2025 AWS NATIONAL AWARD RECOGNITION CEREMONY

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The AWS Awards Recognition Ceremony of the American Welding Society serves an important function. It recognizes the men and women in the industrial, education, and research communities who have made distinctive contributions to advance the science, technology, and application of welding and allied processes, including joining, brazing, soldering, cutting and thermal spraying. This booklet describes the various awards, listing recipients for the past fifteen years along with a brief biography of this year's recipients. A complete listing of awards and their recipients may be obtained from the AWS website at **aws.org/about/awards/** or by scanning the QR code below.

SCAN FOR A FULL LIST OF AWARDS AND RECIPIENTS

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AWS NATIONAL AWARDS 2025

AWS NATIONAL AWARD WINNERS

COMFORT A. ADAMS LECTURE AWARD

The American Welding Society sponsors this lectureship, which was created in the memory of Dr. Comfort A. Adams, its founder and first President.

The award is presented to an individual who is an outstanding scientist or engineer for a lecture describing a new or distinctive development in the field of welding. The lecture is presented during the AWS Welding Show and Convention.

Recipients of award:

Cerjak, H. (2010)
Grong, O. (2011)
Kou, S. (2012)
DuPont, J. N. (2013)
Goldak, J. (2014)
Robino, C. V. (2015)
Vianco, P.T. (2016)
Babu, S. S. (2017)
Nishimoto, K. (2018)
Dong, P. (2019)
No presentation (2020)
Cross, C. E. (2021)
Koseki, T. (2022)
Norrish, J. (2023)
Zhou, Y. N. (2024)

"INTEGRATED COMPUTATIONAL WELDING ENGINEERING - IN PURSUIT OF PERFECT WELDS"

DR. ZHILI FENG leads the Materials Joining Group and is a Distinguished R&D Staff of Oak Ridge National Laboratory. He manages a multi-disciplinary team conducting both fundamental and applied R&D and technology innovations related to materials joining and allied materials manufacturing processes, for automotive, nuclear energy, fossil energy, hydrogen and renewable energy, and defense applications. A Fellow of AWS and IIW, Dr. Feng's research covers various aspects of thermal-mechanical-metallurgical behaviors of materials in materials processing. He is recognized for his work in advancing the science and technology of materials joining in a number of important areas such as integrated computational welding engineering (ICWE), application of machine learning and AI for welding process control and automation, friction stir welding and processing, proactive weld residual stress control and management, novel solid-state joining processes of dissimilar metals, and application of advanced neutron and synchrotron scattering tools to study the fundamentals of weld microstructure evolution and effects on weld properties and performance of welded structures. He is also a Joint Faculty Professor at the University of Tennessee, Knoxville. He obtained his BS and MS from Tsinghua University, and PhD from The Ohio State University in Welding Engineering.

AWS NATIONAL AWARD WINNERS

ADAMS MEMORIAL MEMBERSHIP AWARD

This award is sponsored by the American Welding Society and recognizes educators for outstanding teaching activities in their undergraduate and postgraduate engineering institutions.

Recipients of award:

Tsai, H-L (2010)
Chin, B. A. (2011)
Babu, S. S. (2012)
Warke, R. W. (2013)
Mendez, P. F. (2014)
Palmer, T. A. (2015)
Zhang, W. (2016)
Phillips, D. H. (2017)
Zhou, Y. N. (2018)
Alexandrov, B. (2019
Gerlich, A. (2019)
Hardesty, J. B. (2020)
Miles, M. (2021)
Andersson, J. (2022)
Madigan, R. B. (2023)
Yu, Z. (2024)

No presentation this year.

AWS NATIONAL AWARD WINNERS

HOWARD E. ADKINS MEMORIAL INSTRUCTOR MEMBERSHIP AWARD

This award is sponsored by the Adkins family and recognizes instructors for their outstanding teaching accomplishments at the high school, trade school, technical institute, and community college levels.

Recipients of award:

Carney, J. N. (2010)
Gammill, G. L. (2010)
Hutchison, R. J. (2011)
Gill, T. L. (2012)
Sutherland, S. H. (2012)
Siepert, G. (2013)
Polanin, W. R. (2014)
Mitchell, J. L. (2015)
Smith, S. C. (2016)
Otto, B. (2016)
Hughes, H. (2017)
King, J. L. (2017)
Sumal, A. A. S. (2018)
Vann, R. L. (2018)
Knapp, J. (2019)
No presentation (2020)
No presentation (2021)
Emery, R. (2022)
Jones, R. R. (2023)
Camacho, B. (2024)

DR. TRAVIS JUMPER began his teaching career in 2006 at Jacksonville High School in Jacksonville, Illinois, after completing a BS in Agricultural Systems from Southern Illinois University at Carbondale. He was one of three agricultural educators and taught primarily welding, machine metalworking, electricity, and electronics; along with his teaching responsibilities, he was also an advisor for the FFA. In the evenings, Dr. Jumper spent time teaching as an adjunct welding instructor at Lincoln Land Community College in Springfield, Illinois. Dr. Jumper returned to SIUC in 2010 to complete an MS in Workforce Development and Education. Dr. Jumper researched the Cost-Effectiveness of Implementing Virtual Reality Welding Simulators into Agricultural Mechanics.

In 2012, Dr. Jumper was hired at Lewis and Clark Community College in Godfrey, Illinois, to start a welding technology program. In 2021, Dr. Jumper redeveloped the welding technology program and started the first competency-based education welding technology program in Illinois. In the Summer of 2023, Dr. Jumper completed his Ph D in Agricultural Education and Studies at Iowa State University in Ames, Iowa. Dr. Jumper's dissertation evaluated potential barriers to implementing augmented reality welding simulators into the career and technical education (CTE) welding curriculum. The three studies Dr. Jumper completed were exploring the consumable cost of career and technical education welding technology programs, investing in the benefits of integrating augmented reality simulators into career and technical education welding training, exploring the benefits and barriers to implementing augmented reality (AR) into school-based agriculture education (SBAE) welding curriculum.

AWS NATIONAL AWARD WINNERS

KENNETH L. BROWN MEMORIAL SAFETY AND HEALTH AWARD

This award is sponsored by the American Welding Society to recognize individuals for promoting welding safety and health through research, educational activities, development of safe practices, or dissemination of information through publications or other means, thereby fostering public safety awareness and welfare.

Recipients of award:

Palmer, W. (2011)
Fink, D. A. (2012)
No presentation (2013)
Costa, L. (2014)
No presentation (2015)
No presentation (2016)
No presentation (2017)
Clark, D. (2018)
No presentation (2019)
No presentation (2020)
No presentation (2021)
Petkovsek, J. (2022)
No presentation (2023)
No presentation (2024)

DOUGLAS N. DUNBAR
Retired Health and Product Evaluation Manager from Lincoln Electric.

AWS NATIONAL AWARD WINNERS

ROBERT J. CONKLING MEMORIAL AWARD

This award is named in memory of Robert J. Conkling. He encouraged young people to enter the welding industry and contributed generously of his time and talents to the development of the AWS Welding Show and Convention.

This award is sponsored by the American Welding Society and is presented to the schools that trained the two first-place winners in the national SkillsUSA welding -competition.

2025 SkillsUSA Championships Gold Medalists Schools

First Place — High School

West Side High School
Greers Ferry, Arkansas

First Place — Post Secondary

Utah State University Eastern
Price, Utah

AWS NATIONAL AWARD WINNERS

2024 PAPER | A. F. DAVIS SILVER MEDAL AWARD

This award is endowed by the late A. F. Davis, former Vice President and Secretary of The Lincoln Electric Company. It is awarded to the authors of papers published in the *Welding Journal* during the previous calendar year that represent the best contributions to the progress of welding in the categories of 1) Machine Design, 2) Maintenance and Surfacing, 3) Structural Design, and 4) Skills Development, Education and Training

As of 2023 an update to the following categories was implemented:

(l) Design of Welding Processes, machines, and equipment
(2) Maintenance, Repair and Surfacing
(3) Design of welded structures and equipment
(4) Designs that improve skills development, education, and training

Recipients of award:

Huang, Y. (1) (2011)
Zhang, Y. (1) (2011)
Pargeter, R. J. (2) (2011)
Wright, M. D. (2) (2011)
Korinko, P. S. (2) (2012)
Adams, T. M. (2) (2012)
Malene, S. H. (2) (2012)
Gill, S. C. D. (2) (2012)
Smugeresky, J. (2) (2012)
Fan, Y. (1) (2013)
Yang, C. (1) (2013)
Lin, S. (1) (2013)
Fan, C. (1) (2013)
Liu, W. (1) (2013)
Zhou, Y. (2) (2013)
Yang, Y. L. (2) (2013)
Li, D. (2) (2013)
Yang, J. (2) (2013)
Jiang, Y. W. (2) (2013)
Ren, X. J. (2) (2013)
Yang, Q. X. (2) (2013)
Radakovic, D. J. (3) (2013)
Tumuluru, M. (3) (2013)
Xiao, J. (1) (2014)
Zhang, G. (1) (2014)
Wu, L. (1) (2014)
Chen, S. (1) (2014)
Zhang, Y. (1) (2014)
Aschemeier, U. (2) (2014)
Peters, K. (2) (2014)
Zhang, Y (1) (2015)
Shao, Y (1) (2015)
Ramirez, J. E. (2) (2015)
Sigler, D. R. (3) (2015)
Vanimisetti, S. K. (3) (2015)
Liu, D. S. (2) (2016)
Wei, P. (2) (2016)
Chen, S. J. (1) (2017)
Xiao, J. (1) (2017)
Zhang, G. (1) (2017)
Zhang, Y. (1) (2017)
Chai, X. (2) (2017)
Kou, S. (2) (2017)
Landwehr, D. (2) (2017)
Yu, P. (2) (2017)
Achuthan, A. (3) (2017)
Aidun, D. K. (3) (2017)
Bunn, J. R. (3) (2017)
Coules, H. E. (3) (2017)
Eisazadeh, H. (3) (2017)
Goldak, J. A. (3) (2017)
Chen, J. (1) (2018)
Wu, S. (1) (2018)
Zhang, K. (1) (2018)
Zhang, Y. (1) (2018)
Gao, Y. H. (2) (2018)
Liu, Z. X. (2) (2018)
Lu, L. (2) (2018)
Wang, P. C. (2) (2018)
Zhi, Q. (2) (2018)
Frostevarg, J. (1) (2019)
Kaplan, A. (1) (2019)
Näsström, J. (1) (2019)
Anderson, N. (2) (2019)
Kannan, R. (2) (2019)
Li, L. (2) (2019)
Liu, D. (2) (2019)
Long, W. (2) (2019)
Wei, P. (2) (2019)
Wu, M. (2) (2019)
Aidun, D. (3) (2019)
Bunn, J. R. (3) (2019)
Cornwell, P. (3) (2019)
Eisazadeh, H. (3) (2019)
Payzant, E. A. (3) (2019)
Feng, J. (1) (2020)
Sun, Q. (1) (2020)
Teng, J. (1) (2020)
Wang, J. (1) (2020)
Duch, J. (2) (2020)
DuPont, J. N. (2) (2020)
Brochu, M. (3) (2020)
Chekir, N. (3) (2020)
Sixsmith, JJ. (3) (2020)
Tollett, R. (3) (2020)
Carlson, B. E. (1) (2021)
Haselhuhn, A. (1) (2021)
Hu, S. (1) (2021)
Li, Y. (1) (2021)
Lin, Z. (1) (2021)
Ma, Y. (1) (2021)
Han, Y. (2) (2021)
Jia, C. (2) (2021)

