOKI MFG.CO.,LTD.  
 E2022 Karats Precision, Inc.  
 E7143 KÄRCHER (JAPAN) CO.,LTD.  
 E3022 KASHIFUJI WORKS, LTD.  
 W2016 KATO MFG.CO.,LTD  
 W4072 Kawamoto Pump Mfg. Co., Ltd.  
 E5035 Kawasaki Technology Co., Ltd.  
 W2061 kawata chuck mfg. co., ltd  
 W2060 KAWATATEC CORP.  
 S3106 KEIHIN RAMTECH Co., Ltd.  
 W2040 Kejikousan Co.,Ltd.  
 E3003\*\* Kelch GmbH  
 E2007\* KEN AUTOMATION,INC.  
 W1023 Kennametal Japan Ltd.  
 E1014 Kensakukenma Co., Ltd.  
 W3054 Kexian Precision Tools (Zhejiang) Co.,Ltd.  
 W3093 KEYARROW (TAIWAN) CO., LTD.  
 E7059 keyence corporation  
 W1048 Kfcarbidejapan  
 W4065 King Shang Yuan Machinery Co., LTD  
 E7028 Kintsune Seiki Co.,Ltd  
 E1052 KIRA CORPORATION  
 S3029 kirishima.co.ltd  
 S3061 KISOH CORPORATION  
 E5016 KISTEM Co.,Ltd  
 E7004 Kistler Japan G.K.  
 W2011 Kitagawa Corporation  
 E1083 KITAISANGYO CO.,LTD  
 E1047 KITAMURA MACHINE WORKS CO.,LTD.  
 E4044 KITAMURA MACHINERY CO.,LTD.  
 WA020 KITAOKA Industrial, Inc.  
 S3098 KITO CORPORATION  
 S3018 KITOSEIKISEISAKUSHO CO.,LTD.  
 E5014 KIWA MACHINERY CO.,LTD.  
 E1081 KLINGELNBERG Japan Ltd.  
 E7037 KMKWORLD Inc.  
 W3073 KOBAYASHI DIA,Ltd.  
 W2013 kobayashi iron works co.,ltd  
 W1071 Kobe Steel, Ltd.  
 E5015 Kodama Corporation, Ltd.  
 W4081 KOHARA GEAR INDUSTRY CO., LTD.  
 W3015 Kohsei Co.,Ltd.  
 E7014 KOMATANI GAUGE Co.,Ltd.  
 S3058\* Komatsu Koki Co., Ltd.  
 E5012 Komatsu NTC Ltd.  
 E1056 Komori Safety Device Laboratory Co.,LTD  
 E3025 KONDO MACHINE WORKS CO.,LTD  
 E1050 Kondo Seisakusho Co.,Ltd.  
 WA011 KONITECH INC.  
 E7078 Kosaka Laboratory Ltd.  
 W2024 KOSMEK LTD.  
 W3098 KOWA EMTECH CO.,LTD.  
 E4027 KOWA MACHINERY CO.,LTD.  
 E1058 koyogiken Ink.  
 E6020 KREUZ Co.,Ltd.  
 S3009 Kunshan Omatei Mechanical And Electrical Equipment Co., Ltd.  
 W4039 KURE GRINDING WHEEL CO.,LTD.  
 E2001 Kuroda Precision Industries Ltd.  
 W1014 KYOCERA Corporation  
 E7086 KYOEI ELECTRIC Co.,Ltd  
 W1079 Kyoni Co., Ltd.  
 W1049 Kyoritsu Gokin Co., Ltd.  
 W2037 KYORITSU SEIKI CORPORATION  
 W3108 KYOUIKU GEAR MFG.CO.,LTD.  
 E1009 Kyowua Oil Lubricants Co., Ltd.  
 W1018 kyowa co.,ltd  
 W2046 KYUSHU KOGU CO.,LTD.

**L**

S3096 L.B. Weld Co., Ltd.  
 E2037 LAN Technology Co., Ltd.  
 E7061 LANTEK SHEET METAL SOLUTIONS, S.L.U.  
 E4030 Laser Technical Service Co.,LTD  
 S3074 LAUREL BANK MACHINES CO.,LTD.  
 E7064 Leading Intelligent Equipment (Qingdao) Group Co.,Ltd.  
 E5052\*\* LESTOPREX AG.

W3069 Liaocheng Super New Material Co., Ltd  
 E4040 Liebherr-Verzahntechnik GmbH  
 S3023\*\* LIFENG PRECISION TOOLS (ZHEJIANG) CO.LTD  
 E7099\* Linnenbrink Technik Warburg Maschinenbau GmbH  
 E4029 LIQIUY HSING CO., LTD.  
 E2045 LNS Management SA  
 W1066\*\* LOADPOINT LTD.  
 E5052\*\* LOCKWOOD PRODUCTS, INC.  
 W2025 LUBE CORPORATION  
 S3024 Luoyang Hongyuan Bearing Technology Co Ltd  
 W4049 LUOYANG RUNBAO SUPER ABRASIVES CO.,LTD

**M**

W2008 M.T. S.r.l.  
 W1077 MA TOOL CO.,LTD.  
 E5043 MACHINESOL Co.,Ltd  
 W4076\* MAEDA GIKEN CO.,LTD.  
 W4076 MAEDA SHELL SERVICE CO., LTD.  
 E1089\* Mägerle AG Maschinenfabrik  
 E2008\* Mägerle AG Maschinenfabrik  
 E7113 Magnescale Co., Ltd.  
 E7011 Mahr Japan Co., Ltd.  
 W3113\*\* MAKI FACTORY  
 E3034 MAKINO MILLING MACHINE CO.,LTD.  
 E1049 Makino Seiki Co.,Ltd.  
 W1028 MAKOTOLOY Co.,Ltd  
 E1020 Mamezou Co., Ltd  
 W1046 MANYO TOOLS CO., LTD.  
 E2009\*\* MAPAL KK  
 E7107 MARPOSS K.K.  
 W3111 Marubeni Ele-Next Co.,Ltd.  
 E7085 Marubeni Information Systems.co.,Ltd  
 E1082 MARUEI MACHINE WORKS CO., LTD.  
 E7020\* MARUI TECHNO CO., LTD.  
 WA016 MARUICHI CUTTING TOOLS CO.,LTD  
 E1025 MARUKA FURUSATO CORPORATION  
 W3113\* Marusyo Seiko  
 E7052 Masterlink  
 E3043 Matrix Precision Co., Ltd  
 E1042 MATSUDASEIKI.,LTD.  
 W4071 MATSUI Corporation  
 E3039 MATSUMOTO KIKAI Co., Ltd  
 W2055 MATSUMOTO MACHINE CO.,LTD  
 E3039\* MATSUMOTO SANGYO CO.,LTD.  
 W1006 MATSUOKA CUTTER MFG.CO.,LTD  
 E3019 Matsuura Machinery Corporation  
 E1027 Maxphotonics Co.,Ltd.  
 E4023 MCK Co.,Ltd  
 E1001 MECTRONINC.  
 S3080 Meiko industry Co., Ltd  
 W3113\* MEINAN MACHINERY WORKS  
 W3075 Meister Incorporated  
 S3089 Mena Works Co.,Ltd.  
 S3099 METALEX 2024  
 E7094 METROL Co., Ltd.  
 E7120 Metrotec Corporation  
 S3068\* micro-AMS Inc.  
 E5052\*\* MicroCentric Corporation  
 S3065 MicroLab Precision Technology Co., Ltd.  
 E1003 MICRON MACHINERY CO., LTD.  
 W2010 MIKI PULLEY CO., LTD  
 E4009 Mikron Switzerland AG, Agno  
 E6014 MINAMIDA CO., LTD.  
 S3031 MinebeaMitsumi Inc.  
 S3081 MING TAI MACHINERY INDUSTRIAL CO., LTD.  
 WA018 MINITOR CO.,LTD.JAPAN  
 E4052 MIROKU Machine Tool,INC.  
 E7105 MITAKA KOHKI CO., LTD.  
 E7013\* MITAKASEIKO CO., LTD.  
 E3020 Mitsubishi Corporation Technos  
 S2002 Mitsubishi Electric Coporation  
 W1054 MITSUBISHI MATERIALS CORPORATION  
 W2056 Mitsuboshi Kogyo Co.,Ltd.  
 E7042 MITSUBOSHI MFG.CO.,LTD.  
 E6024 MITSUHATA MACHINERY CO.,LTD  
 E6002\* MITSUI & CO. MACHINE TECH LTD.  
 S3096\* MITSUI & CO. MACHINE TECH LTD.  
 E2042 Mitsui High-tec, Inc.  
 WA022 Mitsui Kokuin  
 E3033 MITSUI SEIKI KOGYO CO.,LTD.  
 W4040 MITSUIGRINDING WHEEL Co.,LTD.  
 S3076 mitsuya industry Inc.  
 E7131 Mitutoyo Corporation  
 WA034 miyakawaindustry.co.,ltd  
 W4050 MIZUHO Co.,Ltd  
 W1029 Mizuho Industries Co., Ltd.  
 E6035 ModuleWorks GmbH  
 S3010 Mold Newspaper  
 W1059 MOLDINO Tool Engineering, Ltd.  
 S3037 Mongtec Precision Inc.  
 S3045 Monodukuri Review Co.,Ltd.  
 S3017 MORI MACHINERY CORPORATION  
 W3113\* Morihagurumaseisakusyo  
 E7068 MORSON JAPAN CO., Ltd.  
 E7087 MOTHERTOOL CO.,LTD.  
 W2038 MST Corporation  
 W1066 MURAKI LTD.  
 E6019 MURATA MACHINERY, LTD.  
 E6019\* Murata Tool, Ltd.  
 E6019\* Muratec C.C.S., Ltd.  
 E7049 Muratec Frontier, Ltd.  
 E6046\* MVM s.r.l.  
 WA030 MY TOOL NAGANO CO., LTD.

**N**

W2045 NABELL CORPORATION  
 W2029 Nabeya.Co.,Ltd.  
 W1055 NACHI Tool Engineering Co.,Ltd.  
 E4033 NACHI-FUJIKOSHI CORP.  
 W1056 NACHI-FUJIKOSHI CORP.  
 E7021 NAGAHAMA SEISAKUSHO LTD.  
 E7013\*\* NAGAI GAUGE MFG.CO., LTD.  
 E1078 NAGASE INTEGRAX Co.,Ltd.  
 E5005 NAGASHIMA SEIKO CO., LTD.  
 E1046 Nagel Aoba Precision Co., Ltd.  
 W2023 Nakahara Chemical Products Industry co.,Ltd.

E7110 Nakamura Mfg. Co., Ltd.  
 E5033 Nakamura-Tome Precision Industry Co., Ltd.  
 E1063 NAKANIHON-RO KOGYO CO.,LTD.  
 W2054 NAKANISHI INC.  
 E5052\*\* Nakanishi Jäger GmbH  
 E1024 Nakaseiki Co.,Ltd.  
 E7139 Nango Co.,Ltd.  
 W4022 NANIWA ABRASIVE MFG. CO.,LTD  
 W4022 NANIWA TOISHI CO.,LTD.  
 E1023 Nanjing Prima CNC Machinery Co.,Ltd.  
 E7036 NATOCO Co.,Ltd  
 W2044 NBK  
 S3075 NDK Inc.  
 S3041 NEOFLEX co.,Ltd  
 W1070\*\* NEW SANKYO TOOL  
 W2035 NEW STRONG CO.,LTD.  
 W4032 NEWREGISTON Co.,Ltd.  
 S3027 News Digest Publishing Co., Ltd.  
 E7067\* nextscience  
 E7146 Nichiko Equipment Co., Ltd.  
 E2031 NIDEC MACHINE TOOL CORPORATION  
 E2032 NIDEC OKK CORPORATION  
 W4066 NIHON PISCO CO.,LTD.  
 E3028 NIHON SEIKI CO., LTD.  
 WA031 NIHON SEIMITSU KIKAI KOSAKU Co.,Ltd.  
 E7051 Nihon Tsukuridas inc.  
 E5002 Nihon-ALSYS,Inc  
 E5011 NIIGATA MACHINO TECHNO CO.,LTD.  
 E7125 NIIGATA RIKEN SOKUHAN CO., LTD.  
 E7006 Niigata Seiki Co.,Ltd  
 W2021 NIKKEN KOSAKUSHO WORKS, LTD.  
 W2063 NIKKI TRADING CORP  
 E7099 NIKKO TECNO CO.,INC.  
 W2031\* NIKKO-YPK SHOJI CO.,LTD  
 E7073 NIKON CORPORATION  
 W4060 Nikuni Co.,Ltd.  
 E2026 NILES MACHINE CO., LTD.  
 W1066\*\* NINE9  
 E3035 NINGBO BLIN MACHINERY CO LTD  
 W2058 NIPPON BEARING CO.,LTD.  
 W1038 Nippon ITF Inc.  
 W2027 Nippon Jabara Co., Ltd  
 E7030 NIPPON MECHA CHEMICAL Co.,Ltd.  
 W2028 Nippon Oil Pump Co.,Ltd.  
 S3073 NIPPON PAPER CRECIA Co., LTD  
 W2036 Nippon Schneebberger K.K.  
 S3082 NIPPON SEIMITSU DENSHI CO.,LTD  
 E3037 NIPPON TAPPER CO.,Ltd  
 W2020 NIPPON THOMPSON CO.,LTD  
 W1030 Nippon Tokushu Goukin Co.,LTD.  
 S3040 NIPPON TUNGSTEN CO.,LTD  
 E7100 Nippon Vision Engineering Co.,Ltd.  
 W4015 NIPPONDIAMOND CO.,LTD.  
 E2046 NISHIJIMA CORPORATION  
 W3113\* Nishiki Industrial Co.Ltd  
 W3110 NISSEI CORPORATION  
 S3062 NISSHIN RUBBER CO.,LTD  
 E6016 NISSHO MACHINERY CO.,LTD  
 S3104 NISSIN  
 E3041 NISSIN MACHINE WORKS , LTD.  
 E1045 Nissin Manufacturing Co., Ltd.  
 W4029 Nitolex Corporation  
 E7151 NITTO KOGYO CORPORATION  
 W4069 Nitto Kohki Co., Ltd.  
 E5040 NITTO SHOJI KAISHA,LTD  
 E4025 NITTO POLYGON CO., Ltd  
 E2009 NK WORKS CO.,LTD.  
 W1075 NOAH CORPORATION  
 W1013 Noga Waters Ltd.  
 W2031 NOMURA MACHINE TOOL WORKS, LTD.  
 E5053 NOMURADS CO.,LTD  
 W4024 NORITAKE CO.,LIMITED  
 W1025 Noto Alloy Co.,Ltd.  
 S3091 NOZUK.Ltd.  
 W1057 NS TOOL CO.,LTD.  
 W2026 NSK Ltd.  
 E5024 NSS co.,LTD  
 W2050 NT TOOL CORPORATION  
 W1027 NTK CUTTING TOOLS Co., Ltd  
 W2052 NTN Corporation  
 E1057 NUMALLIANCE  
 W4043 NUNOME ELECTRIC CO.,LTD.

**O**

E1046\*\* O.ERRE.PI.  
 E7112 OBISHIKEIKISEISAKUSHO  
 W1058 Oerlikon Japan Co., Ltd.  
 W3113\*\* OFFICE KIITOS  
 W1036 OGASAWARA PRECISION LABORATORY CO. LTD  
 WA035 OHM ELECTRIC CO., LTD.  
 E1059 OHMINE INDUSTRY CO.,LTD  
 E3001 Ohmiya Machinery Co.,Ltd  
 E3008 Ohno Seiko Co.,Ltd.  
 S3022 OHNOSEIKI Ltd.  
 E6029 OHTORI KIKO CO.,LTD.  
 E7016 OJIYA SEIKI CO.,LTD.  
 S3014 OKADA INTELLIGENCE (JIANGSU) CO LTD  
 E2030 Okamoto Machine Tool Works,Ltd.  
 W3051 OKASUGI  
 W1060 OKAZAKI SEIKO CO., LTD.  
 W3035 OKE PRECISION CUTTING TOOLS CO LTD  
 S3101 Oki Electric Cable Co.,Ltd.  
 E6048 OKUMA Corporation  
 E5054 O-M Ltd.  
 E1046\* OMAT Co., Ltd.  
 WA005 Onwardgiken Co.,Ltd  
 E7013\* OOKO SEIKI CO., LTD  
 E7065 OPC Foundation Japan  
 E5004 OPEN MIND Technologies japan  
 E7134 Opto Science  
 E1075 Opton.Co.Ltd  
 E7127 Orbray Co.,Ltd.  
 E3036 ORIGINALMIND  
 E5049 ORiN Consortium  
 W4006 Osaka Seikan Co., Ltd.  
 W1066\*\* OSBORN GmbH

E2025\* OSG COATING SERVICE CO.,LTD.  
 W1020 OSG Corporation  
 E7031 Ottenlux Lighting Technology Co.,Ltd  
 E7103 OTSUKA OPTICS Co.,Ltd.  
 E7007 OZAKI MFG.CO.,LTD.

**P**

E7140 P&C LTD.  
 WA004 PAL CO.,LTD.  
 E5010 PALMARY MACHINERY CO., LTD.  
 E7117 Panasonic Factory Solutions Sales & Engineering Japan Co., Ltd.  
 E1030\* PARKER NETSUSHORI KOGYO CO., LTD.  
 W3089 PARKSON WU INDUSTRIAL CO., LTD  
 E6034 Parv Metal Processing Co.  
 W2022 Pascal Corporation  
 W4073 PASCAL SYS&ENG. CO., LTD.  
 E2008\* PEMTEC SNC  
 E2039 PENTA LASER (ZHEJIANG) CO LTD  
 E2048 PERFECT MACHINE CO., LTD.  
 E2025 PerformCoat Europe AG  
 W1066\*\* PERON SPEED INTERNATIONAL SRL  
 E7091 PETROPLAN CO. LTD.  
 E2027 physical photon  
 E7136 PhysixTechnologyInc  
 W2005 PIONEER TRADING COMPANY  
 E2008\* PLATIT AG  
 E7050 Polytec Japan  
 E4037\*\* Posalux S.A.  
 S3051 PRECISION MOTION INDUSTRIES  
 WA023 Precision Tool Makers Export Group,Ltd.  
 E1088\*\* PRECITRAME MACHINES SA  
 E3042-5\* Premier Engineering Co.,Ltd.  
 E3021 PRIORITY CO.,LTD  
 E2046\* Profiroil Technologies GmbH  
 E3003\*\* ProGrit GmbH  
 W3033\* PROST CO.,LTD  
 E7079 Pulstec Industrial Co., Ltd.