AWS NATIONAL AWARD WINNERS

2024 PAPER | A. F. DAVIS SILVER MEDAL AWARD *(cont)*

Wu, CS. (2) (2021)
Wu, J. (2) (2021)
Yang, Q. (2) (2021)
Zhang, Y. (2) (2021)
Bunn, J. (3) (2021)
Feng, Z. (3) (2021)
Kolbus, L. (3) (2021)
Liu, S. (3) (2021)
Wang, Z. (3) (2021)
Wu, X. (3) (2021)
Yu, Z. (3) (2021)
Assuncao, H. L. (1) (2022)
Bracarense, A.Q. (1) (2022)
Pereira Pessoa, E. C. (1) (2022)
Rizzo, F. (1) (2022)
Rocha dos Santos, V. (1) (2022)
Gould, J. E. (1) (2022)
Lester, P. (1) (2022)
Lindamood, L. (1) (2022)
Malpica, J. (1) (2022)
Marinho, R. R. () (2022)
Carlson, B. E. (3) (2022)
Chen, J. (3) (2022)
Feng, Z. (3) (2022)
Huang, H. (3) (2022)
Wang, H-P. (3) (2022)
Ayoade, A. A. (1) (2023)
Steele, J. P.H. (1) (2023)
Bai, J. (1) (2023)
Lin, Z. (1) (2023)
Yang, S. (1) (2023)
Yin, Q. (1) (2023)
Kim, Y. S. (1) (2024)
Cho, S. M. (1) (2024)
Cao, Y. (1) (2024)
Hu, S. (1) (2024)
Wang, Z. (1) (2024)
Zou,. S. (1) (2024)
Wang, J. (2) (2024)
Chen, Y. (2) (2024)
Liu, J. (2) (2024)
Zhang, T. (2) (2024)
Yan. C. (2) (2024)
Feng, Y. (2) (2024)
Liu, C. (2) (2024)
Cheepu, M. M. (1) (2024)
Baek,H. (1) (2024)

AWS NATIONAL AWARD WINNERS

DESIGN OF WELDING PROCESSES, MACHINES, AND EQUIPMENT (I)

"MONITORING WELDING TORCH POSITION AND POSTURE USING REVERSED ELECTRODE IMAGES – PART I: ESTABLISHMENT OF THE REI-TPA MODEL"

PROFESSOR SHANBEN CHEN received his PhD in 1991 from Harbin Institute of Technology, P. R. China. He was awarded the Distinguished Professor position, Cheung Kong Scholar Program* of Ministry of Education of P. R. China & Li Ka Shing Foundation, Hong Kong, and engaged in Shanghai Jiao Tong University, P. R. China since 2000. He is currently the Professor of Intellgentized Robotic Welding Technology Laboratory, School of Material Science and Engineering, Shanghai Jiao Tong University.

Prof. Chen's research interests include intelligentized technologies for welding robot, intelligent control of welding dynamical process, modeling and control of complex systems, hybrid intelligence in intelligentized welding manufacturing systems, robust control of uncertain systems, and relevant ranging in welding automation and advanced welding manufacturing. He is the author or co-author of 10 academic books and more than 300 journal papers. Prof. Chen is the former Chair of Robotics & Automation Committee of Chinese Welding Society (CWS) from 1996 to 2022. He is a Senior member of IEEE since 1995. As the Initiator, he's organized and presided over a series of International Conference on Robotic Welding, Intelligence and Automation (RWIA) every four years since 2002; and organized and presided over a series of the International Workshop on Intelligentized Welding Manufacturing (IWIWM) every two years since 2017. As one of Editors in Chief of the TIWM, Prof. Chen founded "Transactions on Intelligent Welding Manufacturing" (TIWM□at Springer in 2017.

MR. FU YU, Material Engineer, focuses on the field of automated welding technology. He received his bachelor's degree from Jilin University from 2016 to 2020, specializing in Material Forming and Automation Control. He received his master's degree from Shanghai Jiao Tong University from 2020 to 2023, specializing in Material Science and Engineering. His research interests include automated welding system based on molten pool image acquisition and processing, focusing on weld recognition, torch attitude detection and real-time tracking algorithms. His representative paper is "Monitoring Welding Torch Position and Posture Using Reversed Electrode Images".

Currently, Fu Yu works as a R&D engineer at Baoshan Iron & Steel Company Limited (Baosteel), where he is engaged in the technological innovation of industrial welding automation and quality control, and promotes the practical application of smart welding solutions in manufacturing scenarios.

AWS NATIONAL AWARD WINNERS

MAINTENANCE, REPAIR AND SURFACING (II)

"THE EFFECTS OF PREHEATING THE SHIELDING GAS USED IN GAS TUNGSTEN ARC WELDING"

PROFESSOR WAGNER SADE holds a PhD and a master's degree in Materials Engineering from the Thematic Network in Materials Engineering - REDEMAT (UFOP, CETEC, UEMG). He is an Occupational Safety Engineer from the Cândido Mendes University (UCAM RJ) and a Metallurgical Engineer from the Military Institute of Engineering (IME). He has a Technical Course in Chemical Analysis Laboratory Assistant. He is a Professor at CEFET MG (Federal Center for Technological Education of Minas Gerais) of the Mechanical Engineering Department, Campus II, Belo Horizonte. He has experience in Materials and Metallurgical Engineering, with emphasis on Surface Treatments and Modifications, working mainly on the following topics: manufacturing processes, mechanical forming, welding, casting, corrosion, materials testing, failure analysis in copper pipes, blast furnace gas regenerator, thermal, chemical and mechanical treatments of rephosphorized steels, solar energy, solar absorption, renewable energy, Ni-NiO coatings on aluminum, wear, tribology, hardness and chemical Ni-P coatings on steel. He has experience in Occupational Safety Engineering, having worked in the teaching area and in the infrastructure of IFMG (Federal Institute of Minas Gerais) in Ouro Branco.

DR. NILO NOGUEIRA DA SILVA currently serves in the Research and Development department at Powermig – A Lincoln Electric Company. Additionally, he is a Professor at the Pontifical Catholic University of Minas Gerais. He completed his post-doctorate at the University of São Paulo in Metallurgical Engineering, where he was part of the Welding and Joining Research Group, focusing on additive manufacturing. He holds a PhD in Mechanical Engineering from the Federal University of Minas Gerais, specializing in Welding Physics, and a master's degree in Materials Engineering from the Federal University of Ouro Preto, with an emphasis on metal forming and processing. He earned his undergraduate degree in Physics from the Federal University of Minas Gerais.

He has worked as a Specialist Researcher in Additive Manufacturing at the Nuclear Technology Development Center and the Innovation and Technology Center, concentrating on Arc Deposition Additive Manufacturing. Dr. Nogueira da Silva possess extensive experience in welding and materials science, with a strong background in Manufacturing Processes, Welding Physics, Phase Transformation Metallurgy, and Mechanical Forming Processes, as well as Thin Films and Surface Coatings. Additionally, he is an expert in computational simulation applied to welding, manufacturing processes, and additive manufacturing. His expertise extends to materials characterization, project management, and research and development (R&D).

AWS NATIONAL AWARD WINNERS

DISTINGUISHED WELDER AWARD

This award is sponsored by the American Welding Society and is presented to an individual(s) who has exceptional welding skills and experiences related to all aspects of the art of welding.

Recipients of award:

Samanich, R. (2012)
Tichelar, C. W. (2012)
Bane, G. F. (2013)
Sanchez, A. (2013)
Collier, W. (2014)
Duffield, A. (2014)
Glidewell, D. S. (2014)
Kincaid, D. (2014)
Thomas, D. (2014)
Elsloo, D. (2015)
Blom, J. D. (2016)
No presentation (2017)
Schmerl, J. (2018)
Vachon, R. G. (2018)
No presentation (2019)
No presentation (2020)
Kustra, G. A. (2021)
Gibbs, G. (2022)
No presentation (2023)
Mendoza, J. (2024)
Roland, T. (2024)

No presentation this year.

AWS NATIONAL AWARD WINNERS

EXCELLENCE IN ROBOTIC AND AUTOMATED ARC WELDING AWARD

This award is sponsored by the American Welding Society to recognize significant individual achievements in the area of robotic arc welding. This work can include things such as the introduction of new technologies, establishment of the proper infrastructure (training, service, etc.) to enable success and any other activity having significantly improved the state of a company and/or industry. Since 2011, it has been awarded every other year.

Recipients of award:

Boillot, J-P (2011)
No presentation (2012)
Anderson, C. T. (2013)
No presentation (2014)
Noruk, J. S. (2015)
No presentation (2016)
Rhoda, D. P. (2017)
No presentation (2018)
Mangold Jr., V. L. (2019)
No presentation (2020)
No presentation (2021)
Rasmussen, C. (2022)
No presentation (2023)
Gilgenbach, K. (2024)

No presentation this year.

AWS NATIONAL AWARD WINNERS

DALTON E. HAMILTON MEMORIAL CWI OF THE YEAR AWARD

This award is sponsored by the American Welding Society in memory of Dalton E. Hamilton, who contributed greatly to the success of the Society's Certified Welding programs. This award recognizes AWS members participating in the SCWI/CWI programs whose inspection, Society and civic activities have enhanced public awareness of the Society and the CWI program or who have otherwise made an outstanding contribution to the science of welding inspection.

Recipients of award:

Wright, D. (2010)
Waite, R. F. (2011)
Alston, J. (2012)
No presentation (2013)
No presentation (2014)
No Presentation (2015)
Griffith, B. (2016)
Twitty, D. L. (2017)
Pariseau, J. (2018)
Redding, J. (2019)
Corbin, J. D. (2020)
No presentation (2021)
No presentation (2022)
Barrett, S. (2023)
Peterson, D. (2024)

No presentation this year.

AWS NATIONAL AWARD WINNERS

2024 PAPER | W. H. HOBART MEMORIAL AWARD

This award is presented in memory of William H. Hobart, Sr., and is sponsored by Hobart Brothers Company. It is awarded to the authors of the paper published in the *Welding Journal* during the previous calendar year that describes the best contribution to pipe welding, the structural use of pipe or similar applications, excluding the manufacture of pipe.

Recipients of award:

Onsøien, M. I. (2010)
M'Hamdi, M. (2010)
Mo, Asbjørn (2010)
Shi, S. (2011)
Lippold, J. C. (2011)
Ramirez, J. E. (2011)
Drexler, E. (2012)
Darcis, P. P. (2012)
McCowan, C. N. (2012)
Sowards, J. W. (2012)
McColskey, J. D. (2012)
Siewert, T. A. (2012)
Li, X. R. (2013)
Shao, Z. (2013)
Zhang, Y. (2013)
Silwal, B. (2014)
Li, L. (2014)
Deceuster, A. (2014)
Griffiths, B. (2014)
Bortsov, A (2015)
Frantov, I. I. (2015)
Velichko, A. A. (2015)
Utkin, I. Y. (2015)
Beidokhti, B. (2016)
Pouriamanesh, R. (2016)
Li, L. (2017)
Wang, Y. (2017)
No presentation (2018)
Anderson, T. (2019)
Fairchild, D. (2019)
Jin, H. (2019)
Ma, N. (2019)
Wasson, A. (2019)
Yue, X. (2019)
Parker, J. (2020)
Siefert, J. A. (2020)
Thomson, R. (2020)
Anderson, N. (2021)
Arafin, M. (2021)
Collins, L. (2021)
Guo, L. (2021)
Kannan, R. (2021)
Li, L. (2021)
Rashid, M. (2021)
Kumar Dwivedi, D. (2022)
Kulkarni, A. (2022)
Vasudevan M. (2022)
Ustundag, O. (2023)
Bakir, N. (2023)
Gook, S. (2023)
Gumenyuk, A. (2023)
Rethmeier, M. (2023)
Li, L. (2024)
Saini, N. (2024)
Choudhury, S. D. (2024)
Chhibber, R. (2024)
Khan, W. N. (2024)
Wang, Y. (2024)
Kopparthi, R. (2024)

"CHARACTERIZATION OF AS-WELDED MICROSTRUCTURE IN A P91 STEEL"

DR. CLAUDIO ARIEL DANÓN currently works at the National Atomic Energy Commission (CNEA), Argentina. Dr. Danon's research is in Materials Engineering.

AWS NATIONAL AWARD WINNERS

DR. MARÍA INÉS LUPPO earned her PhD in physics from the University of Buenos Aires, Argentina, with a postdoctoral position at EPFL-CRPP, Fusion Technology Materials Group, Paul Scherrer Institute, Switzerland. Currently she is a researcher at the National Atomic Energy Commission (CNEA), Argentina.

Her professional activities include the microstructural and mechanical characterization of structural materials for nuclear applications. She has studied low-carbon steels and austenitic stainless steel welded joints using techniques such as microstructural characterization, hydrogen microprint, hydrogen permeation, and fracture testing. She has worked on the characterization of irradiated iron-based alloys and their correlation with mechanical behavior. Her expertise also includes the analysis of hydrides in Ti and Zr alloys using transmission electron microscopy, as well as the microstructural modification of titanium through heat treatments and thermohydrogenating processes. She has contributed to the development of porous TiZrNb alloys and to the study of 9Cr1Mo steels (P9, P91, and P92), including welded joints under various thermal cycles. She has investigated the impact of hydride blisters on the structural integrity of spent fuel cladding.

MSC ANA LUCÍA MARZOCCA is an Industrial Engineer with a master's degree in Science and Technology of Materials. She is currently a Data Analyst in the Emerging Technologies Department at the National Atomic Energy Commission (CNEA) in Argentina, where she develops automation solutions and process improvements in microscopy imaging of various materials for characterization and measurements. She has expertise in Machine Learning, and various data analysis tools, including Python, Pandas, and OpenCV.

Previously, she worked as a researcher in electron microscopy at CNEA, specializing in Scanning Electron Microscopy (SEM) and Transmission Electron Microscopy (TEM) for material characterization. She also gained experience as a research fellow in metallurgy, focusing on steel welding processes, and as a quality coordinator in the manufacturing industry. Ana Lucía has published multiple research papers and presented at international conferences on metallurgy and materials. In addition to her professional experience, she has pursued further training in Machine Learning, Big Data, and programming.

DR.-ING. FLAVIO SOLDERA studied Mechanical Engineering at the Comahue National University in Argentina and received his degree in 1997. In 2005 he received his PhD in Materials Science and Engineering from the Saarland University in Saarbrücken (Germany), being supported by a scholarship of the German Academic Exchange Service (DAAD).

His scientific interests include advanced materials for electrical application, 3D analysis of micro / nano structures, and electron microscopy and focused ion beam applications.

Since 1998 he has been affiliated with the Saarland University, having co-authored more than 100 per-review publications. Since 2005 he has coordinated international study and research programs in the field of Materials Science and Engineering and since 2008 is the managing director of the European School of Materials (EUSMAT). Several projects of the European Commission, the DAAD as well as the German French University are part of the EUSMAT portfolio. Since 2017 he has also been a part-time researcher at the Steinbeis Materials Research Center Saar.

AWS NATIONAL AWARD WINNERS

2024 PAPER | W. H. HOBART MEMORIAL AWARD *(cont)*

"CHARACTERIZATION OF AS-WELDED MICROSTRUCTURE IN A P91 STEEL"

DR. MONICA ZALAZAR is an Industrial Engineer with a Chemical Focus. She received her PhD in Microalloyed Steel Welding Engineering and is also a Level III Welding Inspector (IRAM IAS U 500 169 Standard). She has been a Professor of Welding Materials and Metallurgy at the National University of Comahue and Technical Director of the Metallography and Welding Laboratory for 40 years. She has published numerous articles in scientific journals, presented at conferences, and has supervised undergraduate and graduate theses. Her expertise is in materials studies and welding. She is currently a consulting professor at UNCO and an independent consultant.

AWS NATIONAL AWARD WINNERS

HONORARY MEMBER AWARD

This award is sponsored by the American Welding Society and is presented to a person of acknowledged eminence in the welding profession or who is credited with exceptional accomplishments in the industry.

Recipients of award:

Lipphardt, E.C. (2010)
Dilthey, U. (2011)
DeRocco, E. S. (2012)
McNelly, J. M. (2012)
Bileca, M. (2013)
Alonso, Jr., O. (2013)
Andringa, M. V. (2014)
Yevick, E. G. (2014)
Feng, Z (2015)
White, T. J. (2015)
Kou, S. (2016)
Purvis, R. F. (2016)
Cook, M. C. (2017)
Ruof, W. (2017)
DuPont, J. N. (2018)
No presentation (2019)
Allford, D. (2020)
Barbie the Welder (2020)
Zhou, Y. N. (2021)
Ripple, R. (2022)
Zhang, H. (2023)
Nangle, D. J. (2024)

CONSUELO POLAND LOCKHART is the Executive Director and Founder of the Latinas Welding Guild, a nonprofit she launched in 2017 to empower women and marginalized communities through welding and trades education. Born in Guatemala and raised in Traverse City, Michigan, Consuelo holds a BFA in Functional Art from Kendall College of Art and Design and a welding/fabrication certificate from GRCC. Her professional journey has been shaped by her experiences navigating exclusion in male-dominated industries, fueling her mission to build inclusive, supportive pathways for others.

Since relocating to Indianapolis in 2016, she has led multiple community-focused initiatives, including serving as Director of RUCKUS Makerspace and later becoming Executive Director of Project Azul. Her work has expanded training opportunities across trades and forged partnerships with employers, schools, and civic organizations. She also serves on several committees and boards, including mayoral appointments and national welding advisory boards. Her accolades include the Indiana Civil Rights Commission's Face of the Future Award and the Indiana Commission for Women's Trailblazer Award. Through her work, Consuelo continues to advance equity, workforce development, and creative expression in the trades.

AWS NATIONAL AWARD WINNERS

INTERNATIONAL MERITORIOUS AWARD

This award is given in recognition of the individual's significant contributions to the worldwide welding industry. This award reflects "service to the international welding community" in the broadest terms.

Recipients of award:

Ahrens, C. (2010)
Liu, S. (2010)
Mustaleski, Jr., T. J. (2010)
Ziegenfuss, H. G. (2010)
Bernasek, M. (2011)
Miglietti, W. (2012)
Middeldorf, K. (2012)
Scotchmer, N. (2013)
Diez, F. M. (2014)
Mukherjee, A. K. (2015)
Ymker, K. (2016)
Marshall, P. W. (2017)
Shaw, R. E. (2017)
Newell, Jr., W. F. (2018)
Tumuluru, M. (2018)
Hochanadel, P.W. (2019)
Ferraz, R. (2020)
Freeman, R. (2020)
Zhang, Y. (2020)
Miglietti, W. (2021)
Wu, CS. (2021)
Borrelli, J. (2022)
Johnston, M. (2022)
No presentation (2023)
Wood, G. (2024)
Wang, B. (2024)

DR. DOUGLAS J. HAMRE is currently the Research and Development Manager at Apollo-Clad Laser Cladding (A Division of Apollo Machine & Welding Ltd.). Originally from Edmonton, Dr. Hamre attended the Colorado School of Mines in Golden, Colorado where he received a BSc in 2001 and a PhD in 2005 both in the field of Metallurgical and Materials Engineering. He returned to Canada in 2011 to join Apollo-Clad after working in the investment casting industry making Titanium and Superalloy investment castings for aerospace and power generation applications. After several years of laser cladding and high-power CNC laser welding, Dr. Hamre has recently found a passion for the emerging technology of handheld laser welding. In addition to being a Professional Engineer in the province of Alberta, he leads the Apollo R&D team that is currently made up of six engineers, two technologists and two lab technicians.

SOFIA SALAZAR TORRES is a Master of Science Student at the University of Alberta, where she is developing a mathematical model for friction stir welding. She holds a bachelor's degree in Mechanical Engineering from the Universidad de Chile and came to Canada through the ELAP scholarship to pursue her passion for welding research.