**Q**

E5012\* QUALICA Inc.  
 E2008\* Quality Vision International Inc

**R**

E3023\* RAMPF Group Japan K.K  
 WA008 REGO-FIX JAPAN K.K.  
 W1008 REIHOU.CO.LTD  
 E2003 Reishauer KK  
 E1088\* Rene Gerber AG  
 E7026 RENISHAW K.K.  
 W4033 RESITON CO., LTD.  
 W3059 RESMOTOOL CO., LTD.  
 E1021 R-GOT CO.,LTD  
 W1064 Rhinos Company Ltd.  
 W3081 RI HSIUNG PRECISION TECH CO., LTD.  
 E2008\* Riello Sistemi Digital Transfer Srl  
 W2007 RIKEN SEIKI Co.,Ltd.  
 E2009\*\* Rinsconnect Corporation  
 E2033 Rittal K.K.  
 W3112 RIX CORPORATION  
 E3003\*\* Roeders GmbH  
 E2034 ROKU-ROKU SMART TECHNOLOGY CO.,LTD.  
 E2008\* Rollomatic SA  
 WA024 Romheld Halder  
 E4003-6 RONG JHEN TECHNOLOGY CO., LTD  
 S3057 ROYAL PRECISION TOOLS CORPORATION  
 W1022 RYOCCO SEIKI CO.,LTD

**S**

E2049 S&F Inc.  
 E3017 S.lab Inc.  
 E4036 SAEILO ASIANET, INC.  
 E4055 SAEILO JAPAN, Inc.  
 W4083-9 SAFEWAY MACHINERY INDUSTRY CORPORATION  
 S3084 Sagami Chemical Metal Co.,Ltd.  
 E6025 SAIDA UMS INC.  
 E7039 SaiSi Machine & Electric (Zhejiang) Co., Ltd  
 W1061 SAITO SEISAKUSHO CO.,LTD.  
 E7084 SAITOH KOUGAKU Co.,Ltd.  
 W4070 SAKAGAMI SEISAKUSHO LTD.  
 W3113\* Sakaiseisakusyo  
 E5020 SAKURAI LTD.  
 W3074 SAKUSAKU CO.,Ltd.  
 S3039 Samchully Machinery Co., Ltd  
 E4022 SAMURAI SAW WORKS CO.,LTD  
 W1012 Sanalloy Industry Co., Ltd.  
 W1039 Sandvik K.K.(Dormer Pramet)  
 E7005 Sangen corporation  
 W4083-15 SANJET INTERNATIONAL CO., LTD.  
 E7035 SANKEI MANUFACTURING CO.,LTD.  
 WA033 Sanki-Technos Co., Ltd.  
 W4064 SANKO LIMITED  
 S3093 SANKYO REELS,INC.  
 W2057 Sankyo Seisakusho Co.  
 S3086 Sanmatsu Co.,Ltd.  
 E2007 Sanpo Seiki Co., Ltd.  
 E3042-6\* Sansel Co.,Ltd.  
 E1039 SANSHIN  
 E7081 Santec Japan Corporation  
 W4079 SANWA ENTERPRISE COMPANY, LTD.  
 E1077 Sanwa Robotics Co.,Ltd.  
 W4035 SANWA SHOKO Co.,Ltd.  
 S3102 SANWACHEMICALCO.,LTD  
 E1004 SANWAKOUYU  
 W1037 SANWASEISAKUSYO CO.,LTD  
 E2019 Sanyo Machine Co., Ltd.  
 W2048 SANYO MFG.CO.,LTD.  
 E4037\*\* Sarix S.A.  
 S3072 Satech Safety Technology Ltd  
 E4039 Sawairi Engineering Co.,Ltd  
 E1089\* SCHAUDT MIKROSA  
 E7066 SCHMERSAL JAPAN K.K.  
 E2004 SCHUNK Intec K.K.  
 W2001 SDG Co., Ltd.  
 E3018 SEA FORCE CO.





# Exhibitors List

W4013 SEA SHORE DIAMOND INDUSTRIAL CO., LTD.  
 E2044 Seibu Electric & Machinery Co.,Ltd.  
 E7057 Seibu Shoko Co., Ltd  
 E6003 SeibuHitec  
 E2015 SEIJOKOGYO  
 E1087 Seiko Instruments Inc.  
 E4041 SEIWA G-TEC INC.  
 E4026 SENJO SEIKI CO.,LTD.  
 W4068 SEOAM MACHINERY INDUSTRY. CO.,LTD.  
 S3032 SGO CO., LTD.  
 E7071 SHAN DONG NANO ADVANCED MATERIALS TECHNOLOGY CO., LTD  
 S3013 SHANDONG OUNUOWEI NUMERICAL CONTROL TOOL CO.,LTD  
 W3106 Shandong Shanneng Precision Machinery Co., Ltd  
 W3019 Shanghai Hezuan Technology Co.LTD  
 W3053 Shareate Tools Ltd  
 W4056 Shell Lubricants Japan  
 W3080 Shenyang Wemust Saws Industrial Corporation Ltd  
 S3030 Shenzhen Danfoo Technology Co., Ltd.  
 E1025\*\* Shenzhen Han's Robot Co., Ltd.  
 E4034 Shenzhen JPT Opto-Electronics Co Ltd  
 S3107 Shenzhen Q-mao Precision Technology Co., Ltd.  
 W3037 SHENZHEN YUBAO DIAMOND TOOLS CO.,LTD  
 E2043 SHIBAURA MACHINE CO., LTD.  
 E1074 SHIBUYA CORPORATION  
 E2021 SHIGIYA MACHINERY WORKS LTD.  
 E6026 SHIMADA MACHINE TOOL DRIVES CO., LTD  
 E4051 SHIN NIPPON KOKI CO.,LTD.  
 E7045 Shinano Kenshi Co., Ltd.  
 W4042 SHINANO KIHAN Co.,LTD  
 E7148 SHINING 3D Tech Co.,Ltd  
 E1057\* SHINKO MACHINERY CO., LTD.  
 E1041 SHINKO MFG.CO.,LTD.  
 W1072 ShinMaywa Industries, Ltd.  
 E7055\* ShinMaywa Soft Technologies, Ltd.  
 S3020 SHIN-OH ELECTRIC CO.,LTD  
 W1063 SHINSEI CORPORATION  
 W4083-3 SHIN-YAIN INDUSTRIAL CO., LTD.  
 W1066\*\* SHIN-YAIN INDUSTRIAL CO., LTD.  
 E3027 SHIZUOKA MACHINE TOOL CO., LTD.  
 E7102 Shoraku Co.,Ltd  
 W4082 Showa Corporation  
 W2012 SHOWA TOOL CO.,LTD  
 E7095 Showa-industry co.,Ltd.  
 E5008 Siemens  
 W1019\* SIGA MACHINE TOOL Co.,LTD  
 E7109 SIGMA ELECTRONICS Co., Ltd.  
 E6019\* silex technology, Inc.  
 W3085 Silver Alloy Co., Ltd.  
 W3040\* SIMOTSU  
 E7106\* SION DIAMOND Co., Ltd  
 E3011\* Sir meccanica S.p.A.  
 W4027 SISA ABRASIVES CO LTD  
 S3021 SKF Japan Ltd.  
 W4057 SMC Corporation  
 W2067 SMW-AUTOBLOK JAPAN INC.  
 E1031 SOCO Machinery Co.,Ltd.  
 E4015 Sodick Co., Ltd.  
 E4046 SOFIX Co., Ltd.  
 S3005 SofTool Manufacturing Co Ltd  
 S3067 Sokeizai Promotion Council (Ministry of Economy, Trade and Industry)  
 E7015 SOKUHANSHA CO.LTD  
 E7098 SOL Corporation  
 E4019 SOMAX CO., LTD.  
 W3066 soneda kougyou co,ltd  
 W4041 SOWA Co.,Ltd.  
 W3040 SOWA SYSTEM CO.,LTD.  
 W3057 SPEED TIGER PRECISION TECHNOLOGY CO.,LTD.  
 E3006 Speedy Target Group Co., Ltd.  
 E7121 SPI ENGINEERING CO.,LTD  
 E6022 STAR MICRONICS CO.,LTD.  
 W3001 STAR TOOL CO.,LTD.  
 W4007 State Industry Co.,Ltd.  
 E1028 ST-LINK  
 WA012 STO Co., Ltd.  
 W3004 Sugatsune Kogyo Co., Ltd.  
 E1079 SUGINO MACHINE LIMITED  
 W4031 Sumflex Co.,Ltd.  
 W1041 Sumitomo Electric Industries, Ltd.  
 E3024 Sumitomo Heavy Industries Finetech, Ltd.  
 E3024\* Sumitomo Heavy Industries, Ltd.  
 W4077 Sumitomo Precision Products CO.,LTD.  
 E3010 SUN-YELL INTERNATIONAL CORPORATION  
 W4083-17 SUPER AIR COMPRESSOR TECHNOLOGY CO., LTD.  
 E5036 Suzhou Haller Intelligent Equipment Co.,Ltd.  
 W3091 Suzhou Huajiede Manufacturing Co Ltd  
 E6007 Swiss Technology Co., Ltd  
 E5052\*\* SwissChuck AG  
 E3032 SYNOVA JAPAN KK  
 E2002\* system 3R International AB  
 E2007\* System Engineering Co.

**T**

E7130 TACC Corporation  
 E7131\* TACC Corporation  
 W4021 TACS CORPORATION  
 E5030 TACTX Co.,Ltd.  
 W1027\*\* TaeguTec Ltd.  
 S3047 TAI CHONG CO., LTD  
 E5040\* Tainatec.co,Ltd  
 W4051 TAISEI KOGYO Co., Ltd.  
 E4003-9 Taiwan External Trade Development Council  
 W4083-18 Taiwan External Trade Development Council  
 E8003 TAIYO KOKI CO., LTD.  
 E3011 Taiyo-Kouki Co.,Ltd.  
 W1073 TAIYO-TOOL CO.,LTD.  
 E6041 TAIYU CO.,LTD  
 E6013 Taizhou Xiongfeng Machinery Co. ,Ltd.  
 E7147 TAJIMA LIGHT METAL CO.,LTD  
 E1048 TAKAHASHI MACHINERY CO., LTD.  
 W3113\* TAKAHASHI SEIKI Co., Ltd.  
 WA013 TAKAHASHI TOOLS CO., LTD.  
 W4023 TAKAKURA KOHGYO CO.,LTD.  
 E6017 TAKAMATSU MACHINERY CO.,LTD.

E1040 Takashima Sangyo Co., Ltd.  
 S3043 TAKAYAMA TRADING CO.,LTD  
 E7053 TAKEBISHI CORPORATION  
 E2029 TAKEDA MACHINE TOOLS CO., LTD.  
 W2019 Takeuchi Precision Works Co.,Ltd.  
 W3113\* Takimoto Giken Industry Co., Ltd.  
 E3013 Takisawa Machine Tool Co., Ltd.  
 E7054 Takumi Engineering, inc.  
 WA010 TAKURAKOGUSEISAKUSYO  
 E5052\*\* TALLERAS MYL S.A.U.  
 E2016 TANIGAWA Co.,Ltd.  
 S3108 TANISHI  
 W3061 TANITEC CORPORATION  
 W4083-12 TANKO ENTERPRISE CO., LTD.  
 W1035 TANOI MFG.CO.,LTD.  
 W3006 Tarfilm Hi-tech Co., Ltd.  
 WA003 TATENO CO., LTD.  
 W1011 tatsuno sawing dr.co.,Ltd.  
 E1046\*\* TBT Tiefbohrtechnik GmbH + Co  
 S3083 Tebiki, Inc.  
 WA009 TECH WAY ADVANCED MATERIALS CO.,LTD  
 W2064 Tech.yasuda CO.Ltd  
 W4080 Techno Dynamics Inc.  
 E5044 TECHNQA,INC  
 E4002 TechnoCoat Co., Ltd.  
 E5050 Techtrage Co.Ltd  
 E7114 TEOCLOCK Co.,Ltd.  
 W3028\*\* TEC-SPIRAL ENTERPRISES TOOLS CO., LTD.  
 W4047 TEIKEN Corporation  
 W2066 TEIKOKU CHUCK CO., LTD.  
 E6033 Telus Laser Co.,Ltd.  
 W4020 TENRYU SAW MFG. CO., LTD.  
 E4047 TERAL INC.  
 S3071 TE-SHIN Precision Technology CO., LTD.  
 S3097 TEZMAKSAN ROBOT VE OTOMASYON TEKNOLOJILERI SAN. TIC A.S  
 E7076 THANKO.inc  
 E7032 THE CREO CO.,LTD  
 S3059 THE KANKISANGYO SHIMBUNSHA  
 W3067 THE KIICHI TOOLS CO.,LTD  
 S3044 THE NIKKANOKOGYO SHIMBUN,LTD  
 E3002 The SHODA Company  
 W4083-1 THETA PRECISION CO., LTD.  
 W2017 THK CO., LTD.  
 W1054\* three B  
 E7070 Three R Solution Corp.Japan  
 E4003-8 TIAN FENG HYDRAULIC CO., LTD.  
 W3106\*\* TIANGONG OSTTE (SHENZHEN) INDUSTRIAL TECHNOLOGY CO.,LTD  
 S3070 Tien Ding Industrial Co., LTD  
 S3004 TIM GROWING BEARING (ZHEJIANG) CO LTD  
 W4046 Tipton Corp.  
 S3035 TJR Precision Technology Co., Ltd  
 E3042-4\*\* TMW CO.,LTD  
 E2036 TMW CO.,LTD.  
 W3063 TnC SHARK Co.,LTD  
 E7013\*\* TOA PRECISION MACHINERY CO., LTD.  
 E7043 TOCHO MARKING SYSTEMS ,INC  
 WA028 TODASEIKI CO., LTD.  
 E1043 Tohshin Technical Co.,Ltd.  
 S3088 Tokai Spring Industries, Inc.  
 W1069\* TOKALOKY CO.,LTD  
 W1069 Tokaloy TGK Co.,Ltd.  
 W1040 TOKO CO.,LTD.  
 W3024 TOKYO AUTOMACH CO.,LTD.  
 E7010 TOKYO BOEKI TECHNO-SYSTEM LTD.  
 E4010 Tokyo Engineering Co., Ltd.  
 S3105 Tokyo Hatsujyo Manufacturing co.,Ltd  
 E3042\* TOKYO KIKAI SEISAKUSHO, LTD.  
 W4053\* Tokyo Oilanalyst Co.,Ltd  
 E2012 TOKYO SEIKI KOSAKUSHO  
 E7027 TOKYO SEIMITSU CO., LTD  
 E1060 Tokyo seimitu hatsujyo Co.,Ltd  
 E1086 TOKYO TAPPING MACHINE CO.,LTD.  
 W3114 Tokyo Technical Instruments Inc.  
 W2042 Tomita Co.Ltd  
 E4003-4 Tongtai Machine & Tool Co., Ltd.  
 W1081 TOOL DE INTERNATIONAL CO.,LTD.  
 W1034\*\* Tool Discovery Co., Ltd  
 E7044 Tornex Inc.  
 WA017 TOWA Corporation  
 E3030 Toyo Advanced Technologies Co.,Ltd.  
 W1080 TOYO CO.,Ltd (Nagano)  
 E2005 TOYO CORPORATION  
 E7124 TOYO Corporation  
 W1066\*\* TOYO IRON  
 E1008 TOYO KENMAZAI KOGYO LTD.  
 S3016 TOYO SCREEN KOGYO CO., LTD.  
 E4004 TOYO SEIKI KOGYO CO.,LTD.  
 W3021 TOYOX CO.,LTD.  
 E7018 TPR OSAKA SEIMITSU KIKAI CO., LTD.  
 E5032 TRANSOR FILTER JAPAN CO., LTD.  
 E5012\* TRI ENGINEERING COMPANY LIMITED  
 W1034\* TRI ENGINEERING COMPANY LIMITED  
 WA027 Trio Inc.  
 E7122 Trioptics Japan Co.,Ltd.  
 W4053 Triple R Co., Ltd.  
 E1038 TRUMPF CORPORATION  
 S3066 Tsubakimoto Mayfran Inc  
 W2033 TSUDAKOMA Corp.  
 E6018 TSUGAMI CORPORATION  
 E7034 TSUKUBA ENGINEERING LTD.  
 E2020 TSUNE SEIKI Co.,Ltd.  
 W1021 Tungaloy Corporation  
 W3075\* TWOPLA GIKEN Co.,Ltd

**U**

E2036\* UEL  
 E6036 UJIDEN CHEMICAL INDUSTRY CO.,LTD.  
 E7128 umati (c/o VDW-Forschungsinstitut e.V.)  
 W3095\* UNIMAGTECH KK.  
 W3032 UNION MATERIALS CORP.  
 W1015 UNION TOOL CO.  
 E7108 UNIPULSE CORPORATION  
 E1089 United Grinding Group Management AG  
 E7056 Universal Robots

E2008\* USACH  
 W1001 UTSUNOMIYA SEISAKUSHO CO.,LTD.  
 W1034\*\* UYAR GmbH & Co. KG

**V**

E5052\*\* Vandurit GmbH  
 E7023 Vectrix Corporation  
 W4083-7 VERNAL MANUFACTURING & ENGINEERING CO., LTD.  
 E5029 Vero Software KK  
 S3056 VERTEX MACHINERY WORKS CO., LTD  
 W3031 VESSEL CO., INC.  
 E3042-7\* VIZEST Co.,Ltd.  
 E2013 Vollmer Japan Corp.  
 E7024 Volume Graphics Co., Ltd.  
 E5012\* Volumetric Accuracy Research Institute Co., Ltd.  
 E7026\* Volumetric Accuracy Research Institute Co., Ltd.  
 E6035\*\* VoluMill by MoudeWorks & VoluTurn by ModuleWorks

**W**

E3003\*\* Wagner Tooling Systems Baublies GmbH  
 E2018 WAIDA MFG. CO., LTD.  
 E2018\* WAIDA PRECISION MACHINERY CO., LTD.  
 W4054 WALRUS PUMP Co., Ltd.  
 E1089\* Walter Maschinenbau GmbH  
 W4064\* Wanner Engineering, Inc.  
 E7002 Watanabe Seimitsu Industries, Ltd.  
 E4005 Weihai Huadong Automation Co.,Ltd  
 E2028 WEISS MACHINERY CO LTD  
 E3003\*\* Werth Messtechnik GmbH  
 W4026\*\* WESTERN JAPAN TRADING CO., LTD.  
 E6002 WFL Millturn Technologies GmbH & Co. KG  
 WA006 WIDIN CO,LTD  
 E1013 WIKUS-Sägenfabrik, Wilh. H. Kullmann GmbH & Co KG  
 W3095 WILHELM KOENIG MTM  
 E1088\* WILLEMEN-MACODEL SA  
 W4083-4 WINSON MACHINERY CO., LTD.  
 E7145 WINTECH  
 E7025 Wintech Automation Co., Ltd.  
 E4013 WINTECH CO.,LTD.  
 E5003 WinTool AG  
 E1010 Wuhan Heavy Duty Machine Tool Group Corporation  
 E1029 WUHAN NEWWISH TECHNOLOGY CO.,LTD  
 E2017 Wuhan Raycus Fiber Laser Technologies Co Ltd  
 E3012 Wuxi Qingyuan Laser Technology Co Ltd  
 E2008\* WYLER AG

**X**

WA007 XEBEC TECHNOLOGY CO.,LTD.  
 S3006 Xi an Dong Long Precision Tools Co Ltd  
 W4011 Xiamen Chiaping Diamond Industrial Co., LTD.  
 W3043 XIAMEN HJ CARBIDE TECHNOLOGY CO LTD  
 S3008 XUANCHENG TENO AUTOMATIC EQUIPMENT CO.,LTD

**Y**

W2039 Yamada Machine Tool Co.,Ltd.  
 W3113\* YAMADA SEISAKUSYO CO., LTD.  
 E7129 YAMAGUCHI SANGYO CO., LTD.  
 E7019 YAMAMOTO SCIENTIFIC TOOL LABORATORY CO., LTD.  
 E6011 YAMASAKI GIKEN Co.,Ltd.  
 E4045\* Yamashita works  
 W1074 YAMAWA MFG.CO.,Ltd.  
 E5037 YAMAZAKI CO.,LTD.  
 E5001 YAMAZAKI MAZAK CORPORATION  
 E6038 YAMAZEN CORPORATION  
 W4045 Yanase  
 E4035 YANGZHOU DEVELOPPING IMP&EXP CO.,LTD  
 W1053 YANO METALS CO.,LTD.  
 E5013 YASDA PRECISION TOOLS K.K.  
 E3042\* YEONG CHIN MACHINERY INDUSTRIES CO., LTD.  
 W1075\* YESTOOL Co.,Ltd  
 W3105 YEU LIAN ELECTRONICS CO., LTD.  
 W1004 YG-1 JAPAN Co., Ltd.  
 W4083-13 YIH TROUN ENTERPRISE CO., LTD.  
 E2008 YKT CORPORATION  
 W3104 YODOGAWA ELECTRIC TOOL MFG CO.,LTD  
 E3042 YONEZAWA KOKI CO., LTD.  
 E4003-7 YONG JU PRECISION TECHNOLOGY CO., LTD.  
 E1053 YOSHIKAWA IRON WORKS CO.,LTD.  
 E5023 Yoshikawa MAPLE Co.Ltd  
 W3064 YU WEI INDUSTRIAL CO., LTD  
 E7093 YUAN JUN FONG CASTING CO., LTD  
 E6039 Yuan Jun industry  
 W3107 Yuan Yi Chang (YYC) Machinery Co., Ltd.  
 W2053 YUKIWA SEIKO INC.  
 W4034 Yuku Corporation  
 E1005 YUSHIRO CHEMICAL INDUSTRY CO.,LTD

**Z**

W3018 ZHEJIANG GEM-CHUN PRECISION INDUSTRY CO., LTD.  
 E6004 Zhejiang IVKE Machinery & Technology Co.,Ltd.  
 E4042 ZHEJIANG MEIRI INTELLIGENT MACHINERY CO LTD  
 S3025 ZHEJIANG SAN OU MACHINERY LIMITED COMPANY  
 W3011 ZHEJIANG SHANGYOU TOOLS CO LTD  
 E5039 Zhejiang Taixing Intelligent Equipment Co.,Ltd  
 E2011 Zhejiang Xinxing Tools Co., LTD.  
 W3012 ZHEJIANG YOUNIO TOOLS CO LTD  
 W3005 Zhejiang Zhiguang Precision Tools Co.,Ltd.  
 W3029 ZHENGZHOU DIAMOND PRECISION MANUFACTURING CO.,LTD.  
 W3028 Zhengzhou Sino-Crystal Diamond Co Ltd  
 W3038 ZHENGZHOU ZHONGNAN JETE SUPERABRASIVES CO., LTD.  
 W3087 ZHENGZHOU ZZDM SUPERABRASIVES CO.,LTD  
 W4012 Zhongye Superhard Material Co., Ltd.  
 W3070 Zhuzhou Cemented Carbide Works Imp. & Exp. Co.  
 W3071 Zhuzhou Huarui Precision Cutting Tools Co Ltd  
 W3039 Zhuzhou Kerno Advanced Materials Co.,Ltd.  
 W3013 Zhuzhou Kunrui Carbide Co.,Ltd  
 W3109\* Zhuzhou Sant Cutting Tools Co., Ltd.  
 S3068 ZIPPERTUBING(JAPAN), LTD.  
 E2041 ZOLLER Japan K.K.  
 W3034 ZUOREN CUTTING TOOLS (SHANGHAI) CO LTD

## Additive Manufacturing Area in JIMTOF2024

AM117 3D Systems Japan  
 AM153 3DEO

**A**

AM151-1 Additive Industries  
 AM123 Aichi Sangyo Co., LTD.  
 AM140 APPLE TREE Co., Ltd.