Sofia has presented her research at prestigious conferences such as FABTECH, CANWELD, and IIW. Her academic excellence has been recognized with the AWS 2025 International Meritorious Award and the CWB Diversity Award. She also participated in the AWS Leadership Symposium in Miami and has been an active member of the University of Alberta AWS/CWB Student Chapter, serving as President in 2024 and Secretary in 2023. In 2024, she helped fund the Chilean section and was invited to present at the Nashville Section and the 2nd FSW Conference in Berlin.

Outside of academics, Sofia enjoys biking, swimming, and pottery painting. She is passionate about applying her expertise in welding and mechanical engineering to innovative projects and collaborative research.

AWS NATIONAL AWARD WINNERS

WILLIAM IRRGANG MEMORIAL AWARD

This award, sponsored by The Lincoln Electric Company, honors the late William Irrgang. The individual that receives this award has done the most to enhance the American Welding Society's goal of advancing the science and technology of welding over the last five years.

Recipients of award:

Thomas, W. (2010)
Babu, S. S. (2011)
Stockton, K. R. (2012)
Mendez, P. (2013)
Wei, P-S (2014)
Landon, D. J. (2015)
Lienert, T. J. (2016)
Zhang, Y. (2017)
Kou, S. (2018)
Tumuluru, M. (2019)
Newell, Jr., W. F. (2020)
Debroy, T. (2021)
Campbell, R. (2022)
Sperko, W. J. (2023)
Babu, S. S. (2024)

PROF. ANTONIO J. RAMIREZ, a Mechanical Eng. by training, became a Materials Scientist during his graduate, postgraduate, and education/work at São Paulo University and The Ohio State University (OSU). He further developed his scientific career at the Brazilian Synchrotron Light Laboratory and Brazilian Nanotechnology National Laboratory (LNNano) between 2004 and 2015 as a researcher, group leader, industrial research director, and LNNano deputy director, where he focused his scientific work on advanced materials characterization using synchrotron light and electron microscopy.

He joined the Welding Engineering Program at the Materials Science and Engineering Dept. at OSU in 2015, where he teaches welding metallurgy and additive manufacturing. He has led the Manufacturing and Materials Joining Innovation Center (Ma2JIC) since 2016, the U.S. most successful Industry-University Cooperative Research center focused on manufacturing co-sponsored by the National Science Foundation (NSF) with more than 45 industrial members and $62M on research expenditures over 13 years. His current research ranges from joining structural materials to exploring fundamental aspects of bulk and nanostructured materials down to the atomic scale. He works with the technological and fundamental aspects of welding and additive manufacturing metallurgy, weldability, and printability of conventional and advanced materials, including welding in space. He also has vast experience in materials modeling.

AWS NATIONAL AWARD WINNERS

2024 PAPER | CHARLES H. JENNINGS MEMORIAL AWARD

This award is sponsored by the American Welding Society in honor of Charles H. Jennings, who served as AWS President during the 1951–52 year. This award is presented for the most valuable paper written by a college student or faculty representative published in the *Welding Journal* during the previous calendar year.

Recipients of award:

Firouzdor, V. (2010)
Kou, S. (2010)
Moulton, J. A. (2011)
Weckman, D. C. (2011)
Huang, Y. (2012)
Zhang, Y. (2012)
Zhang, W. (2013)
Zhang, Y. (2013)
Wagner, D. C. (2014)
Yang, Y. (2014)
Kou, S. (2014)
Huang, X (2015)
Le Gall, I. (2016)
Mendez, P. F. (2016)
Borle, S. (2016)
Lippold, J. C. (2017)
Wheeling, R. A. (2017)
Debroy, T. (2018)
Liu, T. (2018)
Qui, W. C. (2018)
Wei, H. (2018)
Yang, L. (2018)
Dai, T. (2019)
Lippold, J. (2019)
Aidun, D. (2020)
Goldak, J. (2020)
Martinez, M. (2020)
Nimrouzi, H. (2020)
Pliazhuk, M. (2020)
Reyes, C. (2020)
Kou, S. (2021)
Liu, K. (2021)
Yu, P. (2021)
Aidun, D. (2022)
Hejripour, F. (2022)
Huang, Y. (2023)
Meng, X. (2023)
Xie, Y. (2023)
Armaki, H. G. (2024)
Xia, Y. J. (2024)
Lv, T. L. (2024)
Li, Y. (2024)
Carlson, B. E. (2024)

"SIO2-BEARING FLUXES INDUCED EVOLUTION OF γ COLUMNAR GRAIN SIZE"

CHAO HAN is a PhD candidate in the School of Metallurgy at Northeastern University in Shenyang, China. He obtained his bachelor's degree in 2018 from the School of Materials Science and Engineering at Northeastern University, followed by his master's degree from the School of Metallurgy at the same university in 2020. He is currently pursuing his doctoral degree, which he expects to complete in 2025. His research primarily focuses on: (1) the optimization of weld metal microstructures and weld toughness for marine engineering steels through the design of submerged arc welding fluxes; (2) the application of oxide metallurgy in high heat-input submerged arc welding; and (3) non-equilibrium solidification in the weld pool. As the first author, he has published six SCI papers in leading international journals in welding and metallurgy, such as Welding Journal, Metallurgical and Materials Transactions A, and Metallurgical and Materials Transactions B. Additionally, he holds two granted invention patents. Between 2021 and 2023, he served as a technical advisor for the ASM International Shenyang Chapter.

AWS NATIONAL AWARD WINNERS

DR. CONG WANG is a Professor at Northeastern University, Shenyang, China, where he has been teaching and conducting research since 2014. Prior to this, he held positions as a Research Associate at Northwestern University and as a Senior Research Engineer at Saint-Gobain R&D and Alcoa Technical Center in the USA. He received his PhD in Materials Science and Engineering from Carnegie Mellon University under the guidance of Professor Sridhar Seetharaman.

He has received numerous awards, including the Leading Expert of "National Ten Thousand Talent Program" and the Newton Advanced Fellowship from the Royal Society of UK, as well as the EPD Science Award from TMS in the USA. He has been recognized as a Fellow of ASM and holds several editorial positions in prestigious journals. His research has significantly contributed to the advancement of welding metallurgy, and he continues to play an active role in both academic and industrial collaborations.

DR. MING ZHONG is an Associate Professor at the School of Metallurgy, Northeastern University, located in Shenyang, China. He earned his PhD in Materials Science from the University of Tokyo in Japan. Following the completion of his doctoral studies, Dr. Zhong immersed himself in scientific research at several prestigious institutions, including Kyoto University in Japan, Carnegie Mellon University in US, and the Nagoya R&D Center of UACJ Corporation in Japan. Moreover, he has served as a visiting professor at Saint Petersburg State University in Russia.

Dr. Zhong is dedicated to addressing engineering and scientific challenges within the metallurgy and metal materials industries. To date, he has published over 60 SCI papers and secured more than 10 invention patents. Throughout his career, he has spearheaded many critical scientific and technological projects, funded by prominent institutions such as the National Natural Science Foundation of China, the Ministry of Science and Technology, and the Ministry of Education. Meanwhile, he has also taken charge of multiple research projects entrusted by central SOEs and top companies in the industry.

MR. PENG ZUO is a PhD candidate in the School of Metallurgy at Northeastern University in Shenyang, China. He obtained his bachelor's degree in 2020 from the School of Metallurgy at Liaoning Institute of Science and Technology, followed by his master's degree from the School of Metallurgy at Northeastern University in 2022. He is currently pursuing his doctoral degree at the School of Metallurgy at Northeastern University. His research primarily focuses on:(1) the optimization of weld metal microstructures and weld toughness for marine engineering steels through the design of the submerged arc welding fluxes; (2) the application of oxide metallurgy in high heat-input submerged arc welding; (3) fundamental research on welding metallurgy and alloy composition control of weld metal; (4) microstructural transformation and physical metallurgical behavior analysis of submerged arc welded joints in heat-resistant steel; (5) the effect of post-weld heat treatment on weld impact toughness and joint creep performance.

AWS NATIONAL AWARD WINNERS

2024 PAPER | JAMES F. LINCOLN GOLD MEDAL AWARD

This award is endowed by the late J. F. Lincoln, former Chairman of the Board of The Lincoln Electric Company. This award is presented for the paper with the greatest original contribution to the advancement and use of welding published in the *Welding Journal* during the previous calendar year.

Recipients of award:

Tumuluru, M. (2011)
No presentation (2012)
No presentation (2013)
Ramirez, J. E. (2014)
Badger, J. A. (2015)
Kou, S. (2016)
No presentation (2017)
No presentation (2018)
No presentation (2019)
No presentation (2020)
No presentation (2021)
Sampath, K. (2022)
Denonno, O. (2023)
Klemm-Tool, J. (2023)
Schneiderman, B. (2023)
Yu, Z. (2023)
Lee, T. (2024)
Kam, D. H. (2024)
Kim, C. (2024)
Oh, J. H. (2024)

"EFFECT OF WIRE PREHEAT AND FEED RATE IN X80 STEEL LASER ROOT WELDS: PART 1 — MICROSTRUCTURE"

DR. JAMES (ZHENG) CHEN received his PhD from Zhejiang University in China and served as a visiting professor at the University of Pittsburgh and the Joining and Welding Research Institute (JWRI) of Osaka University, Japan. From 2007 to 2011, he worked at Siemens Energy, focusing on laser additive manufacturing. Since 2011, Dr. Chen has been a Principal Research Scientist at CanmetMATERIALS of Natural Resources Canada and an adjunct professor at the University of Waterloo and McMaster University. His research areas include laser materials processing, advanced welding and joining, additive manufacturing, and battery recycling. Dr. Chen has authored over 100 publications and holds 6 patents. He is a Fellow of the Canadian Academy of Engineering, a Professional Engineer, and an International Welding Engineer.

PROF. ADRIAN GERLICH is Associate Professor in the Department of Mechanical and Mechatronics Engineering, University of Waterloo, and Director of the Centre for Advanced Materials Joining. Gerlich is an expert in materials science, microscopy, welding and material characterization. His most significant recent contributions are in the area of the joining of dissimilar materials and friction-stir welding. Gerlich has led a research team of an average of 10 research associates and graduate students; he has secured more than $2.9M in operational funding and $5M in infrastructure for welding and materials processing. He has over 170 publications in peer-reviewed journals, and has been recognized by the American Welding Society on multiple instances, including the Professor Koichi Masubuchi Award and Adams Memorial Membership Award.

AWS NATIONAL AWARD WINNERS

DR. NAZMUL HUDA has a professional background, marked by extensive expertise in power generation, welding processes, materials science, metallurgy, and weld failure analysis. He holds an impressive academic portfolio, including a BSc in Mechanical Engineering, an MSc in Welding/Joining Engineering, and a PhD in Materials Engineering. Over the course of his career, Dr. Huda has gained significant experience working with several multinational power generation companies. He has also contributed to academia as a lecturer at BGMEA university in Bangladesh. In addition, he has made valuable contributions to the scientific community through the publication of over 30 works, including peer-reviewed journal articles and conference papers.

Dr. Huda previously held a postdoctoral fellowship at the University of Waterloo, where his research focused on advanced welding techniques such as Gas Metal Arc Welding, Laser welding, Linear Friction Welding, and Rotary Friction Welding. His work encompassed material characterization, mechanical property evaluation, and failure analysis. He is currently employed as a Research Scientist at CanmetMATERIALS, where he is involved in the development of next generation linepipe materials.

DR. HANWEN YANG is a Postdoctoral Researcher at the Centre for Advanced Materials Joining at the University of Waterloo. He earned his PhD in Mechanical and Mechatronics Engineering from the University of Waterloo and is certified as an International Welding Engineer by the International Institute of Welding. Dr. Yang's research focuses on laser welding, gas metal arc welding of high-strength low-alloy pipeline steels, and laser welding and brazing of automotive steels.

He has authored numerous peer-reviewed publications in prestigious journals, including Welding Journal, Journal of Materials Processing Technology, Materials Science and Engineering: A, and ACS Sensors. Dr. Yang has also been a reviewer for several journals, such as Journal of Materials Processing Technology and Science and Technology of Welding and Joining, and is an active participant in the professional welding community. Additionally, Dr. Yang gained valuable industry experience as a Process Engineer at Volkswagen, further enhancing his expertise in the field.

XIAOYE ZHAO is a PhD candidate in Mechanical Engineering at the University of Waterloo (UW), affiliated with the Centre for Advanced Materials Joining (CAMJ). She holds an MSc in Materials Processing Engineering and a BASc in Metallic Materials Engineering. Her research focuses on advanced materials joining and related applications. Her expertise includes laser brazing of coated advanced high strength steels (AHSS), laser/hybrid welding of pipeline steels for oil/gas transportation, resistance spot welding, surface modification, and energy-related applications specifically water-enabled electricity generation using nanomaterials. Her contributions to the field are evidenced by her authorship of 37 peer-reviewed publications and a U.S. patent. Xiaoye has received numerous honors, including the international Ontario Graduate Scholarship (1 of only 5 in UW), the GM Innovators Graduate Scholarship, and the Canadian Materials Science Conference (CMSC) Early Career Researcher Plenary Award, and so on. She currently serves as Vice Chair of the Canada Welding Association (CWA) Waterloo Student Chapter and has contributed as both a guest editor and lecturer. She also holds a University Teaching Certificate.

AWS NATIONAL AWARD WINNERS

2024 PAPER | MCKAY-HELM AWARD

This award is sponsored by Hobart Brothers Company, to honor two pioneers of the welding industry. James C. McKay was the president of the McKay-Helm Company for more than 30 years, and Dr. David Helm occupied the McKay chair in welding metallurgy at the Mellon Institute in Pittsburgh from 1934 to 1973. It is presented for the best contribution to the advancement of knowledge of low-alloy steel, stainless steel or surfacing welding metals, involving the use, development or testing of these materials, as represented by articles published in the *Welding Journal* during the previous calendar year.

Recipients of award:

Rai, R. (2010)
Palmer, T. (2010)
Elmer, J. (2010)
DebRoy, T. (2010)
Sowards, J. W. (2011)
Ramirez, A. J. (2011)
Dickinson, D. W. (2011)
Lippold, J. C. (2011)
No presentation (2012)
Taban, E (2013)
Bhooge, A. (2013)
Kaluc, E. (2013)
Deleu, E. (2013)
DuPont, J. N. (2014)
Stockdale, A. (2014)
Caizza, A. (2014)
Esposito, A. (2014)
Aidun, D. K. (2015)
Bahrami, A. (2015)
Valentine, D. T. (2015)
Carlton, H. D. (2016)
Elmer, J. W. (2016)
Pong, R. (2016)
Vaja, J. (2016)
Blecher, J. J. (2017)
DebRoy, T. (2017)
Palmer, T. A. (2017)
Li, L. (2018)
Xu, P. (2018)
Zhou, D. (2018)
Cao, Y. (2019)
Luo, C. (2019)
Shan, J. (2019)
Zhau, L. (2019)
Switzner, N. T. (2020)
Yu, Z. (2020)
Johnson, A. (2021)
Carpenter, J. S. (2021)
Coughlin, D. R. (2021)
Dvornak, M. J. (2021)
Elmer, J. W. (2021)
Gibbs, G. (2021)
Gurung, P. (2021)
Hochanadel, P. W. (2021)
Vaja, J. (2021)
Kou, S. (2022)
Morrow, J. D. (2022)
Dai, T. (2023)
David, S. (2023)
Feng, Z. (2023)
Rogers, M. (2023)
Tzelepis, D. (2023)
Kyle, D. (2023)
Sebeck, K. (2023)
Vieau, P. (2023)
Yu, Z. (2024)
Pickle, T. (2024)
Vidal, J. (2024)
Hong, Y. (2024)
Augustine, C. (2024)

"ESTIMATION OF BEAD SIZE AND CATCHMENT EFFICIENCY IN LASER CLADDING"

DR. YI LU earned his PhD in Materials Engineering from the University of Alberta, under the supervision of Professor Patricio Mendez at the Canadian Centre for Welding and Joining (CCWJ), specializing in thermal challenges associated with welding and joining processes. His research significantly advanced the understanding of thermal characteristics in welding by developing systematic methodologies and practical equations. Dr. Lu established closed-form scaling laws and predictive expressions for critical thermal features of moving line heat sources and Gaussian heat sources. These expressions enable precise calculation of essential parameters such as cooling rates, melting efficiency, solidification times, and heat-affected zone dimensions, significantly aiding engineers in optimizing welding processes. Dr. Lu's work provides practical guidelines, facilitates rapid conceptual design, and contributes deep physical insights into thermal phenomena, beneficial for broad applications in materials processing and engineering design.

AWS NATIONAL AWARD WINNERS

PROF. PATRICIO F. MENDEZ is the Weldco/Industry Chair in Welding and Joining and Director of Canadian Centre for Welding and Joining at University of Alberta. His teaching and research focus on physics and mathematics of welding and materials processing. Applications include wear protection overlays, procedure development, laser cladding, handheld laser welding, and additive manufacturing.

Before joining the University of Alberta, he was a professor at the Colorado School of Mines and a consulting engineer at Exponent Inc. In 1995 Dr. Mendez co-founded Semi-Solid Technologies Inc. in the US. Prof. Mendez holds a PhD and an MS degree in Materials Engineering MIT, and a Mechanical Engineer degree from the University of Buenos Aires. His work is known for its depth into the physics and mathematics and has been sponsored by companies and branches of the government in the US and Canada. He is a Fellow of the IIW, AWS, and CWBA, and has received numerous international awards and patents. His students are active leaders in the welding community worldwide.

NITHEESH RAMASAMY is a graduate student, pursuing his MSc in Materials Engineering at the Canadian Centre for Welding and Joining, University of Alberta, since 2023. He holds a Bachelor of Technology with Honors in Metallurgical and Materials Engineering from National Institute of Technology Tiruchirappalli, India. His master's research focuses on assessing thermophysical properties for modeling in welding and additive manufacturing. He also has worked on mathematical modeling of laser cladding, and characterizing hand-held laser welding caustic. Nitheesh has volunteered to be an executive member in the University of Alberta Student chapter of AWS, being a Treasurer in the previous term and is currently serving as the Secretary. Some of his notable awards include - the Captain Thomas Farrell Greenhalgh Memorial graduate scholarship, and the Graduate recruitment scholarship from the University of Alberta.

DR. GENTRY WOOD is a graduate from the Canadian Centre for Welding and Joining (CCWJ) at University of Alberta (2017) where he completed his PhD in modelling of the laser cladding process under Dr. Patricio Mendez: a project sponsored by his current employer Apollo-Clad Laser Cladding. He has been associated with Apollo since the summer of 2011 where he worked as a metallurgical intern. He has 3 first author peer reviewed publications, 6 co-authored publications, 1 patent, and 18 conference presentations including international speaking engagements. Gentry has received the prestigious honor of Dellow of the Canadian Welding Bureau Association, University of Alberta Alumni Horizon Award for his early career achievements and community contributions, and the AWS International Meritorious Certificate Award.

Gentry is actively involved in the welding community and technical societies. He is an expert delegate of the Canadian Commission of the International Institute of Welding (CCIIW) in Commission IV on Power Beam Processes, the Vice Chair of the American Welding Society (AWS) Technical Papers Committee, Past Chair for the Canadian Welding Association (CWA) National Advisory Council, and Past Chair for the local Edmonton CWA chapter.

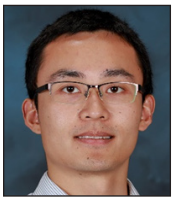
AWS NATIONAL AWARD WINNERS

PROFESSOR KOICHI MASUBUCHI AWARD

This award is sponsored by the Center for Ocean Engineering at the Department of Mechanical Engineering, Massachusetts Institute of Technology. It was established to recognize Professor Koichi Masubuchi, who has made significant contributions to advancing the science and technology of welding, especially welding fabrication of marine and space structures. This award is presented to an individual who has made significant contributions to the advancement of science and technology of materials joining through research and development.

Recipients of award:

Zhang, W. (2010)
Yamamoto, M. (2011)
Park, S.H.C. (2012)
Mayr, P. (2013)
Noecker II, F. F. (2014)
Morisada, Y. (2015)
Gerlich, A. (2016)
Mikami, Y. (2017)
Ogura, T. (2018)
Pouranvari, M. (2019)
Siefert, J. A. (2020)
Yu, Z. (2021)
Fink, C. (2022)
Rodelas, J (2023)
Wang, Y. (2024)



DR. HUI HUANG is currently an associate professor at Shanghai Jiao Tong University and was a Research Staff in the Materials Joining Group at Oak Ridge National Laboratory. Dr. Huang obtained his PhD degree from Joining and Welding Research Institute at Osaka University. His research mainly focuses on high-performance computing of welding distortion and residual stresses for large-scale structures through developing novel algorithms such as dynamic mesh refinement, iterative substructure and hybrid methods.