**B**

AM103\* BEIJING JINGDIAO GROUP CO., LTD.  
 AM142 bestat Inc  
 AM103\* bestat Inc  
 AM114 Brule Inc.

**C**

AM104 CASTEM CO.,LTD.  
 AM106 CHITA MFG CO.,LTD  
 AM131 CKB Corporation  
 AM151-4 Continuum Powders  
 AM147 CT CoreTechnologie Asia Co., Ltd.

**D**

AM136 Daido Steel Co., Ltd.  
 AM103\* DAISEN SANGYO CO.,LTD.  
 AM103\* DELTA ELECTRONICS (JAPAN), INC.  
 AM126 DMGMORI CO.,LTD.  
 AM149 Dmm.com, LLC.  
 AM121 DOHO Corporation

**F**

AM103\* framag Industrieanlagenbau GmbH  
 AM111\* Fuji Koushuha Industry Co.,Ltd.  
 AM109 Fusion Technology Co., Ltd.

**H**

AM145 haraseisakusyo.,co.ltd  
 AM146 HDC Co. Ltd.  
 AM137 Hōganās Japan K.K.  
 AM103\* HOUGHTON JAPAN CO., LTD.  
 AM139 HTL Co. Japan Ltd.

**I**

AM103\*\* IAI CORPORATION  
 AM103\* INNOTECH Co.,Ltd.  
 AM103\* INNOVATEST  
 AM116 IWAMA Co., Ltd.

**J**

AM105 JAPAN 3D PRINTER Co.,Ltd  
 AM124 Japan 3D Printing Industrial Technology Association  
 AM103\* Japan Fluid System Co., Ltd.  
 AM128 Japanese Society of Additive Manufacturing  
 AM111 JBM Engineering Corporation  
 AM103\* JBS System GmbH  
 AM113 JEOL Ltd.

**K**

AM118 Kanazawa University, Human Machine Innovation Laboratory  
 AM103\* KANEMATSU ELECTRONICS LTD.  
 AM103 Kanematsu KGK Corp.  
 AM101 KEYENCE CORPORATION  
 AM135 KEYENCE CORPORATION  
 AM103\* KOCEL JAPAN Co.,Ltd.  
 AM107 Kurimoto Co., Ltd.

**L**

AM151-3 Lumafield

**M**

AM103\* MAEDA SHELL SERVICE CO.,LTD  
 AM110 Marubeni Information Systems.co.,Ltd  
 AM103\* Marubishi Seisakujo Co., Ltd  
 AM115 Matsuura Machinery Corporation  
 AM130 Matsuzawa Machinery Corporation  
 S2002 Mitsubishi Electric Corporation  
 AM103\* MST Corporation

**N**

AM132 NIDEC MACHINE TOOL CORPORATION  
 AM103\* Nihonseiki Co., LTD  
 AM103\* Nikuni Co.,Ltd.  
 AM138 nippon light metal co., ltd.  
 AM148 Noga Waters Ltd.

**O**

AM103\* OGUSU CO.,LTD  
 AM134 OPEN MIND Technologies Japan K.K.

**P**

AM151-2 PanOptimization LLC  
 AM103\* PATLITE Corporation

**Q**

AM143 Q-ho Metal Works

**S**

AM127 SAKURAI LTD.  
 AM108 SEA FORCE CO.  
 AM150 ShareLab  
 AM103\* SHIMADA Machine tool Drives Co., Ltd  
 AM106\* SHOHO IRONWORKS CO.,LTD.  
 AM144 SK Additive Innovation Co., Ltd.  
 AM133 SK Fine Co.,Ltd.  
 AM103\* SOGYO Co., Ltd.  
 AM119 SUGINO MACHINE LIMITED

**T**

AM112 TAIYO NIPPON SAN SO CORPORATION  
 AM152 Technology Research Association for Future Additive Manufacturing  
 AM122 TKE Co.,Ltd.  
 AM106\* TOKAI KYOHAN CO.,LTD.  
 AM103\* TOKAI SOFT CO., LTD.  
 AM125 Tokoshie Inc.  
 AM102 Tokyo Metropolitan Industrial Technology Research Institute  
 AM141 Tokyo Metropolitan Small and Medium Enterprise Support Center

**V**

AM129 Value Finder Co.,Ltd.

**W**

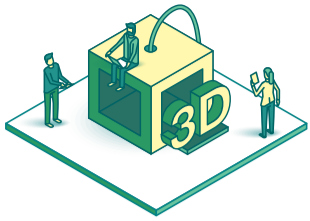
AM103\* Watachukikai Corp.  
 AM103\* Wilhelm Blessing GmbH & Co. KG

**Y**

AM120 Yamaichi Precision Tools (Anhui) Co.,Ltd.  
 AM103\* YAMAMOTO METAL TECHNOS CO., LTD.

(\* Co-Exhibitor (\*\* Represented Company) alphabetical order





# ここまで来た！ 国産 3D プリンターの社会実装

The Latest Status of Social Implementation of Japanese 3D Printers

次世代 3D 積層造形技術総合開発機構 (TRAFAM) 理事長 近畿大学 名誉教授 京極秀樹

Hideki Kyogoku

Chairman, The Technology Research Association for Future Additive Manufacturing (TRAFAM)

Professor Emeritus, Kindai University

最近の積層造形 (AM) 技術の進歩は目覚ましく、金属 3D プリンターは粉末床溶融結合 (PBF) 方式だけでなく、ほかの方式の装置も実用化されてきている。それとともに国産の 3D プリンター開発も行われ、国内企業では実用製品への適用が着実に進んできている。

Lately, Additive Molding (AM) technologies have shown marked advancement, with not only powder bed fusion (PBF) systems but also other types of 3D metal printers becoming practical. Alongside this, Japanese 3D printers are being developed, and Japanese companies are steadily progressing towards the application of these technologies to utility products.

## モノづくりに革新を起こす AM 技術

AM 技術は従来の加工法では不可能な形状や機能を持つ製品を製造できる。かつデジタル・マニュファクチャリング技術であることから、モノづくりに革新を起こす新たな加工法として欧米や中国を中心に急速に適用が進んでいる。

独 AMPower の資料によると、2027 年度における金属 3D プリンターの 카테고리別のシェアは PBF 71%、指向性エネルギー堆積法 (DED) 20%、バインダージェット (BJT) 5% で、PBF が主流であり、DED と BJT が伸びると予測されている。

PBF は海外では航空宇宙分野が主力であるため装置の大型化、造形の高速度など装置の高機能化が進んできている。また、造形品の品質の安定化と保証のためにインプロセスモニタリング・フィードバック技術の開発が求められている。

DED は熱源としてレーザーだけでなく電子ビームやアーク、供給材料として粉末だけでなくワイヤも使われており、これらを組み合わせた装置が増え、実用化されている。BJT は自動車分野の小型部品の大量生産用として期待されており、鑄造の代替技術としての技術開発も行われている。

このように、金属 3D プリンターはカテゴリの選択肢が増えてきており、これに伴って航空宇宙分野からエネルギー・産業機器分野、自動車分野などへと適用分野が広がってきている。

## 国産 3D プリンターの社会実装進む

国産の金属 3D プリンターは、2002 年に松浦機械製作所が PBF と切削機能を持つハイブリッド型装置を開発して以来、長い間開発されてこなかった。

2017 年に経済産業省により技術研究組合次世代 3D 積層造形技術総合開発機構 (TRAFAM) が設立され、レーザー大型 PBF 装置は松浦機械製作所、電子ビーム PBF 装置は多田電気と日本電子、レーザー大型 DED 装置は東芝機械 (現芝浦機械) と三菱重工工作機械 (現ニデックマシンツール) によって計 5 機種開発されたほか、TRAFAM 以外の国内メーカーからも PBF および DED 装置が実用化された。

これらは国内企業にも導入され、実用製品に適用されてきている。加えて、プロジェクトで大型・高速造形可能な砂型造形用の BJT 装置もシーメットにより実用化されている。

このように、海外メーカーの汎用装置の利用だけでなく、国内メーカーによる装置開発も重要だ。今後、これにより工作機械と同様に汎用装置だけでなく専用装置の開発も可能となるだろう。加えて、AM 技術を加えた生産システムが普及した場合には、造形プロセスの前後工程で使う装置とのシステム化も容易となるため、AM 技術導入は生産システムの革新にも大きな役割を果たす。



日本電子の「JAM-5200EBM」  
独自開発の長寿命カソード、ヘリウムフリー&粉末飛散防止機構「e-Shield」、電子ビーム自動調整機能を持つ PBF-EB 装置  
JEOL “JAM-5200EBM”  
PBF-EB system with a proprietary developed long-life cathode, helium-free and powder dispersal prevention system “e-Shield,” and automatic electron beam correction.

## AM Technologies Transform Manufacturing

AM technologies can manufacture products with shapes and features that previous technologies could not achieve. Also, as digital manufacturing technologies, they are rapidly adopted, mainly in the West and China, as a new machining technique that transforms manufacturing.

According to AMPower, Germany, 3D metal printer share by category for fiscal year 2027 is projected to be 71% for PBF, 20% for directed energy deposition (DED), and 5% for binder jet (BJT), with PBF being the mainstream, while DED and BJT are anticipated to grow.

Used primarily in aerospace overseas, PBF is seeing higher-performance systems, such as larger systems and faster molding. The development of in-process monitoring and feedback technologies is also essential to stabilize and warrant molding quality.

DED employs not just lasers but electron beams and arcs as heat sources. Additionally, it uses not just powder but wires for supplied materials, resulting in the introduction of systems that combine these features. BJT is expected to support the mass production of small car parts, and technologies are being developed to replace casting.

As illustrated, 3D metal printers are beginning to offer a wider range of categories to choose from, expanding their application from aerospace to energy and industrial equipment, and automobiles.

## Japanese 3D Printers' Social Implementation Gains Momentum

No Japanese 3D metal printers were developed for a long time after Matsuura Machinery Corporation developed a hybrid system in 2002 that had PBF and a cutting system.

In 2017, the Ministry of Economy, Trade and Industry established the Technology Research Association for Future Additive Manufacturing (TRAFAM), which resulted in the development of five systems: a large laser PBF system by Matsuura Machinery Corporation, electron beam PBF systems by Tada electric and Japan Electron Optics Laboratory (JEOL), and large-scale laser DED systems by Toshiba Machine (“Shibaura Machine” today) and Mitsubishi Heavy Industries Machine Tool (“NIDEC MACHINE TOOL” today). Domestic non-TRAFAM manufacturers also commercialized PBF and DED systems.

These systems have been adopted by Japanese companies and are being used in utility products. Furthermore, CMET has commercialized through a project by a large BJT system for sand molding that can manage high-speed molding.

As illustrated, system development by Japanese manufacturers is just as important as using multi-purpose systems from overseas manufacturers. This will enable the development of not just multi-purpose systems but special-purpose systems, similar to machine tools. The deployment of AM technologies will significantly contribute to the transformation of production systems because the spread of production systems with AM technologies will allow integration with systems that are used before and after molding processes.



ニデックマシンツールの「LAMDA2000」  
独自に開発したローカルシールド機能とプロセスモニタリング AI フィードバック機能を持つ P-DED 積層ヘッドに回転 2 軸を持つ機構の大型 DED 装置。大型金型の補修造形に最適  
NIDEC MACHINE TOOL “LAMDA2000”  
A large DED system featuring a P-DED laminated head with a proprietary developed local shielding function and process-monitoring AI feedback, equipped with two rotating shafts. Perfect for large mold repairs.

East  
東

# East Hall 1・2・3

■ Metal cutting machine tools / Metal forming machine tools / Other associated machinery and equipment

East Hall 3

East Hall 2



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Mar. 3 - 7, 2026

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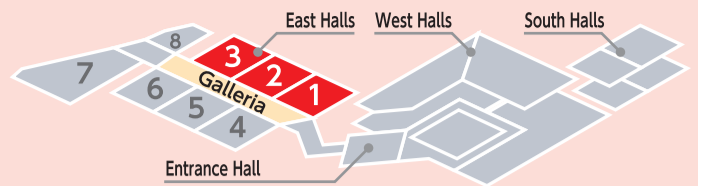
展出物  
金屬切削工作機械、金屬成形工作機械/アクセサリ、コンポーネント、付属品、流体動力及び周辺機器/切削工具、工具保持具、工作物保持具、測定機器、試験機器/スマートマニュファクチャリングシステム、産業用ロボット、制御装置および関連ソフトウェア (CAD、CAM 等)/その他工作機械関連装置・素材・技術及び出版物

www.tmts.tw



No Photography in halls  
 No Smoking on site

Location Map



East Hall 1

**Exhibitor Booths:**

- YKT (E2008)
- AMADA (E1072)
- Fladder Denmark (E1066)
- MARUKA FURUSATO (E1025)
- Nakaseiki (E1024)
- HSG LASER (E1068)
- MAKANOH-RU KOGYO (E1065)
- cgk (E1064)
- Guangdong Longxin Laser Intelligent Equipment
- SOCO Machinery (E1031)
- HIRO CHIKU (E1030)
- Blue Star R&D (E1019)
- Mamezou (E1020)
- Nanjing Prima CNC Machinery (E1023)
- FUNASAW (E1017)
- R-GOT (E1021)
- FUJIKIKO (E1071)
- FABACE (E1062)
- Itaca Japan (E1034)
- ST-LINK (E1028)
- DURMAZLAR MAKINA SAN VE TIC (E1033)
- WUHAN NEWWISH TECHNOLOGY (E1029)
- TRUMPF (E1038)
- ASTEC (E1015)
- Chemtec (E1016)
- NK WORKS (E2009)
- Escro (E2006)
- Sanpo Seiki (E2007)
- United Grinding Group Management (E1089)
- EURO TECHNO (E1088)
- Bystronic Japan (E1073)
- Opton (E1075)
- SHIBUYA CORPORATION (E1074)
- Authentec (E1055)
- OHMINE INDUSTRY (E1059)
- NUMALLIANCE (E1057)
- Authentec (E1055)
- TRUMPF (E1038)
- ASTEC (E1015)
- Chemtec (E1016)
- TOKYO SEIKI KOSAKUSHO (E2012)
- Vollmer Japan (E2013)
- SCHUNK Intec (E2004)
- Seiko Instruments (E1087)
- TOKYO TAPPING MACHINE (E1086)
- IMAHASHI MFG. (E1085)
- EBA KOGYO (E1084)
- KITAI SANGYO (E1083)
- Samwa Robotics (E1077)
- IKURASEIKI (E1076)
- WAKUDA MFG. (E2018)
- ISHII HYOKI (E2014)
- SEIJO KOGYO (E2015)
- TANI GAWA (E2016)
- Wuhan Raycus Fiber Laser Technologies (E2017)
- Reishauer (E2003)
- KLINGELBERG Japan (E1081)
- MARUEI MACHINE WORKS (E1082)
- ALPSTOOL (E1080)
- NAGASE INTEGEX (E1078)
- IRINO (E1050)
- IRINO KIKO (E1051)
- Makino Seiki (E1049)
- IRINO (E1050)
- IRINO KIKO (E1051)
- Tohshin Technical (E1043)
- HASEGAWA MACHINE WORKS (E1044)
- Nagel Aoba Precision (E1046)
- Nissin Manufacturing (E1045)
- Wuhan Heavy Duty Machine Tool Group (E1010)
- Gutenberg (E1011)
- Kyouwa Oil Lubricants (E1008)
- TOYO KENMAZAI KOGYO (E1008)
- FLUJIMOTO YUKA (E1007)
- Heiwa Technica (E1006)
- SANJIA KOUJYU (E1004)
- YUSHIRO CHEMICAL INDUSTRY (E1004)
- Kuroda Precision Industries (E2001)
- GF Machining Solutions (E2002)
- SUGINO (E1079)
- TAKAHASHI MACHINERY (E1048)
- KITAMURA MACHINE WORKS (E1047)
- MECTRON (E1001)
- Fuji Honing Industrial (E1002)
- MICRON MACHINERY (E1003)

**Facilities:** Restrooms, Elevators, Jumbo Taxi Stand (FREE! Hall 1), Japan Precision Machine Association, Japan Forming Machinery Association.

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East 東 East Hall 4・5・6



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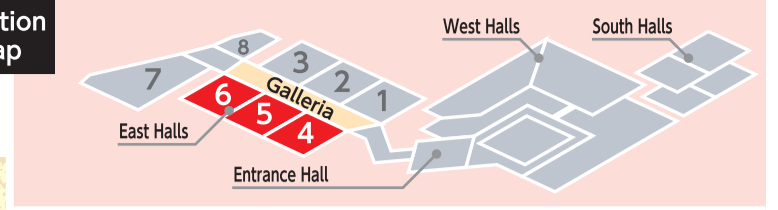
小間  
番号 **E4043**

東4ホール (East 4Hall)



No Photography in halls  
 No Smoking on site

Location Map



# Galleria (1F)



**TAIWAN SMART MANUFACTURING**

## 未来へ受け継ぐ 台湾のモノづくり

イベント連日開催!  
 ~台湾の“おもてなし”をあなたに~

**東4ホール (East4Hall) E4003-9**

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**JIMTOF 2024**

East 4 Hall E4011

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**JIMTOF FOOD FESTIVAL** East 東

Food festival will be held outside the East Exhibition Hall and in the East Hall 7. A wide variety of dishes will be provided throughout the venue.  
Open 10:00 - 18:00 (Last day until 14:00)

**JIMTOF FOOD FESTIVAL** Japanese Local Gourmet West 西

At the "JIMTOF Food Festival" on the west rooftop exhibition area, local gourmet food from all over Japan will gather. Please enjoy it.  
Open 9:00 - 17:00 (Last day until 14:00)

**JIMTOF Café** South 南

There is a cafe corner in the South Hall 2. Drinks and snacks will be provided. Available before fair opening hours.  
Open 8:30 - 17:00 (Last day until 14:00)



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 Osaka	 Nagasaki	 Miyazaki	 Okinawa

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**西2ホール (West 2 Hall) W2042**

- ドイツ 高速5軸門形マシニングセンタ
- ドイツ AR (拡張現実) 品質検査ソフト
- ドイツ 世界初 揺動ジェットノズル
- レーザーユニット搭載 NCフライス盤
- 高速外観検査装置



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**PALMARY**

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- . Cylindrical Grinder
- . Internal Grinder
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# West Hall 1・2

■ Tools for machine  
(Cutting tools & wear-resistant tools) /  
Machine tool accessories



**JIMTOF2024**  
Now conducting visitor survey

JIMTOF original friction is being distributed to those who answered !

Period : Nov. 5, 2024 at 9:00 to  
Nov. 10, 2024 at 16:00

※ First 1,500 people. The number is limited. Please be aware in advance.

※ Please take a screenshot of the completion page and go to the questionnaire station in the entrance hall on the 2nd floor of the conference tower.

西1ホール **W1041**

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## ACADEMIC AREA

アカデミック エリア NEW



**South Hall 4**

Releases multi-angled information that will be instantly useful for job-hunting in the machine tool and manufacturing industries! Enjoy talks by industry leaders and YouTubers, experience manufacturing and many other types of content, as well as free drinks and food! If you are a student, go to the South Hall 4 now!!

## IMEC2024 (The 20th International Machine Tool Engineers' Conference) Poster Session

"Poster session" is held in the South Hall 4 to present the results of research related to machine tools by universities and research institutes in Japan and overseas by poster format.

November 5 (Tue.) ~ November 10 (Sun.) \*Personnel who give explanations from participating organizations are scheduled to be present from 9:00 to 12:00 on November 7 (Thu.) and 8 (Fri.) 9 (Sat.)

### List of Participating Research / Themes

#### A Machine tool and elements

- A-01** Precision Engineering Research Group, Sophia University  
Friction reduction by microtextures with different area ratios on metal sliding surfaces
- A-02** Yamada and Uchida Lab., College of Science & Technology, Nihon University  
Effect of Workpiece Support Stiffness on Machining Accuracy in Cylindrical Grinding
- A-03** Adachi Lab., Dept. of Mechanical Engineering, Chubu University  
Systematic Research on Spindle Technology for Internal Grinding of Large-diameter Deep-hole Grinding
- A-04** Sasahara Lab., Tokyo University of Agriculture and Technology  
In process monitoring of machining operations
- A-05** Manufacturing Lab., Dept. of Mechanical Engineering, The University of Tokyo  
Thermal error compensation using large-scale temperature data
- A-06** Tanabe Lab., Technical and Management Engineering, Sanjo City University  
Development of a new FEM thermal deformation simulation technique for machine tools with enclosures and its application examples
- A-07** Nakao Laboratory, Dept. of Mechanical Engineering, Kanagawa University  
Prediction of thermally induced axial displacement of servomotor using machine learning technique

#### B Machining technology and machining phenomena

- B-01** Machine Tool Engineering Laboratory Endowed by OKUMA, Graduate School of Engineering, Nagoya University  
Bead Shape Stabilization in Powder DED Considering Scanning Speed Fluctuations
- B-02** Advanced Manufacturing Technology Institute (AMTI), Kanazawa University  
Laser scan strategy for microtubule building with PBF-LB/M
- B-03** Nontraditional Machining Lab., Graduate School of Environmental, Life, Natural Science and Technology, Okayama University  
Surface Smoothing of Additively Manufactured Metal Products by Electron Beam Polishing
- B-04** Manufacturing and Machine tool Lab., Graduate School of Science and Engineering, Saitama University  
Material property control by directed energy deposition
- B-05** Nagamatsu Lab., Dept. of Mechanical and Intelligent Systems Engineering, The University of Electro-Communications  
Sasahara Lab., Dept. of Mechanical Systems Engineering, Tokyo University of Agriculture and Technology  
Similar and Dissimilar Light Metal Depositions by Additive Manufacturing
- B-06** Kakinuma Lab., Dept. of System Design Eng., Faculty of Science and Technology, Keio University  
Thermal analysis of metal additive manufacturing and the application to coating technology
- B-07** Ryo Koike Lab., Faculty of Science and Technology, Keio University  
Development of high-speed coating with directed energy deposition
- B-08** Shinozuka Lab., Div. of Systems Research, Yokohama National University  
Simultaneous estimation of various kinds of tool wear from image of the chip back surface temperature by employing AI
- B-09** Manufacturing Process Lab., Mechanical Engineering, Tokyo Denki University  
Chip flow control in machining of holes with cutting simulation
- B-10** Functional Surface Fabrication Lab., Dept. of Mechanical Engineering, Tokyo Denki University  
Drilling of carbon fiber reinforced PEEK resin matrix composite material
- B-11** Gotoh Lab., Dept. of Industrial Information Faculty of Industrial Technology, Tsukuba University of Technology  
Grinding-Assisted Electrical Discharge Machining of CFRP
- B-12** Machining Lab., Dept. of Mechanical Engineering, Meiji University  
Study on machining efficiency of dry EDM of CFRP

#### B-13 Tomohisa Tanaka Lab., Dept. of Mechanical Engineering, Tokyo Institute of Technology

- B-13** Tomohisa Tanaka Lab., Dept. of Mechanical Engineering, Tokyo Institute of Technology  
Development of a ball burnishing processing system applicable to curved thin plates
- B-14** Ninomiya Lab., Dept. of mechanical engineering, Nippon Institute of Technology  
Development of conductive PCD rotary tools for use as discharge electrodes and grinding wheels
- B-15** Okayama University, Faculty of Environmental, Life, Natural Science and Technology  
Development of ball end mill tool life determination system using gradient boosting method
- B-16** Production Technology Lab., Dept. of Mechanical Engineering, Setsunan University  
Study on ball end milling of cemented carbide
- B-17** Mizutani and Kuji Lab., Research Center for Green X-Tech, Green Goals Initiative, Tohoku University  
Development of Innovative Machining Method by Microstructure Control of Amorphous Alloys
- B-18** Chiba Advanced Technology & Science Lab., Chiba University  
Study on crack propagation behavior and fracture surface morphology during wheel scribing of glass sheet
- B-19** Precision machining and mechanism Lab., Nagaoka University of Technology  
Development of special processing technology for generating functional surface and material
- B-20** Enomoto-Sugihara Lab., Dept. of Mechanical Engineering, Osaka University  
Exploring the role of the interface adhesion phenomena focusing on surface expansion distribution
- B-21** Mechanics of Materials Lab., Dept. of Mechanical Systems Engineering, The University of Shiga Prefecture  
Laser hardening and laser correction of deformation for thin steel plate
- B-22** Ishida-Mizobuchi Lab., Tokushima University  
Development of 3R grinding wheel using only polyvinyl alcohol bonding agent to zero emission of grinding wheel scraps

#### C Systems and control technology

- C-01** Morishige Lab., Dept. of Mechanical and Intelligent Systems Engineering, The University of Electro-Communications  
Configuration Space-Based Tool Path Generation for 5-Axis Controlled Machining with Variant Shape Tools
- C-02** Advanced manufacturing systems Lab. Kobe University  
Automated tool path generation with modification of workpiece deformation due to vice clamping
- C-03** Nakamoto Lab., Dept. of Mechanical Systems Engineering, Tokyo University of Agriculture and Technology  
Automatic Process Planning toward DX in Machining Based on Product Manufacturing Information
- C-04** Manufacturing and Machine tool Lab., Graduate School of Science and Engineering, Saitama University  
Intelligent planning method of NC machining process for new cutting technologies
- C-05** Advanced Machining System Lab., Dept. of Mechanical Engineering, Meiji University  
Trajectory Control of High-Precision Robot Machining considering Virtual Joints
- C-06** Morimoto and hayashi Lab., Dpet. of Mechanical engineering, Kanazawa Institute of Technology  
Development of digital twin system by VR

#### D Tools and tooling systems

- D-01** Itoh Lab., Ibaraki University  
Composite Stereolithography 3D Printer System Realizing High-Performance Grinding Wheel
- D-02** Ultraprecision Machining Lab., Dept. of Mechanical Engineering, Chubu University  
Effects of single-crystalline diamond quality on tool wear resistance and cutting performance

#### E Measurement and evaluation technology

- E-01** National Institute of Technology, Sasebo College, Dept. of Control Engineering, Grinding Tools AI Evaluation Lab  
Evaluation of grinding wheel surface morphology change
- E-02** Murakami Lab., Department of Mechanical Systems Engineering, Faculty of Environmental Engineering, The University of Kitakyushu  
Advancement of machining and measurement technology using machine learning
- E-03** Yoshioka Lab., Institute of Industrial Science, The University of Tokyo  
Compensation of Workpiece Mounting Errors based on Measurement with 3D Scanner
- E-04** Cyber Machining Group, Industrial Cyber-Physical Systems Research Center (ICPS), National Institute of Advanced Industrial Science and Technology (AIST)  
Development of a Visual Wear Detection System for Gear Skiving Cutters
- E-05** Precision Measurement and Machining Lab., Dept. of Micro Engineering, Kyoto University  
Vision-based measurement of motion accuracy of machine tools
- E-06** Advanced Micro Machining Lab., Dept. of Mechanical Engineering, Chubu University  
Tool state estimation based on on-machine captured tool image
- E-07** Digital Manufacturing Lab., School of Science and Engineering, Chuo University  
Non-contact monitoring of cutting process using machining sound measurement
- E-08** Micro and Nano Engineering Lab.(HASE Lab.), Graduate School of Engineering, Saitama Institute of Technology  
Smart Condition Monitoring of Small Machine Tools by Dual AE Sensing
- E-09** Saito Lab., College of Engineering, Nihon University  
Measurement of angular indexing accuracy for 5-axis machining centers using touch trigger probe
- E-10** PPSE Lab., Grad. of Integrated Science and Technology, Nagasaki University  
Optical system for On-machine and In-line measurement
- E-11** Nano Precision Machining Lab., Dept. of Advanced Machinery Engineering, Tokyo Denki University  
Exploring the Next Generation of Manufacturing Technology using Nano-Precision Machining
- E-12** Precision Lab. Osaka Institute of Technology  
Simultaneous 5-axis Motion Test without CAM
- E-13** Yanagihara lab., Dept. of Creative engg., National Institute of Technology, Ariake College.  
Can in-process dynamics control in grinding provide innovation for grinding process?

#### F Production system and their components

- F-01** Mechanical Design and Systems Laboratory, Graduate School of Advanced Science and Engineering, Hiroshima University  
Accuracy improvement for robotic machining
- F-02** Suwa Lab., Dept. of Mechanical Engineering, Setsunan University  
Optimization Technology for Energy-Efficient Operations in Robotic Flexible Manufacturing Systems

#### Special Exhibits

- S** NIT Museum of Industrial Technology  
NIT Museum of Industrial Technology -You can learn machine tools





Booth No.: W3103

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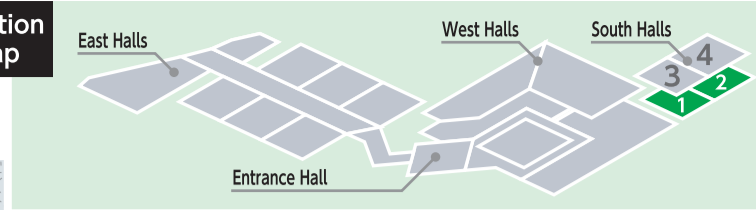
Tipton Corp. JIMTOF2024 West 4Hall W4046



South  
南

# South Hall 1・2

Location Map



- Metal cutting machine tools
- Additive Manufacturing Area



## Special Concurrent Exhibition Additive Manufacturing Area in JIMTOF2024

South 南 South Hall 1F

Additive Manufacturing (AM) and 3D printing products market is regarded as a true growth business area, with its market size increasing year by year.

AM and 3D printing are also a captivating trend in machine tools industry, and is highly expected as an innovative technology in manufacture that enables reduction in the number of parts, shorter lead time and high-mix low-volume production.

In addition to exhibitions, presentations and seminars will also be held, and it will be a place where you can efficiently discover the latest AM-related products, cutting-edge technologies and solutions!



## 世界初のハイブリッド 金属3Dプリンタ

LUMEX Avance-25

南2ホール AM115 [AMエリア]



サンプルワーク:フクイラトル  
モデル提供/公立大学法人福井県立大学

Mitsuura 株式会社 松浦機械製作所



環境と技術は、引き算から足し算でイノベーション。

ティーケーエンジニアリングは、技術、経験、柔軟な発想で新しいものを創造し続けます。

南1ホール (South 1Hall) AM122

CREATION AND CHALLENGE

TKE

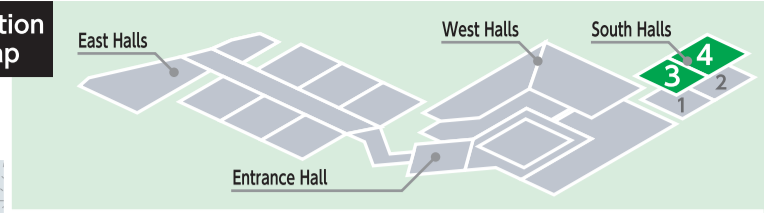
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South  
南

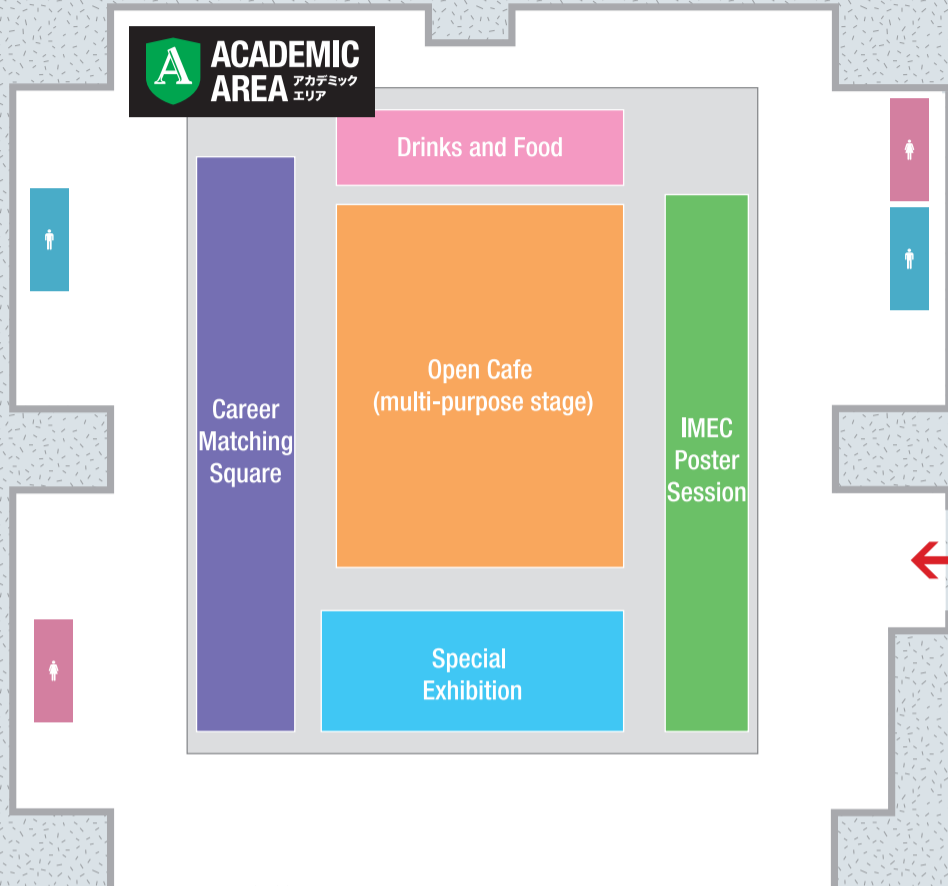
# South Hall 3・4

Location  
Map

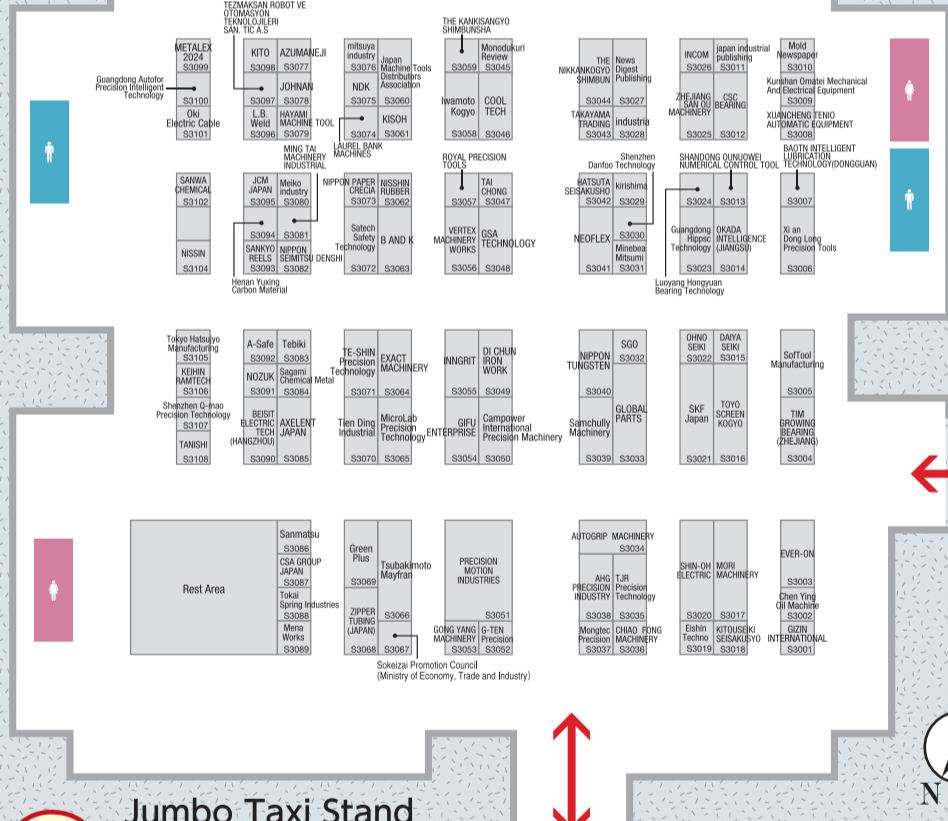


Machine tool accessories/  
Other associated machinery and equipment/  
Publications

South Hall 4



South Hall 3



Jumbo Taxi Stand

West & South Halls  
4F Rooftop

To West Hall 3・4



**ACADEMIC AREA**  
アカデミック エリア

South  
南

South Hall 4

## Career Matching Square

Many students are welcomed in this area as JIMTOF2024 exhibitors' general affairs and HR personnel look forward to seeing you, whether you are a science/engineering major or not.

### [Companies]

- |                                     |   |
|-------------------------------------|---|
| MARUKA FURUSATO CORPORATION         | OKUMA Corporation                                       |
| SUGINO MACHINE LIMITED              | TOKYO SEIMITSU CO., LTD                                 |
| SHIBAURA MACHINE CO., LTD.          | Santec Japan Corporation                                |
| Toyo Advanced Technologies Co.,Ltd. | UNIPULSE CORPORATION                                    |
| MITSUI SEIKI KOGYO CO.,LTD.         | Mitutoyo Corporation                                    |
| MAKINO MILLING MACHINE CO.,LTD.     | mitsubishi materials CORPORATION                        |
| NACHI-FUJIKOSHI CORP.               | MOLDINO Tool Engineering, Ltd.                          |
| SHIN NIPPON KOKI CO.,LTD.           | THK CO., LTD.   |
| YAMAZAKI MAZAK CORPORATION          | KOSMEK LTD.   |
| CITIZEN MACHINERY CO., LTD.         | MATSUMOTO MACHINE CO.,LTD                               |
| FUJI CORPORATION                    | Tokyo Metropolitan Vocational Skills Development Center |

## Open Cafe

A free space for visitors, with Wi-Fi and drinks. Enjoy a break and the multi-purpose stage!

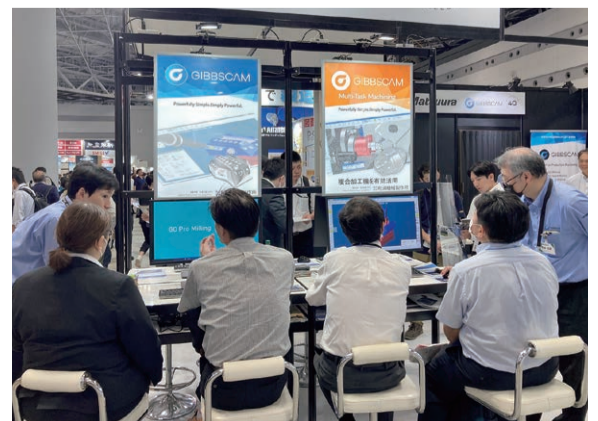


See the multi-purpose stage program here (Japanese Only) ▶

## Special Exhibition Machine Tool Infinity ∞

~ Welcome to the world of machine tools that opens up infinite possibilities ~

There will be many activity contents which you will enjoy while deepening your understanding of the machine tool industry and feel the industry's potential at hand.