As a technical leader, he developed an explicit FEA solver which later evolves to a software (DR-Weld) based on a novel time scaling approach and fine-tuned GPU parallelization, which can enhance the computational efficiency up to thousands of times. Such code and software have been applied in automotive and software companies to accelerate product development cycle of welding process and additive manufacturing. Dr. Huang has also contributed to dissimilar materials joining technology including ultrasonic welding and friction based self-piercing riveting through proactive design by modeling.

AWS NATIONAL AWARD WINNERS

SAMUEL WYLIE MILLER MEMORIAL MEDAL AWARD

This award is sponsored by the American Welding Society to honor Samuel Wylie Miller, President during the 1921–22 years. It is awarded for meritorious achievements that have contributed conspicuously to the advancement of the art and science of welding and cutting.

Recipients of award:

Kotecki, D. J. (2010)
Siewert, T. (2011)
Szumachowski, E. R. (2012)
Temple, P. I. (2013)
Devletian, J. H. (2014)
Crockett, D. D. (2015)
Martukanitz, R. P. (2016)
Yevick, E. G. (2017)
Landon, T. (2018)
Sparschu, T. M. (2019)
Miller, D. K. (2020)
Melfi, T. (2021)
Campbell, R. D. (2022)
Sekely, J. (2023)
Knight, G. (2024)

DR. BLAIR E. CARLSON is currently Lab Group Manager for the Advanced Joining Processes group and a Senior Technical Fellow at GM Global R&D. His current focus is the joining of dissimilar materials. During his 30+ years of experience within GM he has had assignments in Sweden, Germany, and China for both manufacturing engineering and research. He holds a PhD in Materials Science from the University of Michigan, and a Master's in Executive Technology Planning from Chalmers University. Carlson is a Fellow of SME and AWS as well as a member of the AWS R&D Committee. He has contributed to 76 patents & 41 trade method secrets (with 30 intellectual properties in production), and 100+ journal publications.

AWS NATIONAL AWARD WINNERS

NATIONAL MERITORIOUS AWARD

This award is sponsored by the American Welding Society and is given in recognition of good counsel, loyalty and devotion to the affairs of the Society; assistance in promoting cordial relations with industry and other organizations; and for the contribution of time and effort on behalf of the Society.

Recipients of award:

Dillhoff, III, J. H. (2010 – Posthumous recognition)
Richwine, R. L. (2010)
Albrecht, B. (2011)
Stropki, J. M. (2011)
DeCorte, D. B. (2012)
McCall, J. (2012)
Crisci, J. R. (2013)
Houston, S. V. (2013)
Raymond, S. L. (2014)
Lienert, T. J. (2105)
Phillips, D. C. (2015)
Stricker, J. (2016)
Tumuluru, T. (2016)
Knight, G. A. (2017)
Perdomo, J. J. (2017)
Miglietti, W. (2018)
No presentation (2019)
Deckrow, J. (2020)
Witkowski, S. (2020)
Boling, B. E. (2021)
DeCorte, D. (2021)
Aranmor, S. L. (2022)
Komlos, W. (2022)
Gilgenbach, K (2023)
Young, A (2023)
Chen, C. (2024)
Brown, C. (2024)

MIKE GASE, Mr. Gase began in 1982 as a fabricator, then erector. After earning his CAWI he moved to Detroit to work for a firm performing field inspections. Soon, a CWI certification was earned, then later an ASNT Level III, and in 2014, the SCWI. Mr. Gase currently works at Midwest Steel, Inc., as the Corporate Quality Director.

Mr. Gase volunteered with Detroit ASNT and AWS local chapters and Mr. Gase started participating in AWS committees in 2009. Mr. Gase is Chair of D1.4 Reinforcing Steel, and the D1.1 Fabrication and Inspection Task groups. Mr. Gase is also chair of AISC's 360 Chapter N and AISC 341 Chapter J, member of the Welding Handbook Committee, and the QCWI committee.

Mr. Gase has made several true friendships within the AWS and AISC community. The men and women who serve on those committees are truly passionate and willing to collaborate on some tough issues. Mr. Gase could not have grown without these mentors and associates. It is for those people that he accepts this award.

AWS NATIONAL AWARD WINNERS

MIKE KERR is a highly experienced and accomplished welding engineer with over 17 years in the welding industry. His career spans various aspects of construction, fabrication, engineering, research and development, and training. Michael has demonstrated expertise in pre-contract review, project planning, shop fabrication, field construction project execution, field engineering, welder and procedure qualification, and inspection.

Mike actively participates in several American Welding Society (AWS) code committees, holding positions such as Chair of the AWS D1M - New Materials Task Group (2019–2024), Vice Chair of the AWS D1.4 - Reinforcing Steel (2022–Present), and Vice Chair of the AWS D1 TG3 - Fabrication Task Group (2024–Present). He is also a member of various other AWS committees and the chair of Northern College's Welding Advisory Committee.

His dedication to the welding industry and his continuous pursuit of excellence makes him a respected and influential figure in his field.

AWS NATIONAL AWARD WINNERS

2024 PAPER | ROBERT L. PEASLEE MEMORIAL BRAZING AWARD

This award is sponsored by the Wall Colmonoy Corporation and honors Robert L. Peaslee for his many years of dedicated service to the industry. This award recognizes the paper considered to be the best contribution to the science or technology of brazing or soldering published in the *Welding Journal* during the previous calendar year.

Recipients of award:

Wang, H. (2011)
Xue, S. (2011)
Chen, W. (2011)
Liu, X. (2011)
Pan, J. (2011)
Nasiri, A. (2012)
Li, L. (2012)
Kim, S. (2012)
Zhou, Y. N. (2012)
Weckman, D. C. (2012)
Nguyen, T. C. (2012)
Liu, W. (2013)
Bachorik, P. (2013)
Lee, N-C (2013)
Nasiri, A. (2014)
Weckman, D. C. (2014)
Zhou, Y. N. (2014)
Ekrami, A. (2015)
Kokabi, A. H. (2015)
Pouranvari, M. (2015)
Nasiri, A. M. (2016)
Weckman, D. C. (2016)
Zhou, Y. N. (2016)
Smet, D. D. (2017)
Grant, R. P. (2017)
Kilgo, A. (2017)
Kotula, P. M. (2017)
McKenzie, B. M. (2017)
Vianco, P. T. (2017)
Walker, C. A. (2017)
Busbaher, D. (2018)
Preuss, T. (2018)
Fu, H. (2018)
Leone, E. (2018)
De Smet, D. (2019)
Grant, R. (2019)
Kilgo, A. (2019)
McKenzie, B. (2019)
Vianco, P. T. (2019)
Walker, C. A. (2019)
Guerrero, E. (2020)
Kilgo, A. (2020)
McKenzie, B. (2020)
Price, W. J. (2020)
Vianco, P. T. (2020)
Williams, S. (2020)
Bo, J. (2021)
Li, Z. (2021)
Ma, L. (2021)
Xu, Z. (2021)
Yan, J. (2021)
De Smet, D. (2022, 2023)
Grant, R. (2022, 2023)
Kilgo, A. (2022, 2023)
McKenzie, B. (22, 23)
Vianco, P. T. (22, 23)
Walker, C. A. (22, 23)
Yan, J. C. (2024)
Chen, S. (2024)
Xu, Z. (2024)
Ma, Z. (2024)
Li, Z. (20024)
Ma, L. (2024)

"CAVITATION CHARACTERISTICS IN ULTRASONIC SOLDERING AND THE EROSION EFFECT"

DR. ZHENGWEI LI is an Associate Professor at the Harbin Institute of Technology School of Materials Science and Engineering. He specializes in welding and joining technologies, including ultrasonic soldering/brazing, resistance spot welding, etc. He has published more than 80 SCI indexed papers in peer-reviewed journals, with a H-index of 24.

In 2021 he earned his PhD in Materials Processing Engineering at Harbin Institute of Technology. He became an Associate Professor of the Department of Welding Science and Engineering at Harbin Institute of Technology in 2024.

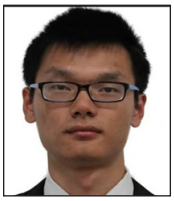
AWS NATIONAL AWARD WINNERS

PROF. ZHIWU XU is a member of the State Key Laboratory of Precision Welding & Joining of Materials and Structures, Harbin Institute of Technology (HIT), P.R. China. He received his BS, MS, and PhD degrees in Materials Processing and Engineering from HIT in 2000, 2004 and 2008, respectively. He became a lecturer of HIT in 2005 and was promoted to professor in 2021. He worked at the Institute of Materials Engineering, TU Dortmund, Germany, as a visiting scholar under the guidance of Prof. Dr.-Ing. W. Tillmann from June 2013 to June 2014.

He has published more than 60 articles in peer-reviewed journals in the fields of ultrasonic soldering & brazing and joining of advanced materials or dissimilar materials. He has one authorized US patent and over 20 authorized or pending China patents. He serves as a reviewer for a dozen journals, such as Ultrasonics Sonochemistry, Materials & Design, Journal of Alloys and Compounds, etc. His current research interests include: (1) Metallurgical problems related with joining of advanced materials or dissimilar materials; (2) Mechanism and processes of ultrasonic soldering & brazing; (3) Simulation of joining process.

JIUCHUN YAN is a professor at the Harbin Institute of Technology School of Materials Science and Engineering. In 1986 he earned his bachelor's degree in Welding Process and Equipment, and his PhD degree (2002) in Materials Processing Engineering at the Harbin Institute of Technology. He becomes a professor of Department of Welding Science and Engineering in Harbin Institute of Technology in 2004.

His research activities include special joining technology, structure and mechanical behavior of joining interface. He is devoted to the investigation of ultrasonic-assisted soldering and brazing of aluminum alloys, magnesium alloys, ceramics and aluminum matrix composites. Until now, he has had more than 120 SCI index papers published in journals and has 50 authorized patents (including a US Patent).



BO ZHANG obtained a bachelor's degree in Materials Forming and Control Engineering from Jilin University in July 2013, and a master's degree in Materials Processing Engineering from Harbin Institute of Technology in July 2015. He is currently employed at FAW Volkswagen Automotive Co., Ltd., responsible for the production line planning and process management in Bodyshop in the vehicle manufacturing industry. His master's thesis topic is " Characteristics and mechanism of the ultrasonic cavitation within the filling under ultrasonic of liquid Sn". the characteristics and distribution of the cavitation within the process of the solder of pure Sn filling under ultrasonic, and analyzing the reason of it through the fluid simulation software. His current research areas also include: (1) welding process research in the production of white body in car plant; (2) White body welding process planning and automated production line planning.

AWS NATIONAL AWARD WINNERS

PLUMMER MEMORIAL EDUCATION LECTURE AWARD

This award is sponsored by the American Welding Society to recognize Fred L. Plummer's service to the Society as President from 1952 to 1954 and Executive Director from 1957 to 1969. This award recognizes outstanding contributions to the national education lectures presented at the AWS Annual Welding Show and Convention.

Recipients of award:

Madigan, R. B. (2010)
Lawrence, T. W. (2011)
Adonyi, Y. (2012)
Polanin, W. R. (2013)
Vetter, L. (2014)
Stone, R. T. (2015)
Burdge, S. L. (2016)
Cotner, D. R. (2017)
Baber, T. (2018)
Turner, D. (2019)
No presentation (2020)
Colton, J. N. (2021)
Carney, J. N. (2022)
Mosman, J. (2023)
Emery, R. (2024)

BRETT CAMACHO has been a welding and fabrication educator for twenty-eight years, nineteen of those years at Fresno City College as a full-time welding and fabrication instructor. He has helped transform the FCC welding programs into one of the most technologically advanced programs in California, from two full-time instructors in one shop to five full-time instructors and two shops, where students have their choice of majoring in Metal Fabrication, Pipe and Structural Steel, or Welding Automation. Brett has helped developed strong industry partnerships and community relations by sitting on advisory committees, hiring committees, conducting workshops for high school instructors, presenting at conferences, hosting welding competitions, fabricating projects for local businesses; one of the coolest being, having his students fabricate orangutan sleeping baskets and feeders for the Fresno Chaffee Zoo.

In 2019, Brett led the charge to work with NC3 and Lincoln Electric and become a Lincoln Electric Educational Partner School; he is one of five Master Instructors helping to train instructors wanting to implement the LEEPS program into their school. In 2024 Brett proudly passed the CWI exams and is now a Certified Welding Inspector and a Certified Welding Educator. Brett's professional goals are to continue to expand the welding and fabrication program which includes another 7,000 square foot shop currently being renovated, taking the day program from a two-year program to a one-year program, increasing the number of skilled welders ready to enter the work force.

AWS NATIONAL AWARD WINNERS

PRIVATE SECTOR INSTRUCTOR MEMBERSHIP AWARD

This award was established by the AWS Board of Directors as a means of honoring educators in the welding community who teach in private facilities. These individuals, in the opinion of the AWS Education Committee, have advanced the knowledge of welding to their students through apprenticeship programs, internal corporate training programs, and similar nonpublic educational activities.

Recipients of award:

Trevithick, M. (2012)
No presentation (2013)
No presentation (2014)
Cox, E. J. (2015)
Rolla, G. T. (2016)
Adolphi, S. (2017)
Sperko, W. (2017)
Cowman, R. D. (2018)
No presentation (2019)
No presentation (2020)
No presentation (2021)
Grantham, J. A. (2022)
Szabla, D. (2023)
Jones, J. W. (2024)

JASON BECKER is the Owner of Underground Metalworks and Weldworks Training Center Inc. in Central Florida, where he provides hands-on welding instruction and advanced training through his AWS Accredited Testing Facility. With over 27 years of experience as a welder-fabricator, 10 years as a welding educator, and 8 years as a Certified Welding Inspector, Jason has dedicated his career to upholding industry standards, mentoring the next generation of welders, and helping companies maintain code compliance.

He is also the host of the Arc Junkies Podcast, the top welding podcasts globally, where he spotlights the people, processes, and stories shaping the future of the trade. Through his platforms, Jason has built a reputation as a passionate advocate for welding education and workforce development.

AWS NATIONAL AWARD WINNERS

2024 PAPER | WARREN F. SAVAGE MEMORIAL AWARD

This award is endowed by former associates of Professor Warren F. Savage to honor his dedication and accomplishments in the field of welding metallurgy. This award recognizes the paper published in the Research Supplement of the *Welding Journal* during the previous calendar year that best represents innovative research resulting in a better understanding of the metallurgical principles related to welding.

Recipients of award:

Nissley, N. E. (2010)
Lippold, J. C. (2010)
Caron, J. L. (2011)
Heinze, C. (2011)
Schwenk, C. (2011)
Rethmeier, M. (2011)
Babu, S. S. (2011)
Lippold, J. C. (2011)
Kou, S. (2012)
Limmaneevichitr, C. (2012)
Wei, P-S (2012)
Yue, X. (2013)
Lippold, J. C. (2013)
Alexandrov, B. T.(2013)
Babu, S. S. (2013)
Caron, J. L. (2014)
Babu, S. S. (2014)
Lippold, J. C. (2014)
Bundy, J. (2015)
Gerlich, A. (2015)
Najafabadi, H. I. (2015)
Mendez, P. F. (2015)
Lippold, J. C. (2016)
Hodgson, D. K. (2016)
Dai, T. (2016)
Javernick, D. A. (2017)
Lienert, T. J. (2017)
Liu, S. (2017)
Tate, S. B. (2017)
Kannan, R. (2018)
Li, L. (2018)
Wang, Y. (2018)
Zhang, L. (2018)
DuPont, J. (2019)
Hamlin, R. (2019)
DuPont, J. N. (2020)
Kant, R. (2020)
Alexandrov, B. T. (2021)
Penso, J. A. (2021)
Wang, H. (2021)
Fink, C. (2021)
Derrien, R. (2022)
Liu, S. (2022)
Moine, E. (2022)
Briand, F. (2022)
Sullivan, E. M. (2022)
Dai, T. (2023)
Feng, Z. (2023)
Wang, Y. (2023)
Kiser, S (2023)
Baker, B. (2023)
Sridharan, N. (2024)
Ramakrishnan, (2024)
Robertson, J. (2024)
Jordan, B. (2024)
Lee, Y. (2024)

"AL_2O_3-MNS INCLUSIONS AND PITTING CORROSION IN THE WELD HEAT-AFFECTED ZONE"

DR. LEIJUN LI, P.ENG., is Professor of Materials Engineering and Department Chair for Chemical and Materials Engineering at University of Alberta. He teaches welding and physical metallurgy and leads research in solidification, microstructure formation, and resulting properties of alloys and structures used for energy and natural resources.

He is a Fellow of American Welding Society, ASM International, and the Canadian Welding Bureau/Association. Dr. Li obtained his PhD degree in Materials Engineering from the Warren "Doc" Savage Materials Joining Lab at Rensselaer Polytechnic Institute (RPI). Dr. Li received several AWS awards, including the A.F. Davis Silver Medal Award (2019), W.F. Savage Memorial Award (2018), McKay-Helm Award (2018), W.H. Hobart Memorial Award (2014, 2017, 2021, and 2024), and the Adams Memorial Award (2006). The 2025 W.F. Savage Memorial Award is the second time he has received this award.

AWS NATIONAL AWARD WINNERS

ZHE LYU received his BSc in Mechanical Engineering from the University of Alberta in 2020 and is currently a PhD candidate in Chemical and Materials Engineering at the same institution. His research focuses on the integration of computational modeling and experimental materials science to investigate the degradation behavior of service-aged Cr-Mo steels. His work combines thermo-mechanical finite element simulations, crystal plasticity modeling, and advanced characterization techniques such as EBSD and TEM to study microstructural evolution, including carbide precipitation and dislocation interactions. He also explores transport phenomena in additive manufacturing, particularly heat and mass transfer, residual stress development, and phase transformations in laser-directed energy deposition (L-DED). Through this multidisciplinary approach, he aims to improve the predictive understanding of material performance under long-term service and complex thermal-mechanical conditions, with applications in pressure vessel design and high-temperature structural components.

DR. YAJING WANG received her bachelor's and master's degrees in engineering from Inner Mongolia University of Science and Technology in 2010 and 2013. From 2014 to 2018, she worked as a lecturer at Lyuliang University.

Between 2019 and 2021, she was funded by the China Scholarship Council (CSC) to join Professor Leijun Li's research group in the Department of Chemical and Materials Engineering at the University of Alberta as a visiting Ph.D. student. Her research primarily focused on the flow-accelerated corrosion (FAC) performance and microstructure of steam pipe girth welds. In 2024, she earned her Ph.D. in Engineering from Taiyuan University of Science and Technology, China. In February 2025, she rejoined Professor Leijun Li's team as a postdoctoral researcher to further pursue research in this field.

ZHISHENG WU is a Senior Professor at Taiyuan University of Science and Technology in the School of Materials Science and Engineering department. He is also the Chief Leader of Discipline of Material Forming Technology in TYUST and Director of Shanxi Modern Welding Engineering Technology Research Center, Shanxi Graduate Education Innovation Center of Welding technology and Engineering Specialty, and Honorary Chairman of Shanxi Welding Society. He has served as visiting professor at several universities including University of Edmonton, Canada, Auburn University, U.S.A, Cranfield University, U.K., Tianjin University, Xian Jiaotong University, and Taiyuan University of Science and Technology, China.

Prof. Wu's research interests include, Electrode life of Resistance Spot Welding of aluminum alloys and magnesium alloys, Arc welding joint strengthening of aluminum alloys and Magnesium alloys, Deformation control of welded joint of aluminum alloys and Magnesium alloys, Computer Simulation of aluminum alloys and magnesium alloys welding process, and Welding procedure of metal layered composite materials.

AWS NATIONAL AWARD WINNERS

2024 PAPER | WILLIAM SPRARAGEN MEMORIAL AWARD

This award is sponsored by the American Welding Society and honors William Spraragen, a founding member of the Society and the first Editor of the *Welding Journal*, serving from 1922 to 1954. It is presented for the best paper published in the Research Supplement section of the *Welding Journal* during the previous calendar year.