TAIWAN  
SMART MANUFACTURING

未来へ受け継ぐ  
台湾のモノづくり

イベント連日開催!  
~台湾の“おもてなし”をあなたに~

西4ホール(West4Hall)  
W4083-18



# モノづくりを Digital technologies supporting manufacturing 支えるデジタル技術



中央大学 理工学部 教授  
鈴木教和

Norikazu Suzuki  
Faculty of Science and Engineering  
Professor Chuo University

デジタル技術の活用がモノづくりの進化を加速させている。製造現場に自動化・合理化をもたらすだけでなく、その開発リードタイムやコストの大幅な削減を実現する。最近のデジタル技術を取り巻く動向について概説する。

The use of digital technology is accelerating advancements in manufacturing. It brings not only automation and rationalization to manufacturing sites, but also significantly reduces development costs and lead times. Here is an overview of the latest trends in digital technology.

## デジタル技術 自動化・合理化のカギ握る

産業界において労働人口減少は深刻な問題である。自動化・合理化技術の活用は急務であり、その実現のカギを握るのがデジタル技術である。例えば、生産ラインを構成するさまざまな設備をコンピューター上でモデル化することで、バーチャルの世界で設計を行う設備MBD（モデルベース開発）を実現することができる。すなわち、デジタル変革（DX）の取り組みがモノづくり産業に競争優位性をもたらす。

ロボットや加工・搬送設備などの3次元（3D）モデルとシミュレーション技術を駆使し、設計・製作・量産の検討をデジタル領域で行うことで、設備設計の完成度が向上する。また製作後のやり直しが削減されるため、開発リードタイムとコストを大幅に削減できる。

## 高機能なロボットの活用進む

特に、ロボット技術の進化には目を見張るものがある。ビジョンセンサーや力センサーを搭載した高機能なロボットの活用が進み、人工知能（AI）を活用する自律制御技術の実用性が向上している。さらに、人との協働作業を実現する協働ロボットや自律移動ロボット（AMR）の活用が、工場の省人化・無人化・自動化に貢献している。

デジタルツインやIoTとの親和性も高く、オフラインシミュレーションによる設備立ち上げやIoTツールを利用した状態監視に適しており、ゼロダウンタイム（ZDT）の実現に貢献する。最近では、ロボットマシニングへの活用も注目されている。

## デジタルツイン 加工条件最適化に有効

工作機械においてもデジタル技術の活用拡大が著しい。特に注目されるのがデジタルツイン技術である。例えば、加工シミュレーションにより工作機械本体や治具を設計する段階で、その機械的な特性（振動や熱変形のしやすさなどの情報）を事前に予測・把握し、高い精度で加工結果を事前に予測する。これらのデジタルツイン技術は、加工条件の最適化を容易にし、製造技術開発において極めて有効なツールとなる。

また、工作機械の熱変形補正や加工の安定化におい

てAIを代表とするさまざまなデジタル技術の活用が進められ、最近では消費電力削減のためのゼロ暖機運転なども実現されている。さらに、イメージセンサーやセンサー工具などの周辺技術においてもその進化が著しい。今後もデジタル技術がもたらすイノベーションに注目したい。

## Digital technology is key to automation and rationalization

In industries, the decrease in the working population is a serious issue. The use of automation and rationalization technologies is a pressing issue, and digital technology plays a key role in making this happen. For instance, by modeling various facilities that make up a production line on a computer, it is possible to conduct facilities' equipment MBD (model-based development), which allows design to be conducted in a virtual world. In essence, digital transformation (DX) efforts create a competitive advantage in manufacturing.

The completeness of facility design is enhanced by utilizing 3D models of robots, processing facilities, and transportation facilities, as well as simulation technologies, to evaluate design, production, and mass production in the digital domain. Development lead times and costs can also be significantly reduced as post-production rework can be decreased.

## Use of high-performance robots is on the rise

The advancement of robotics is especially worth noting. The use of high-performance robots equipped with vision sensors and force sensors is increasing, and autonomic control technologies using artificial intelligence (AI) are becoming more practical. Robots that work together with human workers and autonomous mobile robots (AMR) are also helping factories reduce man hours and enable unmanned and automated operations.

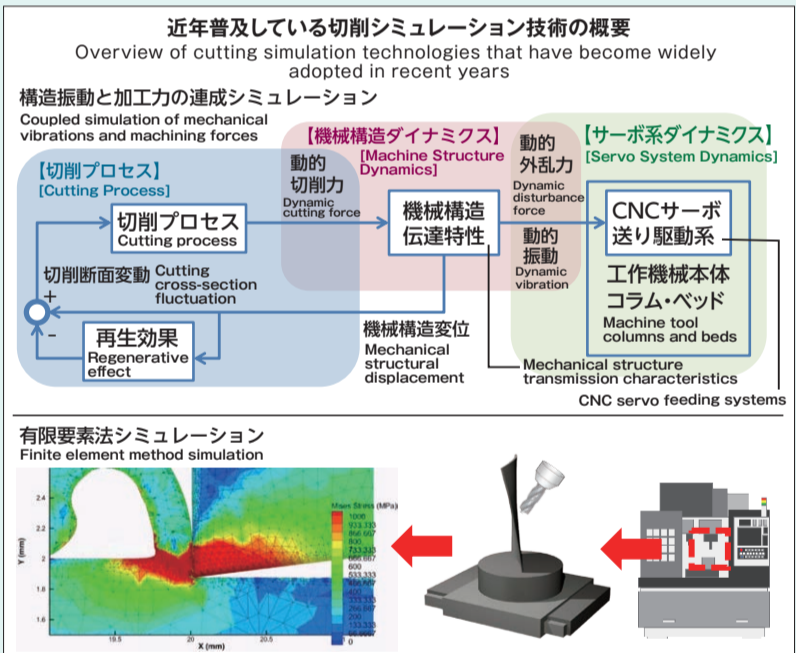
These robots also work well with digital twins and IoT, making them suitable for launching facilities through offline simula-

tions and for operational monitoring with IoT tools, contributing to zero downtime (ZDT). The use of these robots for robotic machining is also drawing attention lately.

## Digital twins effective for the optimization of processing conditions

The use of digital technologies in machine tools is also experiencing a marked increase, particularly with digital twin technology. For instance, forecasting and identifying mechanical features (information such as vibrations and how much it can deform with heat) of machine tools and jigs during the design phase with processing simulations allows for a highly accurate estimation of processing results. These digital twin technologies help in effortlessly optimizing processing conditions, serving as extremely effective tools in the development of manufacturing technologies.

Recently, AI and various other digital technologies are being actively used to adjust thermal deformation in machine tools and to stabilize machining processes, including zero warm-up operations, to save power. The advancement of digital technologies is also prominent in peripheral technologies, such as those used in image sensors and sensor tools. We will continue to keep track of innovations achieved through these digital technologies.



台北国際工作機械見本市



# TIMTOS

2025年3月3日(月)~8日(土)

台北南港第1, 第2展示ホール (TaiNEX 1 & 2)  
台北世界貿易センター第1展示ホール (TWTC Hall 1)

www.timtos.com.tw



### 出展内容

- 金属切削機械 ■ 金属成形機械 ■ 切削工具・ツーリング・アクセサリ ■ ワイヤー・チューブ・シート加工装置
- レーザー加工設備 ■ 溶接・表面処理設備 ■ 検査・測定 ■ AI・制御系統&スマート・マニファクチャリング
- 部品・アクセサリ ■ 革新的応用とソリューション ■ ナショナル・パビリオン



主催者: 台湾貿易センター 台湾機械工業同業公会



**株式会社向洋技研**  
KOYO GIKEN INC.

東1ホール  
East Hall 1  
**E1058**

**美しく強いスポット溶接を世界の現場に**

Clean and strong spot welding for all precision sheet metal sites around the world

向洋技研は「美しく強いスポット溶接を世界の現場に」を掲げ、「MYSPOТ」シリーズの最新モデルによる提案を行います。実機実演を行いながら「環境に配慮した高品質な接合」とは何か、またそれがどのように「利益を生み出す溶接工程」となるかを提示します。省人化の加速、原材料の高騰により品質維持と利益確保が課題となる中、スポット溶接機MYSPOТが生産現場におけるさまざまな課題解決を提案することで、お客さまの生産性向上に貢献します。



Koyo Giken is promoting "clean and strong spot welding for sites around the world" and will be proposing the latest model of the "MYSPOТ" series. While demonstrating the actual machine, they will show what "environmentally friendly, high-quality joining" is and how it can become a "profit-making welding process." With the accelerated trend toward labor saving and rising raw material prices making quality maintenance and profits an issue, the spot welder MYSPOТ will contribute to improving customer productivity by proposing solutions to various issues at production sites.

E-MAIL

info-hp@koyogiken.co.jp

**ケナメタルジャパン株式会社**  
KENNAMETAL JAPAN LTD.

西1ホール  
West Hall 1  
**W1023**

**究極の生産性と工具寿命を備え、幅広い用途に対応**

Ultimate productivity and tool life meet an extreme application range

5枚刃設計と強力なコアとの組み合わせで、MRR、工具寿命、切り屑排出機能を向上。センターレスエンドフェイス設計がランピング加工、プランジ加工、深溝入れ加工を実現。チップギャッシュで、切り屑排出を向上させ、フルートから切削域へのクーラントの流量を増やすことで工具の冷却を向上。独自のWフルート形状により、切り屑排出を向上させ、コアを強化。エキセントリックリリーフが切れ刃の強度を高めることで、工具寿命が延長し、被削材の幅広いアプリケーション範囲を実現。



H2TE

Open 5-flute design combined with a stronger core for increased MRR, tool life and chip evacuation capabilities. Novel centerless end face designed for aggressive ramping, plunging and deep slotting. Chip gashes for better chip evacuation and improved tool cooling with increased coolant flow from the flute to cutting zone. Proprietary W-flute shape for better chip evacuation and stronger core. Eccentric relief increases the edge strength for longer tool life and wide material application range.

E-MAIL

japan.customerservice@kennametal.com

**東洋研磨材工業株式会社**  
TOYO KENMAZAI KOGYO LTD.

東1ホール  
East Hall 1  
**E1008**

**磨きの工程改善で実績多数！鏡面研磨機SMAP**

Proven Polishing Performance! The Mirror Surface Shot Machine "SMAP"

鏡面ショットマシンSMAPは、職人技術である「研磨・磨き」の工程を誰でも簡単に行える画期的な機械。弾力のある研磨メディアを、エアを使わず対象に斜めに投射し滑らせることで磨きが行われ、手では磨きづらい複雑形状の加工が可能。自動化実績も多数あり、幅広い業界で活躍中。鏡面磨きが得意だが、新商品のSDメディアは放電加工1stカットの粗さにも対応できます。ブース実演を行っており、その場でテスト加工も可能。ぜひテストサンプルをお持ち下さい。



The Mirror Surface Shot Machine "SMAP" is a groundbreaking machine that allows anyone to perform the traditional polishing and buffing process once reserved for skilled craftsmen. By projecting flexible polishing media at an angle without using air, it glides over the surface, allowing polishing of even complex shapes that are difficult to handle by hand. With a proven track record in automation and use across multiple industries, it's ideal for mirror polishing, but the latest SD media product can also support the roughness of the first cut of electrical discharge machining. Live demonstrations are available at the booth, and you can even bring your own samples for testing.

URL

https://toyo-kenmazai-kogyo.jp/

**フジ産業株式会社**  
FUJI SANGYO CO.,LTD

東3ホール  
East Hall 3  
**E3031**

**高トルクタイプ長尺加工機による高速加工**

High-torque Long Length steel processing machine

鋼材加工用高トルク仕様長尺加工機「FB-5000-20ATC-S」は、通常の加工機より各種剛性を高め、角パイプやH鋼などの鋼材加工に最適な加工機となっています。もちろん鋼材以外、アルミ、ステンレス、樹脂など幅広いワークに対応します。オーダーメイドによる製作でストロークなどは、お客さまのご要望で変更できます。

JIMTOF2024では刃物メーカーの不二越様とのコラボレーションでバリレスドリルによる高速加工をご覧いただけます。



The 'FB-5000-20ATC-S' is a high-torque steel processing machine with enhanced rigidity, ideal for cutting square pipes and H-beams. At JIMTOF 2024, we'll demonstrate its high-speed capabilities in partnership with Nachi-Fujikoshi.

URL

https://fuji-sangyou.com/



**自動化・省人化・高効率化**  
スマートに解決  
未来へ導く Sodick Smart Solution

AMR\*が工程間連携を実現  
※: Autonomous Mobile Robot



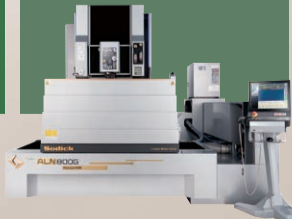
リニアモータ駆動  
超精密  
ワイヤ放電加工機

**AX350L iG+E**

リニアモータ駆動  
高速・高性能  
精密形彫り放電加工機

**AL40G+**

長時間大型ワーク加工を  
多彩な機能で自動化・効率化



リニアモータ駆動  
高速・高性能  
大型ワイヤ放電加工機

**ALN800G iG+E**

軽量＆コンパクトな機体で  
難削材の微細精密加工実現



**New Model**  
リニアモータ駆動  
フェムト秒レーザー加工機

**LSP404**

精密切削加工の自動化に向け  
多彩なシステムをご提案



リニアモータ駆動  
マシニングセンタ  
& オートワークチェンジャ

**UX650L & SR12**



JIMTOF2024  
特設サイトへは  
こちらから

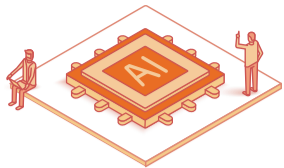
**GO!**



株式会社 ソディック

※ 出展機は都合により予告なく変更する場合がありますのでご了承ください。





# 進化するデジタル技術 ～デジタルツイン・AI活用～

Evolution of Digital Technologies: Uses of Digital Twin and AI

工作機械や機械部品メーカーをはじめとする製造業で、現実世界を仮想空間に再現する「デジタルツイン」や人工知能 (AI) などの活用が活発化している。コンピューター上での高精度なシミュレーション解析は開発期間の短縮に寄与する。従来は試作品の製作が欠かせなかったが、デジタル技術の活用によって試作回数を減らすことで手間やコストを低減。人手不足が深刻な社会課題となる中、開発・製造工程のデジタル化は加速すると見られる。

Manufacturers, including those producing machine tools and machine parts, are seen actively using digital measures such as digital twin, which replicates the physical world in virtual spaces, and artificial intelligence (AI). High-precision simulations conducted on computers help in shortening development periods. Previously, simulations required prototypes to be created, but with digital technologies, the need for prototyping has been reduced, lowering both cost and effort. As worker shortage is becoming a serious social issue, the digitalization of development and manufacturing processes is set to accelerate.

## 正確な加工時間の見積もりを実現

オークマは独自のコンピューター数値制御 (CNC) 装置「OSP-P500」に、加工時間の見積もりを実加工時間の1000分の1、誤差1%以下の高速・高精度で可能にするデジタルツインの機能を搭載する。装置内のデジタル空間に最新の実機データと3次元 (3D) モデルデータを活用し、機械を再現。正確な加工時間を見積もることができ、加工スケジュールの策定や迅速で正確な納期、コスト見積もりに寄与する。

この機能を実現に結びつけたのは、オークマの根底に流れる「機電一体」の思想だ。市販のソフトウェアでも似たようなシミュレーションは可能だが、モーターで動く軸動作の再現は容易でも、油圧などで動く周辺ユニットの再現までは難しい。電気を専門とする技術者は電気制御の挙動は推測できても、油圧制御の挙動の推測には機械の知見も必要になる。電気と機械のどちらについても技術の蓄積があるオークマだからこそ、工作機械の動作の隅々までを正確に予測する仕組みを完成できた。



オークマの独自コンピューター数値制御 (CNC) 装置「OSP-P500」  
Okuma's proprietary computer numerical control (CNC) system "OSP-P500"

## 最適な加工プログラム作成で 段取り作業削減

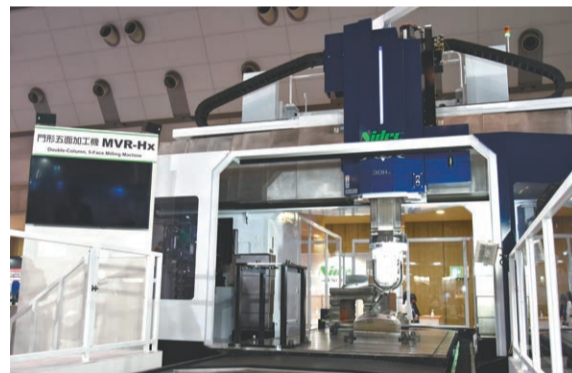
ニデックマシンツール (滋賀県栗東市、二井谷春彦社長) はデジタルツインを活用し、工作機械の加工前の検証作業を高精度にシミュレーションできるソフトウェアを開発した。仮想空間で最適な加工プログラムを作成できる。実際に機械や加工対象物 (ワーク) を使った段取り作業をすることなく、同社の工作機械に適用するだけで狙った品質の加工を実現でき、生産性を従来比2倍以上に高められる。

開発したソフトは同社製門型5面加工機「MVR-Hx」向けで、来春発売を予定する。同加工機は自動車向け

の金型など大型ワークの加工を想定する。

従来は実加工前にオペレーターが動作干渉や切削負荷、サイクルタイムなどを確認して加工条件を設定し、加工プログラムの修正や試し加工を繰り返していた。パソコン上の仮想空間でシミュレーションすることで、「事前検証の時間を約20分の1に短縮できる」(同社担当者) という。

また同社の門型5面加工機はシミュレーションの再現性が高く、高精度な加工を安定して実現できる。新ソフトと共に活用することで、生産性向上とオペレーターの作業負担低減に貢献する。

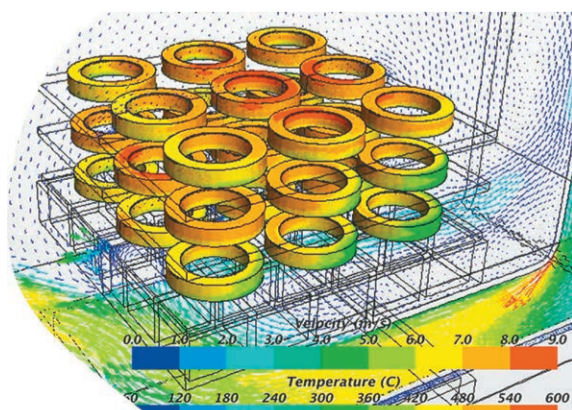


ニデックマシンツールの門型5面加工機「MVR-Hx」シリーズ  
NIDECK MACHINE TOOL's double-column, 5-face milling machine "MVR-Hx" series

## リアルな現象と デジタルによる解析を融合

一方、リアルも重視するのが日本精工だ。独自開発手法の「リアルデジタルツイン」は、コンピューター上での解析にとどまらず、実験による検証を組み合わせるのが特徴だ。例えばベアリングを回す際、保持器の動作やグリースの状態を、実験を通じてデータ化する。同社はリアルな現象とデジタルによる解析を融合することに意義があると考えている。

同社ではベアリングの熱処理工程にもリアルデジタルツインを活用している。従来は熱処理炉内のベアリングのリングが冷却過程で変形し、その変形を後工程で補正する必要があった。この課題に対して、冷却ムラによる変形メカニズムの仮説を立てて、熱処理炉内の現象



日本精工の熱処理シミュレーション  
NSK's heat treatment simulation

をデジタル上でモデル化。デジタルとリアルで現象の洞察を繰り返すことで、生産性向上や開発期間の短縮を実現した。JIMTOFで展示する低フリクションボールねじ「MT-Frix(エムティ・フリックス)」の開発にもリアルデジタルツインが活かされている。



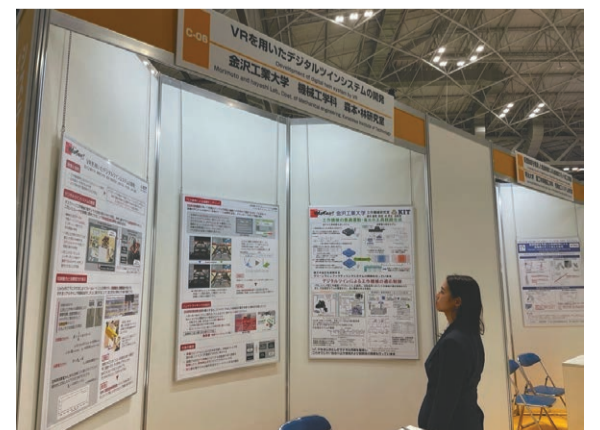
日本精工が開発した低フリクションボールねじ「MT-Frix」  
NSK's low-friction ball screw "MT-Frix"

## IMEC2024でも関連発表多数

各社がデジタルツインやAI技術を提案する中、IMEC2024 (第20回国際工作機械技術者会議) でも、関連したセッションや発表が目される。

7日15時40分から会議棟1階のレセプションホールAで行われるオールセッション「テクニカルセッション1: デジタル技術で変わる製造現場の未来」では、「AI R&D for Real Factory」「CNC デジタルツイン活用による電装設計と加工プロセスの効率化」「HondaのものづくりDX デジタルを活用した製造オペレーション改革へのチャレンジ」の3講演が予定されている。

南4ホール内では、研究機関・大学が53テーマでポスターセッションを行う。金沢工業大学機械工学科の森本・林研究室の発表テーマは「VRを用いたデジタルツインシステムの開発」。デスクトップ工作機械のVR操作シミュレーションシステムを改良し、没入感のあるデジタルツイン実現を目指しており、それらの研究について紹介する。



IMEC ポスターセッションでもデジタルツインシステムに関する研究が紹介されている (金沢工業大学機械工学科森本・林研究室)  
Research on digital twin systems was also introduced at the IMEC poster session (Kanazawa Institute of Technology, Department of Mechanical Engineering, Morimoto/Hayashi Laboratory)



**Able to Estimate Processing Time Accurately**

Okuma has equipped its proprietary computer numerical control (CNC) system, "OSP-P500," with a digital twin feature that will be able to estimate processing time at 1/1000 of the actual processing time, with high speed and precision within a 1% margin of error. The digital space within the system features the latest actual system data and 3D model data to recreate the system. This allows for precise processing time estimates, contributing to the scheduling of processing timetables, quick and accurate delivery dates, and cost estimation.

This functionality was made possible by Okuma's foundational mechatronics integration philosophy. Commercial software can perform similar simulations, but while they may easily replicate the movement of motor-driven spindles, they can rarely reproduce the operation of other parts such as hydraulic peripheral units. Electrical engineers may be able to estimate how electrically operated parts move but estimation of hydraulic units requires further expertise in machinery. Okuma was able to perfect the mechanism that could predict every movement of machine tools because of its extensive engineering prowess in both electricity and machinery.

**Drawing up Optimized Machining Programs to Reduce Setups**

NIDEC MACHINE TOOL (located in Ritto, Shiga Prefecture, President Haruhiko Niitani) has developed a software that leverages digital twin to perform high-precision simulations of evaluation processes before the machining of machine tools. The software can draw up optimized machining programs in a virtual space. Without actually setting up

machines and workpieces, the software can simply be used on NIDEC's machine tools to enable targeted machining quality, raising productivity twofold or more.

The software is for NIDEC's double-column, 5-face milling machine, "MVR-Hx," which will be launched next spring. It is intended for large workpieces such as automobile molds.

Previously, operators would verify movement interference, cutting load, and cycle time before machining, adjusting machining programs, and conducting trial machining. Simulations in virtual space on the personal computer can "reduce the preliminary evaluation hours to about one-twentieth," according to a NIDEC representative.

NIDEC's double-column, 5-face milling machine also has high simulation reproductivity, ensuring steady high-precision machining. When used with the new software, the machine helps improve productivity and reduce operator workload.

**Fusion of Physical Phenomena and Digital Analysis**

Meanwhile, NSK focuses on the physical world as well. Its proprietarily developed "Real Digital Twin" not only performs analysis on the computer but is characterized by how it combines experiment-based evaluations with the analysis. For instance, when rotating bearings, the system converts data on the movement of the retainer and the state of grease through experimental testing. NSK believes that combining physical events and digital analysis is meaningful.

NSK also utilizes Real Digital Twin in the heat treatment process of bearings. Previously, bearing rings inside the heat treatment furnace would deform during cooling, requiring correction in subsequent stages. To solve this problem, NSK devised

a hypothesis regarding deformation mechanisms caused by uneven cooling and digitally modeled the phenomenon inside the heat treatment furnace. By repeatedly observing the phenomenon digitally and physically, it succeeded in improving productivity and shortening the development period. NSK's low-friction ball screw "MT-Frix," which will be on display at JIMTOF, was also developed using Real Digital Twin.

**Many Related Presentations at IMEC2024**

While various companies are proposing digital twin and AI technologies, related sessions and presentations at IMEC2024 (20th International Machine Tool Engineers' Conference) will also be attracting attention.

The oral session, "Technical Session 1: Digital technology changing the future of manufacturing industries," will be held from 3:40 p.m. on November 7 in Reception Hall A on the first floor of the Conference Tower. Three lectures are scheduled to be given: "AI R&D for Real Factory," "High efficiency of electrical design and machining process using CNC Digital Twin," and "Honda's manufacturing DX Challenge to reform manufacturing operations using digital technology."

In South Hall 4, poster sessions will be held by research institutes and universities with 53 themes. The theme of the presentation by Morimoto and Hayashi Laboratory of the Department of Mechanical Engineering at Kanazawa Institute of Technology will be "Development of digital twin system by VR." They aim to realize an immersive digital twin by improving the VR operation simulation system for desktop machine tools and will introduce their research.



JIMTOF 2024 JIMTOF Map & Daily News編集部主催 トークショー

**高専の現場教員が考える理想のインターンシップ**

日本に58校ある高専。夏のインターンシップを単位認定するなど、企業を深く知る機会として学校の現場も意識されています。一方で高専生に特化した、お客さんではないインターンシップの在り方が求められています。今回、機械系のバックグラウンドを持つ高専の先生をお招きし、JIMTOF2024 (第32回日本工作機械見本市)を舞台に、理想のインターンシップを通し工作機械関連業界の魅力をどう伝えればいいのか、率直にお話いただきます。企業と学校がWin-Winの関係を築くために、相互理解を深める一助となれば幸いです。人事・採用分野の方に聞いていただきたい内容です。

詳細はこちら

[https://jimtof.org/jp/evt\\_stu.html#academic](https://jimtof.org/jp/evt_stu.html#academic) >>>>





本江 哲行氏  
国立高等専門学校機構  
本部事務局 理事長特別補佐



外山 茂浩氏  
長岡工業高等専門学校  
電子制御工学科 教授

日時

2024年11月9日(土)  
12:25 ~ 13:15

会場

東京ビッグサイト南4ホール  
アカデミックエリア内「多目的ステージ」

定員

約30人 ※トークショー自体への申し込みは不要で無料です。

**無料**



## C O L U M N

## 新設!アカデミックエリアができるまで

The road to the establishment of the new Academic Area

日本工作機械工業会事務局

Japan Machine Tool Builders' Association Administrative Office

次代のモノづくりを担う人材への発信と日曜日のイベント振興策を兼ね、南4ホールに新設した「アカデミックエリア」。このエリアをいかに皆さんに楽しんでもらったら良いか、でき上がるまでには、事務局はあれこれと、このエリアの企画イメージを妄想してきました。ここではあえて、次世代に向けて「会社員の世界をちょっと体験」という視点で考えたものの、日の目を見なかった大物企画を紹介します。

The Academic Area was recently opened in the South 4 Hall to inspire the next generation of manufacturing talent and as a place for vitalizing Sunday events. Before its completion, the Administrative Office has been brainstorming ideas for how everyone could enjoy this area. Here, we would like to introduce to you key projects that never saw the light of day despite being designed from a standpoint of giving the next generation a peek into the world of company employees.

## わが社の社食自慢

工作機械メーカーの社員食堂は、品数が豊富で栄養バランスを考慮した料理を提供しているところが多数あります。例えば、野菜取り放題のサラダバー、有名飲食店とのコラボレーションメニュー、注文を受けてから仕上げる調理スタイルなど、そのままレストラン経営に乗り出した方がいいのでは、という会社も少なくありません。

これらの「美食」を学生に味わってもらい、当業界に入るきっかけにってもらえればと考えました。そこで、学生の社食体験として、キャリアマッチングスクエアの発展企業から、社員食堂の名物ランチを提供するコーナーを考案。会期中、日替わりで発展企業の社食シェフが腕を競い、学生たちが点数評価して、最終日には最優秀社食を決めるという構想もありましたが、厨房設備や給排水工事などのコスト面に加え、協力企業のハードルが高いことから、やむなく断念しました。

## 飲みニケーション体験!?

アニメ「サザエさん」で、会社帰りにサザエさんの父、波平さん(54歳)が、おでんの屋台や赤ちょうちんを灯した居酒屋で、ほろ酔いになるシーンは定番です。人気漫画「クレヨンしんちゃん」でも、32年間の住宅ローンに頭を抱えた主人公しんちゃんの父・野原ヒロシ(35歳)が、会社の後輩を飲みに誘い、頭にネクタイを巻きながら楽しく痛飲する様子がよく描かれます。



仕事終わりのひとときを体感してほしい。そんな思いを込めて、学生を対象に、15時以降、おでんの屋台をオープンさせて、交流を深めてもらう企画を立案して、発案者自らがチャルメラを吹きながら屋台を引くことまで考えたものの、コスト面などの課題から頓挫しました。

このほかにも、お蔵入りした企画はいくつかあります。こうしたさまざまな試行錯誤のすえに、実際に出来上がったアカデミックエリアでは、「マシンツール・インフィニティ∞ ~無限の可能性を切り拓く工作機械の世界へようこそ~」と題した体験企画などをラインアップ。またオープンカフェ内に設置する多目的ステージでは、著名講師やYouTuberによるスペシャルトークショーなど、多彩なプログラムとなりました。ぜひ、工作機械の世界をのぞいて、楽しんでみてください。

## Showing off our company cafeteria

Many machine tool manufacturers have company cafeterias offering a wide range of nutritionally balanced options. In fact, there are quite a few companies that could immediately step into the restaurant business, with their amazing salad bars, collaboration menus with well-known restaurants, and made-to-order serving styles.

We thought it would be great if students could experience these gourmet meals, using them as a way to spark interest in joining the industry. Thus, we came up with the idea of creating an area for students to experience famous lunches from company cafeterias at the booths of participating companies in the Career Matching Square. There was another idea to invite the chefs of company cafeterias to take daily turns serving lunch, which will then be reviewed and scored by the students to decide the best company lunch on the last day of the event. However, this idea had to be dropped due to the cost of kitchen facilities and waterwork constructions, as well as the difficulty of finding companies that were willing to cooperate.

## Drinkommunication experience!?

In the anime "Sazae-san," the father figure Namihei (age 54) is always seen enjoying getting a bit inebriated after work in street hotpot booths and casual izakayas with red lanterns (indicating they are cheap and affordable). In the popular manga "Crayon Shin-chan," the main character's father, Hiroshi Nohara (age 35), who is struggling with his 32-year mortgage, is also often depicted inviting his younger colleagues out for drinks and tying a necktie around his head while enjoying his night out.

How about letting students experience what moments after work feel like? With this in mind, we came up with an idea of opening a hotpot booth after 3 p.m. for students to facilitate deeper interactions. The person who suggested this idea even considered walking around while towing a hotpot trolley and playing a traditional horn used for such trolleys. However, this idea was ultimately abandoned due to cost and other issues.

There are also a few other projects that did not materialize. Completed after many trials and errors, the Academic Area now offers a range of activity projects, such as "Machine Tool Infinity ∞ Welcome to the World of Machining Tools that Explore Infinite Potential." Additionally, the multipurpose stage in the open café will host special talk shows by famous lecturers and YouTubers. Why don't you have a peek at the world of machine tools and have fun?



## MT検定

## 工作機械検定

MACHINE TOOL

2級

日本工作機械工業会は、一般の方々にも工作機械はどのような機械かを知ってもらう「工作機械検定(MT検定)」を実施しています。JIMTOF Map & Daily Newsでは、工作機械産業に関する標準的な問題を取り上げる「2級」(合計20問)の中から12問を選び、6回にわたって掲載します。全問正解を目指し、ぜひチャレンジしてみてください。

## Q.1

1958年、世界で初めてマシニングセンタを製品化した企業は次のどれですか。

- A カーネイ・アンド・トレッカー社
- B キャタピラ社
- C シンシナティ・ミラクロン社

## Q.2

我が国の工作機械生産額が1982年米国を抜き世界一位になった最大の要因はどれですか。

- A NC工作機械の輸出が伸びたため
- B 円安で生産額が上昇したため
- C 欧米の自動車会社向け専用工作機械輸出時期が重なった

工作機械検定2級にチャレンジ!  
応募期間 11月30日(土)まで。

スマホでも受験できて、  
その場で合否判定します!

工作機械検定は  
こちらから

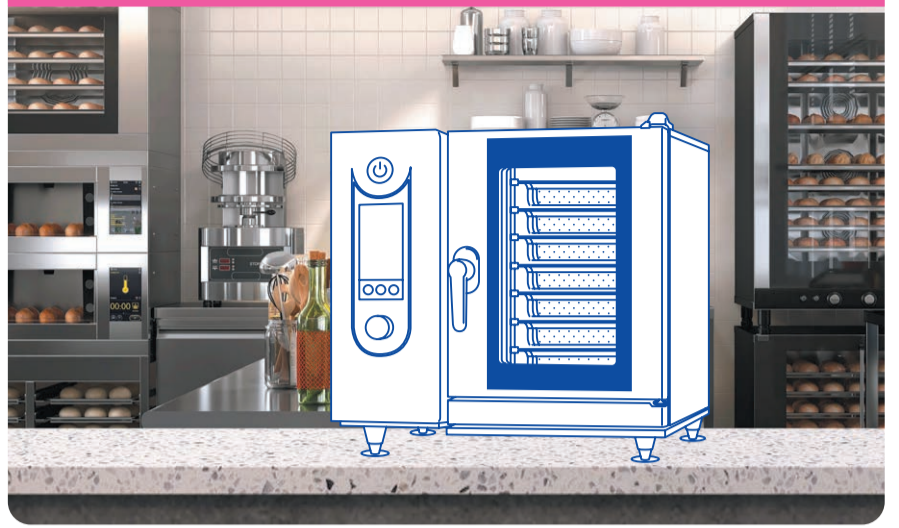




例えば、小売業 × 清掃ロボット



例えば、宿泊業 × スチームコンベクションオーブン



中小企業の**人手不足解消**に効果のある「**省力化製品**」を導入するための補助金

# 中小企業 省力化投資補助金

補助率  
**1/2**

**随時申請受付中!**



例えば、飲食サービス業 × 券売機



例えば、製造業 × 無人搬送車

**中小企業省力化投資補助金とは、**人手不足解消に効果があるロボットやIoTなどの製品を導入するための経費を国が補助することにより、簡易で即効性がある中小企業の省力化投資を促進し、売上拡大や生産性向上を図るとともに賃上げにつなげることを目的とした補助金です。

### 補助対象となる事業

人手不足の中小企業などが、省力化製品を**対象製品のリスト(カタログ)**から選んで導入し、販売事業者と共同で「**労働生産性 年平均成長率3%向上**」を目指す事業計画<sup>\*1</sup>に取り組むものを対象とします。

申請時に全ての従業員の賃金が最低賃金を超えていること、補助金の重複に該当しないことなどの要件<sup>\*2</sup>を満たす必要があります。また、補助金の交付が決定された場合でも事業実績報告の審査によって補助額の減額となる場合があります。

<sup>\*1</sup> 公募要領「4-1. 補助対象事業の要件」を参照。  
<sup>\*2</sup> 公募要領「4-2. 補助対象事業者の要件」を参照。



### 補助率と補助上限額

従業員数	補助率	補助上限額	補助事業実施期間に一定以上の賃上げを達成した場合
5名以下	<b>1/2</b>	200万円	300万円に引き上げ
6~20名		500万円	750万円に引き上げ
21名以上		1,000万円	1,500万円に引き上げ

補助上限額の引き上げを適用する場合、事業終了時に①給与支給総額+6%以上かつ、②事業場内最低賃金+45円以上とする計画を策定し申請する必要があります。  
※補助上限額を引き上げたが事業終了までに賃上げ未達の場合は、補助額の減額となります。  
※各申請における補助額の合計が補助上限額に達するまでは、複数回の応募・交付申請が可能です。

### 補助対象製品の カテゴリ

**どんどん拡大中!**

- ▶ 清掃ロボット
- ▶ スチームコンベクションオーブン
- ▶ タブレット型給油許可システム
- ▶ 測量機
- ▶ 近赤外線センサ式プラスチック材質選別機
- ▶ 鋳物用自動バリ取り装置
- ▶ 配膳ロボット
- ▶ 券売機
- ▶ オートラベラー
- ▶ 丁合機
- ▶ 自動調色システム
- ▶ 自動倉庫
- ▶ 自動チェックイン機
- ▶ 飲料補充ロボット
- ▶ 印刷用紙高積装置
- ▶ デジタル加飾機
- ▶ 検品・仕分システム
- ▶ 自動精算機
- ▶ デジタル紙面色校正装置
- ▶ 印刷用インキ自動計量装置
- ▶ デジタル紙面検査装置
- ▶ 印刷紙面検査装置
- ▶ 無人搬送車(AGV・AMR)
- ▶ 段ボール製箱機
- ▶ 蛍光X線膜厚測定器
- ▶ 自動裁断機 など

※一部の省力化製品については、置き換えであっても交付申請可能です。

お問い合わせは、本補助事業コールセンターまで

あらかじめ右記ホームページの掲載資料や「よくあるご質問」をご確認のうえ、お問い合わせください。

ナビダイヤル **0570-099-660**

IP電話などからのお問い合わせ **03-4335-7595**

受付時間：9:30~17:30 / 月曜~金曜(土・日・祝日除く)

※通話料がかかります。恐れ入りますが、繋がらない場合は、しばらくたってからおかけ直してください。

全都道府県に、インフォメーション窓口を設けています。詳しくは右記ホームページをご確認ください。

本補助金の詳細や対象製品のリスト(カタログ)、公募要領などはこちらから

中小企業省力化投資補助事業ホームページ  
<https://shoryokuka.smrj.go.jp/>



省力化製品に関わる工業会・製造事業者・販売事業者のみならず

カタログ登録サポートセンター **03-6746-1530** でご相談受付中!

● 受付時間：9:30~17:30 / 月曜~金曜(土・日・祝日除く)

Be a Great Small.  
**中小機構**





# Event Calendar

## November 5 (Tue.)

Time	International Conference Room, Conference Tower 7F	Organizers Main Stage South Hall 1, Additive Manufacturing Area
12:00		
13:00	13:00 – 14:00 <b>Keynote Speech</b> Bring your dreams to manufacturing! THK's pursuit of a new-concept EV	13:00 – 14:00 Changing The Future of Die Casting Leads to the Change of Metal AM of Mold Manufacturing
14:00		14:00 – 16:00 Western companies tackling the challenges of AM head-on
15:00		
16:00		
17:00		

## November 6 (Wed.)

Time	Reception Hall, Conference Tower 1F	Organizers Main Stage South Hall 1, Additive Manufacturing Area
12:00		
13:00	13:00 – 14:15 <b>Special Lecture</b> Monozukuri manufacturing is about Developing People	13:00 – 16:15 AM Seminar by Japan Machine Tool Builders' Association
14:00		
15:00		
16:00		
17:00		

## November 7 (Thu.)

Time	Reception Hall, Conference Tower 1F	Organizers Main Stage South Hall 1, Additive Manufacturing Area
10:00		10:00 – 12:00 The latest status of social implementation of Japanese 3D printers Morning session
11:00		
12:00		
13:00	12:30 – 18:00 IMEC2024 (The 20th International Machine Tool Engineers' Conference) Oral Session	13:00 – 16:00 The latest status of social implementation of Japanese 3D printers Afternoon session
14:00		
15:00		
16:00		
17:00		
18:00		

## November 8 (Fri.)

Time	International Conference Room, Conference Tower 7F Reception Hall, Conference Tower 1F	Organizers Main Stage South Hall 1, Additive Manufacturing Area
10:00		10:00 – 11:00 How the West is working to address the challenges of additive manufacturing
11:00		11:00 – 12:00 ShareLab
12:00		12:00 – 13:00 Mass Production of AM as a Business
13:00	13:00 – 14:00 <b>Special Lecture</b> International Conference Room, Conference Tower 7F Cross-Industry Collaboration in Action: Exploring Open Innovation Management with JSOL at Maeda Corporation Fantasy Marketing Department	13:00 – 16:00 AM utilization starts with automation of overlay welding repair and dissimilar metal coating
14:00		
15:00		
16:00	13:00 – 18:00 Reception Hall, Conference Tower 1F IMEC2024 (The 20th International Machine Tool Engineers' Conference) Oral Session	
17:00		
18:00		

## November 9 (Sat.)

Time	International Conference Room, Conference Tower 7F	Organizers Main Stage South Hall 1, Additive Manufacturing Area
10:00		10:00 – 11:00 Applications and challenges as repair techniques for metal AM
11:00		11:00 – 13:00 ShareLab
12:00		
13:00	12:30 – 15:10 <b>Students only</b> Top Seminar by Machine-Tool Manufacturers for Students	13:00 – 14:00 A Practical Guide to 3D Printing
14:00		14:00 – 15:00 Technology and Business Trends in Additive Manufacturing and 3D Printing from Global viewpoint
15:00		
16:00		
17:00		

## November 10 (Sun.)

Time	Reception Hall, Conference Tower 1F	Organizers Main Stage South Hall 1, Additive Manufacturing Area
10:00		10:00 – 13:55 Manufacturing Revolution: Breaking Through Manufacturing Barriers with Additive Manufacturing
11:00	10:30 – 11:30 <b>Special Lecture</b> 10:30 – Development of Space Robots 11:00 – Daily Life of Women in STEM (Monozukuri)	10:00 – 10:55 Utilization of metal AM for aluminum die-casting dies 11:00 – 11:55 The Production of Die-Casting Mold Components Using Multi-Laser AM Equipment and Future Developments 12:00 – 12:55 Giga cast technology trends and die-casting technology 13:00 – 13:55 Achievements for mold repair and technology development by 5-axis DED hybrid machine
12:00		
13:00		
14:00		14:00 – 15:55 「Additive Manufacturing Pioneering New Frontiers in Manufacturing: Unconstrained by Conventional Wisdom」
15:00		
16:00		
17:00		



**South Hall 4 Academic Area**

### IMEC2024 Poster Session

November 5 (Tue.) - 10 (Sun.) 9:00-17:00

\* Personnel who give explanations from participating organizations are scheduled to be present from 9:00 to 12:00 on November 7 (Thu.) and 8(Fri.) 9 (Sat.)

### Open Cafe

A free space for visitors, with Wi-Fi and drinks. Enjoy a break and the multi-purpose stage!

See the multi-purpose stage program here (Japanese Only) ▶







# Lectures / Seminars

**Free of charge**

\* Pre-registration is required for lectures and seminars.  
\* On-site registration is accepted on a space available basis only.

**J** Japanese (including interpretation) **E** English  
**M** Multilingual Translation (AI Translation included)

International Conference Room, Conference Tower 7F / Reception Hall, Conference Tower 1F

## Keynote Speech

**J E M**

International Conference Room, Conference Tower 7F November 5 (Tue.) 13:00~14:00

### Bring your dreams to manufacturing! THK's pursuit of a new-concept EV

THK was the first company in the world to develop the LM Guide, which is a critical element of machine tools. As a result of honing this technology alongside our ball screw expertise, we were able to unveil our original EV prototype that features the latest in EV technology, the LSR-05, at JMS 2023. In this talk, SNDP's Shiro Nakamura (formerly from Nissan) and I will discuss the path that led us to today as well as the road ahead.



THK CO., LTD.

Chairman/CEO **TERAMACHI Akihiro**



SN Design Platform

President **NAKAMURA Shiro**



LSR-05

## Special Lecture

**J E M**

Reception Hall, Conference Tower 1F November 6 (Wed.) 13:00~14:15

### Monozukuri manufacturing is about Developing People

Manufacturing is facing a turbulent era with CN and digital transformation on the horizon. Hence, we always value "honing people for the coming era". With our "Genba First" mindset, based on our experiences by always being present on-site, We will give you presentation about value for honing people.



TOYOTA MOTOR CORPORATION

Executive Fellow **KAWAI Mitsuru**

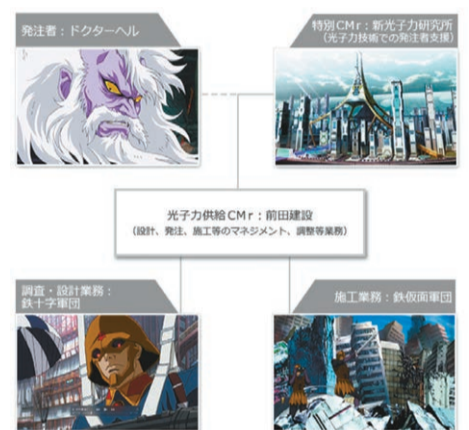
## Special Lecture

**J E M**

International Conference Room, Conference Tower 7F November 8 (Fri.) 13:00~14:00

### Cross-Industry Collaboration in Action: Exploring Open Innovation Management with JSOL at Maeda Corporation Fantasy Marketing Department

The Maeda Corporation Fantasy Marketing Department began in 2003 as a cross-industry co-creation public relations activity and achieved success by being adapted into stage plays and movies. Together with JSOL employees, we will discuss the management methods and idea generation techniques that create something from nothing as concrete examples of co-creation



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Maeda Corporation Executive Officer  
Department of Transportation Systems Engineering,  
College of Science and  
Technology, Nihon University, Visiting Professor  
**IWASAKA Teruyuki**



JSOL Corporation  
Engineering Technology Div.  
Section manager **ODA Hodaka**



JSOL Corporation  
Engineering Technology Div.  
**AMANO Shinichi**

## Special Lecture

Reception Hall, Conference Tower 1F November 10 (Sun.) 10:30~11:30

10:30~11:00

**J E M**

### Development of Space Robots

With expansion of the space exploration, the robot application, "Service Robot in Space" (SRS), providing service becomes popular to a human in space. Several JAXA space robot systems will be presented and the attendees will understand the process how to manufacture the complicated systems.



JAXA, Human Spaceflight Technology Center  
Senior Manager **OTSUKA Akiko**

11:00~11:30

**J E M**

### Daily Life of Women in STEM (Monozukuri)

Through the panel discussion among women in STEM (engineer in private company, researcher in university and/or engineer in research organization), attendees can catch the clue to enter the manufacturing world.



JAXA, Human Spaceflight  
Technology Center

Senior Manager **OTSUKA Akiko**



Astroscale  
Guidance, Navigation Control Engineer

**IWASAWA Aria**



Nihon University,  
College of Science and Technology,  
Department of Aerospace Engineering

Associate Professor **TAKAHASHI Akiyo**



Yamaguchi University,  
Department of Mechanical Engineering,  
Graduate School of Sciences and  
Engineering for Innovation

Associate Professor **BANNO Ayana**



IHI AEROSPACE Co., Ltd.,  
Corporate Planning Department,  
Business Development Group

General Manager **FUKUNAGA Mihoko**

## IMEC2024 (The 20th International Machine Tool Engineers' Conference)

### Oral Session

**J E Fees required**

Reception Hall A, Conference Tower 1F November 7 (Thu.) 12:30~18:00/November 8 (Fri.) 13:00~18:00

### Overall theme "Manufacturing technology to create future societies"

Various speakers from Japan and overseas give the speeches on the latest technology trends in four sessions, "Challenges and the future of manufacturing towards a sustainable society", "Digital technology changing the future of manufacturing industries", "Continuously evolving automation technology", "Machining technologies for new value creation".



For the registration and inquiries for Oral Session

Japan Machine Tool Builders' Association IMEC Office

+81-3-3434-3961  
<https://www.jmtba-imec.jp/>  
Email: imec@jmtba.or.jp

## Top Seminar by Machine Tool Manufacturers for Students

**Free of charge Students only**

International Conference Room, Conference Tower 7F November 9 (Sat.) 12:30~15:10

\*A networking event with companies will be held after the seminar.



For inquiries for the Seminar

Technical Dept., Japan Machine Tool Builders' Association

+81-3-3434-3961  
<https://www.jmtba.or.jp/news/news2024/>  
Email: topseminar@jmtba.or.jp





# Lectures / Seminars in AM Area

## South Hall 1 - Organizers Main Stage

**November 5 (Tue.)**

13:00 | 14:00 **Changing The Future of Die Casting Leads to the Change of Metal AM of Mold Manufacturing** J

NIHON SEIKI Co., LTD.  
Managing Director **MATSUBARA Masato**

14:00 | 16:00 **Western companies tackling the challenges of AM head-on** J  
E  
M

14:00 | 14:30 **Challenges of Adopting Large Metal Powder Bed Fusion Printers**

Additive Industries  
Account Manager **Tim Julsing**

14:30 | 15:00 **A Multi-Grid Modeling approach to thermomechanical simulation of AM parts**

PanOptimization LLC  
Principal Engineer **Tyler Nelson**

15:00 | 15:30 **Software-defined inspection with industrial X-ray CT**

Lumafield  
Co-Founder and Head of Product **Andreas Bastian**

15:30 | 16:00 **Sustainable Manufacturing for a Circular Economy**

Continuum Powders  
President - Asia Pacific **Phil Ward**

**November 6 (wed.)**

13:00 | 16:15 **AM Seminar by Japan Machine Tool Builders' Association** J

13:00 | 15:15 **Introduction of latest technology AM equipment manufactures**

〈Presenters〉 SIEMENS K.K., C&G SYSTEMS INC., MITSUBISHI ELECTRIC CORPORATION, YAMAZAKI MAZAK CORPORATION, OKUMA CORPORATION, DMG MORI CO.,LTD., JEOL LTD., MATSUURA MACHINERY CORPORATION, SODICK CO., LTD.

15:15 | 16:15 **Panel Discussion**

〈Facilitator〉 Prof. Dr. **FURUMOTO Tatsuaki** (Kanazawa University)  
〈Panelistr〉 Prof. Dr. **SASAHARA Hiroyuki** (Tokyo University of Agriculture and Technology) and Seminar Presenter

**November 7 (Thu.)**

10:00 | 12:00 **The latest status of social implementation of Japanese 3D printers (Morning session)** J

10:15 | 11:10 **Developments and Prospects of Next-Generation Industrial 3D Printers - Laser Beam System -**

TRAFAM/Kindai University  
President/Emeritus Professor **KYOGOKU Hideki**

11:10 | 12:00 **Research and Development in Electron Beam type Additive Manufacturing**

New Industry Creation Hatchery Center, Tohoku University  
Professor Emeritus (Institute for Materials Research) **CHIBA Akihiko**

**November 7 (Thu.)**

13:00 | 16:00 **The latest status of social implementation of Japanese 3D printers(Afternoon session)** J

13:00 | 13:20 **Trends in the machine parts and tooling industry and expectations for additive manufacturing**

Ministry of Economy, Trade and Industry  
Manufacturing Industries Bureau  
Machine Parts and Tooling Industries Office  
Manager **HOSHINO Masashi**

13:20 | 13:50 **Applications of the domestic sand casting 3D printer "SCM-1800" to the production of general industrial machinery parts**

TSURUMI MANUFACTURING CO.,LTD. Technical Division  
General Manager **KATSURADA Nobuya**

13:50 | 14:20 **Application example of sand 3D printer "SCM-800 II".**

PROTO CO., LTD.  
PRESIDENT **HASEGAWA Yoshinari**

14:30 | 15:00 **Pioneering the future of manufacturing! Latest large-scale metal 3D printer application technology and additive manufacturing for plants and industrial machinery**

JFE Engineering Corporation, Planning Section, Tsurumi Works, Infrastructure Engineering Sector  
Manager **MIZUGUCHI Kazuo**

15:00 | 15:30 **3D additive manufacturing development of copper by selective electron beam melting and its application for manufacturing induction heating coils**

NDK Inc.  
Department General Manager **OHNUMA Ippei**

15:30 | 16:00 **[GENERAL DISCUSSION] The latest status of social implementation of Japanese 3D printers**

〈MODERATOR〉 TRAFAM/Kindai University  
President/Emeritus Professor **KYOGOKU Hideki**  
〈PANELIST〉 Each Presenter

**November 8 (Fri.)**

10:00 | 11:00 **How the West is working to address the challenges of additive manufacturing** J  
E  
M

Lead Consultant, Layered Ltd  
CEO  
**Peter Rogers**

Additive Industries  
Account Manager  
**Tim Julsing**

PanOptimization LLC  
Principal Engineer  
**Tyler Nelson**

Lumafield  
Co-Founder and Head of Product  
**Andreas Bastian**

Continuum Powders  
President - Asia Pacific  
**Phil Ward**

11:00 | 12:00 **ShareLab** J

業務用3Dプリンター / AM技術の情報ポータル

12:00 | 13:00 **Mass Production of AM as a Business** J

TÜV SÜD Japan Ltd.  
Additive Manufacturing Expert  
**NAGANO Chiyo**



**Free of charge**

\* Pre-registration is required for lectures and seminars.  
\* On-site registration is accepted on a space available basis only.


**J** Japanese (including interpretation) **E** English **M** Multilingual Translation (AI Translation included)

November 8 (Fri.)

**13:00 | 16:00** AM utilization starts with automation of overlay welding repair and dissimilar metal coating. **J** JSAM


  
 <Chairmanship>  
 Japanese Society of Additive Manufacturing  
 managing director **SAWAKOSHI Toshiyuki**  
 Ministry of Economy, Trade and Industry  
 Machine Parts and Tooling Industries Office  
 Manufacturing Industries Bureau  
**YONEHARA Makiko**

**BattleTalk 1 (30 Mins.)**

**Latest technology and mass production parts with Additive Manufacturing of DMGMORI**  
 DMG MORI CO., LTD.  
 Operating Officer for R&D In charge of AM  
 General Manager, AM Department  
**HIRONO Yoko, P.E. Jp.**


**BattleTalk 2 (30 Mins.)**

**Introduction of TNSC's Advanced AM Solution: Wire DED Metal 3D Printers**  
 TAIYO NIPPON SANSO CORPORATION  
 Sales & Marketing Dept. Innovation Div.  
 Innovation Unit  
 General Manager **ASAI Junichiro**



**BattleTalk 3 (30 Mins.)**

**Latest Technological Trends in the DED-Type 3D Metal Additive Manufacturing Machine, LAMDA**  
 NIDEC MACHINE TOOL CORPORATION  
 Machining Center Division Development Group 2 Team 5  
 Team Leader **TAUCHI Hiroyuki**



**BattleTalk 4 (30 Mins.)**

**Future manufacturing using the Wire Laser Metal 3D Printer AZ600**  
 Mitsubishi Electric Corporation Industrial Mechatronics Systems Works  
 Additive Manufacturing System Design Section  
 Laser Systems Dept.  
 Senior Manager **KOBA Ryogo**


**BattleTalk 5 (30 Mins.)**

**Introduction of fine-DED system [ALPION] and application examples**  
 MURATANI MACHINE MANUFACTURE CO.,LTD.  
 Product Development Department  
**SAKON Yu**


November 9 (Sat.)

**10:00 | 11:00** Applications and challenges as repair techniques for metal AM **J**  
 National Institute of Advanced Science and Technology  
 Senior Researcher  
**SATO Naoko**



**11:00 | 13:00** ShareLab **J**  
 業務用3Dプリンター / AM技術の情報ポータル  
  
 ShareLab


**13:00 | 14:00** A Practical Guide to 3D Printing **J**  
 Japan 3D Printing Industrial Technology Association  
 Researcher  
**YAMAGUCHI Kiyoshi**



**14:00 | 15:00** Technology and Business Trends in Additive Manufacturing and 3D Printing from Global viewpoint **J**  
 Japan 3D Printing Industrial Technology Association  
 Managing director / researcher  
**MATSUOKA Tsukasa**


November 10 (Sun.)


**10:00 | 13:55** Manufacturing Revolution: Breaking Through Manufacturing Barriers with Additive Manufacturing **J**

<Chairmanship >  
 Value Finder., Inc.  
 CEO  
**OYANAGI Hirofumi**




**10:00 | 10:55** Utilization of metal AM for aluminum die-casting dies **J**  
 Production Engineering Development Center,  
 CS Project & Aluminum Engineering Dept. Compressor Div.  
 TOYOTA INDUSTRIES CORPORATION  
 Project Leader **SATO Ryosuke**




**11:00 | 11:55** The Production of Die-Casting Mold Components Using Multi-Laser AM Equipment and Future Developments **J**  
 Castec Inc.  
 Group Leader **HOSOBUCHI Natsumi**


**12:00 | 12:55** Giga cast technology trends and die casting technology **J**  
 Research and Development Department  
 Die Casting Planning and Development Division RYOBI LIMITED  
 Chief Advisor **KAMI Shigetake**


**13:00 | 13:55** Achievements for mold repair and technology development by 5-axis DED hybrid machine **J**  
 FUJI CO., LTD.  
 General Manager of AM Technology Department **YOSHIDA Natsuki**


**14:00 | 15:55** [Additive Manufacturing Pioneering New Frontiers in Manufacturing: Unconstrained by Conventional Wisdom] **J**

<Facilitator>  

  
 Value Finder., Inc. CEO **OYANAGI Hirofumi**  
 KANAGATA SHINBUN CO.,LTD. manager **YAMAMOTO Yoshihiro**

<Panelist>  

  
 Production Engineering Development Center,  
 CS Project & Aluminum Engineering Dept.  
 Compressor Div.  
 TOYOTA INDUSTRIES CORPORATION  
 Project Leader **SATO Ryosuke**  
 Castec Inc.  
 Group Leader **HOSOBUCHI Natsumi**



  
 Research and Development Department  
 Die Casting Planning and Development Division  
 RYOBI LIMITED  
 Chief Advisor **KAMI Shigetake**  
 FUJI CO., LTD.  
 General Manager of AM Technology Department  
**YOSHIDA Natsuki**  
 NIHON SEIKI Co., LTD.  
 Managing Director **MATSUBARA Masato**



# Exhibitor Workshops

## Conference Room 605-608, Conference Tower 6F

J Japanese (including interpretation) E English

November 5 (Tue.)	11:00   12:00	605 Conference Room	A1-① W1054 MITSUBISHI MATERIALS CORPORATION	<span>J</span>
		New Endmill High-efficiency, high-precision machining Lecturer: Yuki Matsuoka		
		606 Conference Room	A1-② E5029 Vero Software KK	<span>J</span>
		Introduction of Hexagon solutions (measuring machines, CAD/CAM, CAE) for labor saving in design and manufacturing Lecturer: Yuichi Kondo :Business Development, Metrology & Production Software Business Unit		
	13:00   14:00	607 Conference Room	A1-③ W2004 FIRSSTEC CORPORATION (+81)-72-960-3340	<span>J</span>
		How to use magnetic chucks and improve productivity Lecturer: Yasuhito NAKAI, CEO Firstec Corporation		
		608 Conference Room	A1-④ S3046 COOL TECH LTD.	<span>J</span>
		Mix alkaline ionized water with cutting fluid for environmental protection! Lecturer: Hiroki Sugioka		
	15:00   16:00	605 Conference Room	A2-① E2043 SHIBAURA MACHINE CO., LTD.	<span>J</span>
		Requirements of precision machining and introduction of the machines that meet them Lecturer: Yu Murofushi		
		606 Conference Room	A2-② W1047 Fuji Die Co.,Ltd (+81)-3-3759-7124	<span>J</span>
		Introduction of the cemented carbide V series for motor core molds Lecturer: Fuji Die Co., Ltd. Technical Development division Materials Development Department Assistant General Manager Kouhei Wada		
11:00   12:00	607 Conference Room	A2-③ S3106 KEIHIN RAMTECH Co., Ltd. (+81)-45-620-6460	<span>J</span>	
	Basic Characteristics of Synchronized Stir Welding and its Prospects Lecturer: IPPEI SATO			
	608 Conference Room	A2-④ W1029 Mizuho Industries Co., Ltd. (+81)-6-6471-4721	<span>J</span>	
	Special surface modification treatment Lecturer: Osawa Fumikazu			
15:00   16:00	605 Conference Room	A3-① E7107 MARPOSS K.K.	<span>J</span>	
	Your first step to machine and process monitoring. Start reducing since tomorrow your tool costs and monitoring your machine Lecturer: Yasuhiro Kurahashi, Group Manager, MMS Technical Development Group			
	606 Conference Room	A3-② E4007 ENEOS Corporation	<span>J</span>	
	Contribution to Carbon Neutrality by Using ENEOS Lubricants Lecturer: Lubricants R&D Department, General Manager, Koji Hoshino, Ph.D.			
11:00   12:00	607 Conference Room	A3-③ E7116 Hexagon Metrology K.K.	<span>J</span>	
	Automation technology in measurement Lecturer: Junichi Goto			
	608 Conference Room	A3-④ AM103 Kanematsu KGK Corp. (+81)-3-5579-5863	<span>J</span>	
	Introduction for JINGDIAO- Precision CNC machine tool Examples of Precision Machining Solutions Lecturer: New Business Promotion HQ New Business Promotion Dept. New Business Development and Technical Sales Support Office			

November 6 (wed.)	11:00   12:00	605 Conference Room	B1-① W1020 OSG Corporation (+81)-533-82-1118	<span>J</span>
		Press conference for OSG new products Lecturer: Tetsuya Mizoguchi, Takahiro Yamamoto		
		606 Conference Room	B1-② W1034 IWATA TOOL Co.,Ltd. (+81)-52-739-1080	<span>J</span>
	13:00   14:00	607 Conference Room	B1-③ E7123 HEIDENHAIN K.K. (+81)-3-3234-7781	<span>J</span>
		Advanced Encoder Technology Lecturer: Mr. Helmut Kugel / Mr. Yuzo Ogata		
		608 Conference Room	B1-④ E6035 ModuleWorks GmbH	<span>J</span>
	Target Digital Factory: Smarter Machines and Digitalization for Solving the Manufacturing Challenges on the Shop Floor Lecturer: Fabian Tarara and Sven Odendahl			
	11:00   12:00	605 Conference Room	B2-① E1089 United Grinding Group Management AG (+81)-566-71-1666	<span>J</span>
		New Laser machining by WALTER Lecturer: Dr. Claus Dold		
		606 Conference Room	B2-② E7111 EUROTECHNO Inc. (+81)-3-3391-1311	<span>J</span>
How to choose the suitable 3D measurement system Lecturer: Fumihiko Ohara (Eurotechno), Soichi Akimoto (Bruker Japan)				

November 6 (wed.)	13:00   14:00	607 Conference Room	B2-③ W2017 THK CO., LTD. (+81)-3-5730-3845	<span>J</span>
		Further developments are expected in the near future of OMNledge Lecturer: THK CO., LTD. Managing Executive Officer Industrial Machinery FA Solution Sales Division FA Solution Sales Division, Head Takuya Sakamoto		
	15:00   16:00	608 Conference Room	B2-④ E7069 HARTING K.K.	<span>J</span>
		Maintenance Solutions for Machine Tools and Equipment: from Connectors to IoT Products Lecturer: TBD		
	13:00   14:00	605 Conference Room	B3-① E7131 Mitutoyo Corporation	<span>J</span>
		The Future of Manufacturing Opened Up by 3D Measurement Lecturer: Mitutoyo Corporation Fellow Makoto Abe		
	15:00   16:00	606 Conference Room	B3-② WA002 IHI Corporation	<span>J</span>
		IHI Hauzer and IHI Bernex Advanced Deposition Technologies Lecturer: Masaaki Takizawa, Daniel Schranz		
	13:00   14:00	607 Conference Room	B3-③ W1035 TANOI MFG.CO.,LTD. (+81)-48-092-1731	<span>J</span>
		What is Robot Machining?! Lecturer: Takeharu Oka		
15:00   16:00	608 Conference Room	B3-④ AM103 Kanematsu KGK Corp. (+81)-3-5579-5863	<span>J</span>	
	Introduction for JINGDIAO- Precision CNC machine tool Examples of Precision Machining Solutions Lecturer: New Business Promotion HQ New Business Promotion Dept. New Business Development and Technical Sales Support Office			

November 7 (Thu.)	11:00   12:00	605 Conference Room	C1-① E4012 FUJI-DENSHI (+81)-72-991-1361	<span>J</span>
		Carbon Neutrality and the Potential of High Frequency Induction Heating Lecturer: Manabu Dohsaka, Genshi Shiota		
		606 Conference Room	C1-② W1057 NS TOOL CO.,LTD.	<span>J</span>
		Effective use of high-precision small diameter end mills to reduce machining errors from 0.01mm to 0.002mm. Lecturer: Satoshi Chida, Manager, Research and Development Division, Development Group, Development Department, NS Tool Co., Ltd.		
	13:00   14:00	607 Conference Room	C1-③ E2008 YKT CORPORATION (+81)-3-3467-1252	<span>J</span>
		USACH's high-efficiency grinding technology for SiC boules and PEMTEC's high speed Precision Electrochemical Machining technology for tungsten carbide and difficult-to-machine materials Lecturer: YKT CORPORATION		
		608 Conference Room	C1-④ E1025 MARUKA FURUSATO CORPORATION	<span>J</span>
		ARUM Inc. Lecturer: TAKAYUKI HIRAYAMA		
	15:00   16:00	605 Conference Room	C2-① W1056 NACHI-FUJIKOSHI CORP.	<span>J</span>
		Introduction to Burrless Series Lecturer: Toshihiro Hoshiba		
		606 Conference Room	C2-② W1058 Oerlikon Japan Co., Ltd.	<span>J</span>
		BALINIT® ALCRONA EVO - A PVD coating for outstanding performance and significant tool cost savings Lecturer: Ivan Iovkov		
11:00   12:00	607 Conference Room	C2-③ E7119 FARO Japan, Inc. (+81)-52-890-5011	<span>J</span>	
	New measurement methods using FARO's 3D measuring devices Lecturer: Koichi Fujinaka			
	608 Conference Room	C2-④ E3042 YONEZAWA KOKI CO., LTD. (+81)-3-3703-2131	<span>J</span>	
	Traceability Issues and Countermeasures in Manufacturing (Individual Identification by Image Recognition) Lecturer: GAZIRU, INC. PRESIDENT SHIGEKAZU FUKUZAWA			
13:00   14:00	605 Conference Room	C3-① W1039 Sandvik K.K. (Dormer Pramet) (+81)-90-9136-6802	<span>J</span>	
	Introduction to Dormer Pramet Lecturer: Koji Ijuin			
	606 Conference Room	C3-② E7056 Universal Robots (+81)-3-3452-1202	<span>J</span>	
	Introducing PolyScope X, the next gen cobot system development platform Lecturer: TBC			
15:00   16:00	607 Conference Room	C3-③ E5018 ITOCHU Techno-Solutions Corporation (+81)-80-3697-6096	<span>J</span>	
	The new approach for the cutting simulation Lecturer: Eto Hisao			
	608 Conference Room	C3-④ S3021 SKF Japan Ltd.	<span>J</span>	
	Introduction of SKF engineering support and super precision bearings with new materials for high-speed and high-load spindles Lecturer: Koji Kaneko			





# AM Area Exhibitor Workshop

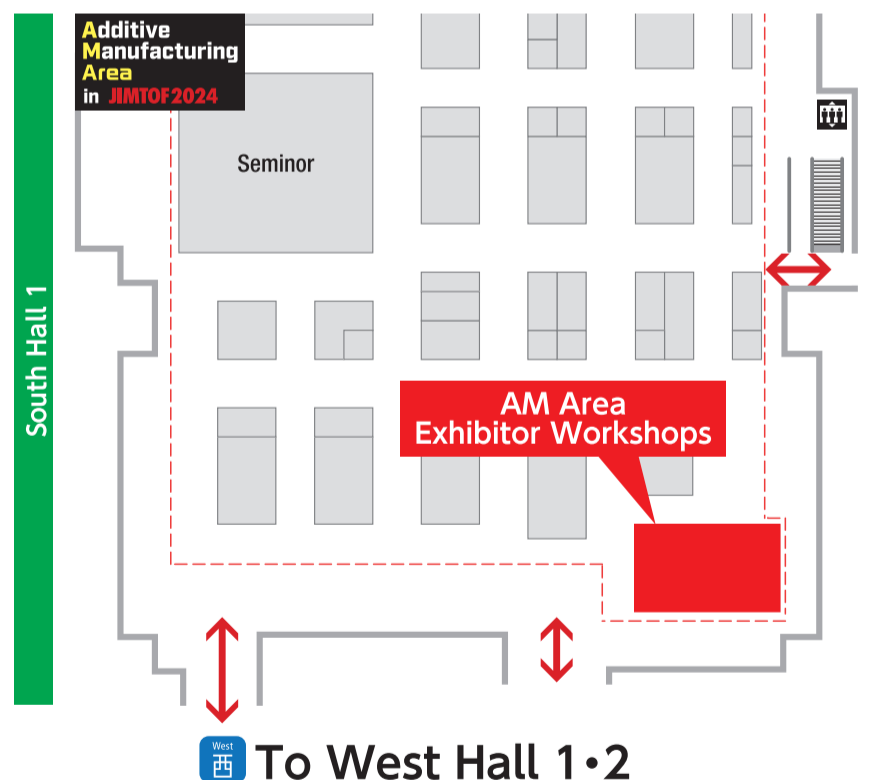
South Hall 1,  
Exhibitor Workshops Venue

**J** Japanese (including interpretation) **E** English

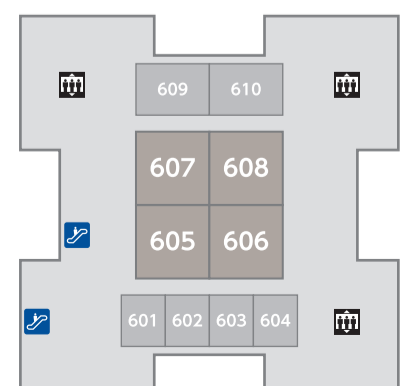
November 8 (Fri.)	11:00   12:00	605 Conference Room	D1-① S2001 FANUC CORPORATION ①Solve labor shortages with FANUC robots! Machining automation using easy to use collaborative robots even for first-time users ②Case Study of Data Improvement at FANUC Factory Lecturer:①Masahiro Morioka ②Yoshihito Sasuga	J
		606 Conference Room	D1-② S2002 Mitsubishi Electric Coporation AI Diagnostic Tool for CNC Machining [NC MachiningAID] ~The Fully Automated Line Aimed by Mitsubishi Electric CNC~ Lecturer:Tetsushi Ishida	J
		607 Conference Room	D1-③ E7132 Blum-Novotest K.K. (+81)-568-74-5311 The imminent reality of the manufacturing site. Start on-machine measurement and automation. Lecturer:Ryo Takamura	J
		608 Conference Room	D1-④ E5019 Beckhoff Automation K.K. Monitoring research for cutting process and research cases at German research institutes by using PC-based CNC Lecturer:Junichi Kouguchi	J
	13:00   14:00	605 Conference Room	D2-① E3034 MAKINO MILLING MACHINE CO.,LTD. Proposal of high value-added die & mold machining realized by the next generation V series Lecturer:Mishima Takahiro	J
		606 Conference Room	D2-② E1072 AMADA CO.,LTD. The next-generation manufacturing pioneered by AMADA's laser welding solution Lecturer:Harumi Nishiyama	J
		607 Conference Room	D2-③ E2043 SHIBAURA MACHINE CO., LTD. New Machining Technology for Manufacturing, ~What is Friction Stir Welding (FSW)?~ Lecturer:Ken Ito	J
		608 Conference Room	D2-④ W2021 NIKKEN KOSAKUSHO WORKS, LTD. Tooling & Rotary Table : Nikken unique Dual-technology Lecturer:Takahiro Kawata	J
	15:00   16:00	605 Conference Room	D3-① E5034 CITIZEN MACHINERY CO., LTD. Support functions to reduce customers' business task. Lecturer:Application Development Section, Development Dept. Manager Kazuyuki Izumi	J
		606 Conference Room	D3-② W1043 DIJET INDUSTRIAL CO., LTD (+81)-6-6794-0160 About deep digging processing technology by carbide shank arbor and high-performance aluminum indexable tools Lecturer:Yoshihide Kurashiki	J
		607 Conference Room	D3-③ W1015 UNION TOOL CO. (+81)-3-5493-1023 Tips for Optimizing Milling Experience : High Precision and Efficient Milling Techniques with Our Latest End Mills Lecturer:Watanabe Masahide Manager Milling Tool Development Section 2nd Tool Engineering Department	J
		608 Conference Room	D3-④ W1071 Kobe Steel, Ltd. PVD coating technology for Cutting and Molding tools Lecturer:Kohei Otsuka	J
November 9 (Sat.)	13:00   14:00	605 Conference Room	E2-① E4056 Data Design Co., Ltd. (+81)-52-953-1588 Proposal for improvement of machined surface quality by cutting force analysis software "Toolzyer" Lecturer:Taiki Izawa	J
		605 Conference Room	E3-① E5022 Computer Engineering & Consulting Ltd. (+81)-3-5789-2455 Proposals for utilizing digital data to accelerate GX and examples of manufacturing DX initiatives Lecturer:Naoki Ichimura	J
	15:00   16:00	606 Conference Room	E3-② WA019 Ayabo Corporation (+81)-566-71-1060 A Quarter Century of Major Change! The Reach of the Latest Coatings and the Time-Delayed Self-Excited Oscillation Model - Cutting Tools Lecturer:Ayabo Corporation Katsushi Fujii, Naoyuki Hirata / OITA UNIVERSITY Takahiro Ryu / KAGOSHIMA UNIVERSITY Kenichiro Matsuzaki	J
		607 Conference Room	E3-③ E5042 CGTech (+81)-3-5911-4688 Fllexible Machining by CAM-POST Lecturer:TODA RACING Co.,Ltd. Shigeru Nakagawa	J
608 Conference Room	E3-④ AM103 Kanematsu KGK Corp. (+81)-3-5579-5863 Introduction for JINGDIAO- Precision CNC machine tool Examples of Precision Machining Solutions Lecturer:New Business Promotion HQ New Business Promotion Dept. New Business Development and Technical Sales Support Office	J		

November 6 (wed.)	11:30   12:30	H2 AM132 NIDEC MACHINE TOOL CORPORATION The Latest Application Examples of 3D metal additive manufacturing machines (powder DED / Binder jetting) Lecturer:Yuiko Egawa	J
	13:15   14:15	H3 AM105 JAPAN 3D PRINTER Co.,Ltd Factory Floor 3D Printing in Carbon Fiber & Metal Materials Lecturer:Thomas Pang	J
November 7 (Thu.)	11:30   12:30	I2 AM133 SK Fine Co.,Ltd. (+81)-77-566-1201 Ceramic 3D printer business introduction and future prospects Lecturer:Tadakatsu Asano	J
	13:15   14:15	I3 S2002 Mitsubishi Electric Coporation Introducing efforts towards practical application in the manufacturing field Lecturer:Satoshi Hattori	J
	15:00   16:00	I4 AM117 3D Systems Japan (+81)-3-5798-2500 3D SYSTEMS New Products Introduction Lecturer:Takao Namiki	J
November 8 (Fri.)	11:30   12:30	J2 E4015 Sodick Co., Ltd. (+81)-45-330-4816 Application Examples and Proprietary Technologies for Die-Casting Molds Created by Sodick Metal 3D Printer Lecturer:Nahoko TAWARA	J
	13:15   14:15	J3 E7024 Volume Graphics Co., Ltd. Hexagon's Additive Manufacturing Solutions Lecturer:Shuhei Kinoshita	J

## AM Area Exhibitor Workshop



Conference Tower 6F  
Conference Room  
605-608





# アカデミックエリア 南4ホールに新設

Academic Area Newly established in South Hall 4

南4ホールに「アカデミックエリア」が新設された。学生のモノづくり業界への興味・関心を高める狙い。また南1・2ホールには「Additive Manufacturing Area in JIMTOF2024(AMエリア)」が設置されている。

The “Academic Area” has been newly established in South Hall 4 with the aim of increasing students’ interest in manufacturing. An “Additive Manufacturing Area in JIMTOF 2024 (the AM area)” has also been set up in South Halls 1 and 2.

## 若者にモノづくりの魅力アピール

モノづくり業界では人手不足・若手不足が叫ばれており、業界全体でモノづくりの魅力を若者にアピールすることの重要性が高まっている。アカデミックエリアには出展企業の総務・人事担当者と直接交流できる「キャリアマッチングスクエア」が設置され、22社が出展、就活に役立つ情報を提供する。同コーナーの受け付けでは、学生限定でドーナツを無料配布している。

企画展示「マシンツール・インフィニティ」では、①汎用旋盤やCAMシミュレーターによるモノづくり体験②免震車による免震体験③電気自動車（EV）のプロトタイプ展示④企業のモノづくりプロジェクトにおける秘話紹介の四つのコンテンツを楽しめる。

また国内の大学や研究機関が53のテーマで研究発表する「IMEC(国際工作機械技術者会議)ポスターセッション」が開催されているほか、オープンカフェ内の多目的ステージでは業界のトップランナーによるミニセミナーやYouTuberによるトークショーなどが行われる。

## 市場拡大進むAMの最新技術が集結

前回に続き、南1・2ホールにはAMエリアが設置されている。3Dデータモデルを基に金属や樹脂などを積み重ねることで形状を作る積層造形(AM)技術は、航空宇宙分野や医療分野向けの部品製造などで活用が進んでおり、今後も市場の成長が見込まれる。

会場では技術研究組合次世代3D積層造形技術総合開発機構(TRAFAM)による特別展示「ここまで来た!国産3Dプリンタの社会実装」が行われている。



四つのコンテンツを楽しめる企画展示「マシンツール・インフィニティ」  
Special exhibition “Machine Tool Infinity” offers four types of content



## Communicating the appeal of manufacturing to young people

In the manufacturing industry, there is a shortage of labor and young people, increasing the importance of communicating the appeal of the entire manufacturing industry to young people. The Academic Area includes a “Career Matching Square” with 22 companies setting up booths for students to talk directly to exhibitors’ general affairs and HR personnels, providing useful information for job hunting. Free donuts will be given to students only at the Square’s reception desk.

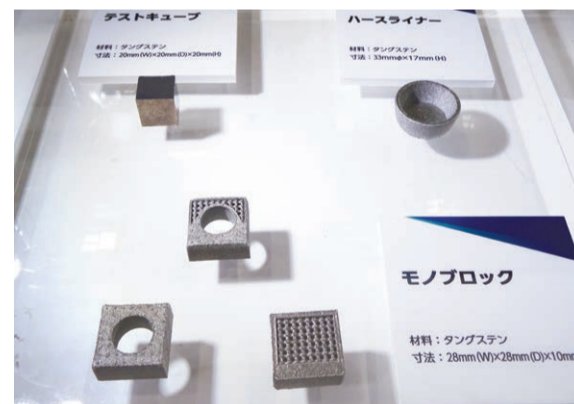
Visitors to the special exhibition “Machine Tool Infinity” can enjoy four types of content: (1) hands-on manufacturing experiences with multi-purpose lathes and CAM simulators; (2) seismic isolation experiences with a seismic isolation experience vehicle; (3) exhibits of EV prototypes; and (4) behind-the-scenes stories of companies’ manufacturing projects.

There is also an “International Machine Tool Engineers’ Conference (IMEC) Poster Session” for Japanese universities and research institutions to present their research on 53 themes, and mini seminars by industry leaders as well as talk shows by YouTubers that will take place on the multi-purpose stage inside the open café.

## Gathering the latest technologies in the rapidly expanding market of AM

Just like last time, the AM area has been set up in South Halls 1 and 2. Additive manufacturing (AM) technologies form shapes by layering metal and plastic, based on 3D models. Their applications are expanding in areas such as the manufacturing of aerospace and medical parts, and the market is expected to continue growing.

The AM Area also has a special display “The latest status of social implementation of Japanese 3D printers” by the Technology Research Association for Future Additive Manufacturing (TRAFAM).



南1・2ホールではAMの最新技術が披露されている  
(日本電子ブース)  
South Halls 1 and 2 display state-of-the-art AM technologies  
(JEOL booth)

**THK**  
The Mark of Linear Motion

## 最先端の自動化

— 期待を超える 革新への“動き” —

私たち THK は機械の直線運動部のころがり化を独自の技術により実現し、「直線運動案内」として世界で初めて製品化。

いつの時代も、蓄積したノウハウで最先端の自動化に貢献してきました。

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