Recipients of award:

Noecker, II, F. F. (2010)
DuPont, J. N. (2010)
Tordonato, D. (2011)
Madeni, J. C. (2011)
Liu, S. K. (2011)
Babu, S. S. (2011)
Mendez, P. F. (2011)
Sowards, J. W. (2012)
Liang, D. (2012)
Alexandrow, B. T. (2012)
Frankel, G. S. (2012)
Lippold, J. C. (2012)
Atabaki, M. M. (2013)
Chun, E. J. (2014)
Hayato, B. (2014)
Terashima, K. (2014)
Saida, K. (2014)
Nishimoto, K. (2014)
Fusner, E. W. (2015)
Hope, A. T. (2015)
Lippold, J. C. (2015)
Amata, M. A. (2016)
Babu, S. S. (2016)
Bundy, J. C. (2016)
Chai, X. (2016)
Chen, S. (2016)
Kou, S. (2016)
Zhang, C. (2016)
Zhang, F. (2016)
Carlton, H. D. (2017)
Elmer, J. W. (2017)
Vaja, J. (2017)
Dai, T. (2018)
Lippold, J. C. (2018)
Kou, S. (2019)
McCarthy, J. (2019)
Thompson, K. (2019)
Yu, P. (2019)
Tanaka, M. (2020)
Tashiro, S. (2020)
Nguyen, A.V. (2020)
Wu, D. (2020)
Ji, C. (2021)
Murugan, S.P. (2021)
Park, Y-D. (2021)
Vijayan, V. (2021)
Hintze Cesaro, A. (2022)
Mendez, P. F. (2022)
Lai, X. (2023)
Wang, X. (2023)
Wei, Z. (2023)
Yong, L. (2023)
Zhang, D. (2023)
Cross, C. E. (2024)
Fink, C. (2024)
Barraza, A. M. (2024)
Stull, C. J. (2024)
Martinez, J. N. (2024)

"MULTIPHYSICS SIMULATION OF IN-SERVICE WELDING AND INDUCTION PREHEATING: PART 1"

DR. ANDRES ACUNA has been a Welding Engineer in the Consumables R&D department at Lincoln Electric since 2023. With over 16 years of experience in the Oil and Gas industry, he possesses a strong background in welding processes and failure analysis. Dr. Acuna earned his bachelor's degree in Mechanical Engineering in Brazil and spent 11 years at Petrobras, where he conducted research in welding processes and materials, and provided failure analysis for refineries and pre-salt FPSOs.

In 2016, he completed his master's degree in Welding Engineering at The Ohio State University, focusing on hybrid laser welding for gas pipelines. He continued his studies at Ohio State, earning a PhD in 2023 with research on sigma phase kinetics in duplex stainless steels. Dr. Acuna's main research interests include duplex stainless steels, stainless steels, precipitation kinetics, welding metallurgy, impact toughness, hybrid laser welding, microscopy, and pipeline welding.

AWS NATIONAL AWARD WINNERS

DR. ENG. GIOVANI DALPIAZ holds a degree in Mechanical Engineering from the Federal University of Rio Grande do Sul, with a master's and doctorate in Metallurgical Engineering. He has experience in the area of welding of metallic materials, both processes and welding metallurgy. He currently works as an equipment engineer at Petrobras, working in research, development, technical assistance and teaching in the area of welding. He works extensively in the maintenance of oil platform equipment.

DR. MARCELO TORRES PIZA PAES received his master's and PhD in welding from the Federal University of Rio de Janeiro (UFRJ) in Brazil in Metallurgy Engineering. He has worked at Petrobras for thirty-five years in the fields of structural integrity, materials selection, failure analysis and welding. He is a Master Consultant at Petrobras Research Centre on metallic materials for upstream, having led several research projects with Brazilian universities and international research centers related to in-service welding, metallic/ceramic coatings, tribology and hydrogen embrittlement. H has represented Petrobras at TWI Research Board from 2014 to 2022. Paes has collaborated in ISO and API standards for the last twenty years both in welding and materials selection for offshore applications.

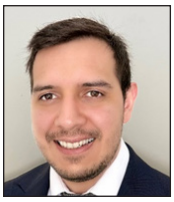
PROF. ANTONIO J. RAMIREZ, a Mechanical Eng. by training, became a Materials Scientist during his graduate, postgraduate, and education/work at São Paulo University and The Ohio State University (OSU). He further developed his scientific career at the Brazilian Synchrotron Light Laboratory and Brazilian Nanotechnology National Laboratory (LNNano) between 2004 and 2015 as a researcher, group leader, industrial research director, and LNNano deputy director, where he focused his scientific work on advanced materials characterization using synchrotron light and electron microscopy.

He joined the Welding Engineering Program at the Materials Science and Engineering Dept. at OSU in 2015, where he teaches welding metallurgy and additive manufacturing. He has led the Manufacturing and Materials Joining Innovation Center (Ma2JIC) since 2016, the U.S. most successful Industry-University Cooperative Research center focused on manufacturing co-sponsored by the National Science Foundation (NSF) with more than 45 industrial members and $62M on research expenditures over 13 years. His current research ranges from joining structural materials to exploring fundamental aspects of bulk and nanostructured materials down to the atomic scale. He works with the technological and fundamental aspects of welding and additive manufacturing metallurgy, weldability, and printability of conventional and advanced materials, including welding in space. He also has vast experience in materials modeling.

AWS NATIONAL AWARD WINNERS

2024 PAPER | WILLIAM SPRARAGEN MEMORIAL AWARD *(cont)*

"MULTIPHYSICS SIMULATION OF IN-SERVICE WELDING AND INDUCTION PREHEATING: PART 1"



DR. KAUE C. RIFFEL is a Mechanical Engineer and researcher in the Welding Engineering Program at The Ohio State University (OSU), working within the Edison Joining Technology Center. He holds a PhD with a focus on welding processes, earned through a collaboration between the Federal University of Santa Catarina (UFSC), Brazil, and the OSU. Dr. Kaue has extensive experience in arc welding processes, metallurgy, and simulation, covering areas such as waveform development, joining of advanced materials, wire-arc additive manufacturing, artificial intelligence for robotic programming, scanning electron microscopy, electron backscattered diffraction, finite element analysis (FEA), and CALPHAD. At OSU, he leads engineering teams and manages R&D projects to develop innovative welding and additive manufacturing solutions for industries including aerospace, nuclear, oil and gas, naval, automotive, and energy generation.

PROF. REGIS HENRIQUE GONÇALVES E SILVA has a bachelor's, a master's and a doctorate degree in Mechanical Engineering from UFSC-Federal University of Santa Catarina, Brazil, with research stays at the Fraunhofer IPT-Aachen, and at the SLV Munich, both in Germany. Since September 2014, he has been a member of the Faculty of the Department of Mechanical Engineering at UFSC, where he heads the Welding and Mechatronics Institute-LABSOLDA. He leads funded industrial and academic R&D projects and cooperation programs with domestic and foreign universities and companies. His work focuses on R&D in Welding Processes and their Automation, with emphasis on the following topics: Plasma; TIG; MIG/MAG; PTA; Stud welding; Laser; hybrid processes; monitoring and control technologies for trajectory, metal transfer and process stability; welding repair and coating/cladding; orbital welding; sensors; and Additive Manufacturing. He has more than 190 papers published in technical-scientific journals and annals of national and international events, 6 patents (2 already granted). He is an associate editor for the Revista Soldagem e Inspeção, Principal Reviewer for IIWs Welding in the World and a reviewer for further 19 journals (national and international).

AWS NATIONAL AWARD WINNERS

R. D. THOMAS MEMORIAL AWARD

This award was originally sponsored by the Arcos Co. and its president, R. D. Thomas, Jr. It honors the late R. D. Thomas, an AWS charter member and the AWS Representative to the first organization meeting of the International Institute of Welding (IIW). This award is presented to a member of the American Council of IIW or to an AWS member who has made a substantial contribution to the activities of the IIW.

Recipients of award:

David, S. A. (2010)
Milewski, J. (2011)
Elmer, J. W. (2012)
Melfi, T. (2013)
Lippold, J. C. (2014)
Gould, J. E. (2015)
Miller, D. R. (2016)
Conrardy, C. (2017)
Hochanadel, P. W. (2018)
Tumuluru, M. (2019)
Kautz, D. (2020)
Grewell, D. (2021)
Liu, S. (2022)
Feng, Z. (2023)
Peters, C. (2024)

DR. AMBER N. BLACK has been a member of the materials science community for 20 years and the high energy density welding/processing field for 17. Dr. Black volunteers in the American Welding Society on the Committees for Additive Manufacturing (D20), Electron Beam Applications (C7B), and Laser Applications (C7C). She is also an active member of the International Institute of Welding where she has been the American Delegate to Commission I and Vice Delegate to Commission IV for 8 years, Secretary to Commission I, and a Future Leader on the Board of Directors.

In school she received numerous scholarships and fellowships, notably a National Science Foundation Graduate Research Fellowship. Amber was the 2018 recipient of the ASM Bronze Medal and has received three LANL Distinguished Performance Awards in the past two years. She is a graduate of the University of Connecticut and Pennsylvania State University. She has been a team leader of LANL's Sigma division for over five years, originally for the Welding & Joining team and currently for Additive Manufacturing, a team she has developed from its formation.

AWS NATIONAL AWARD WINNERS

ELIHU THOMSON RESISTANCE WELDING AWARD

This award is sponsored by the Resistance Welding Manufacturing Alliance and was established in conjunction with the 100th anniversary of the invention of resistance welding. This award is presented for an outstanding contribution to the technology and application of resistance welding, including equipment innovations, unique applications in production, a paper published in the *Welding Journal* or other prestigious publication, or other activity of merit.

Recipients of award:

Beneteau, D. M. (2010)
Brafford, W. (2011)
Tumuluru, M. (2012)
Hirsch, R. B. (2013)
Gould, J. E. (2014)
DeCorte, D. B. (2015)
Maatz, Jr. D. F. (2016)
Siehling, M. (2017)
Karagoulis, M. J. (2018)
Cohen, R. (2019)
Wei, P.S. (2020)
Snow, Jr., T. (2021)
Kimchi, M. (2022)
Spinella, D. (2023)
Zhang, H. (2024)

KURT HOFMAN is the President and Chief Technology Officer at RoMan Manufacturing, where he oversees strategic planning, new business development, and succession planning1. With a career spanning over three decades, Kurt has held various executive roles, including Executive Vice President and Vice President at RoMan Manufacturing and IRCO Automation and president and founder RoMan Engineering Services where Kurt grew from a team of four individuals to a team of over 65 employees including 50 welding engineers who today are well represented over the entire welding industry.

He has also served on the Board of Trustees at Ferris State University and currently serves as board chairman. He has been actively involved in the Ferris State University Welding advisory board. Kurt holds a Bachelor of Science in Welding Engineering Technology from Arizona State University and an Associate in Applied Science in Welding Technology from Ferris State University. Kurt has spent nearly 40 years involved in the field of resistance welding, from designing and applying resistance welding transformers to developing software that assisted in sizing welding transformers and inventing and patenting an impedance meter that measures secondary impedance in resistance welding circuits.

AWS NATIONAL AWARD WINNERS

GEORGE E. WILLIS AWARD

This award is sponsored by The Lincoln Electric Company to honor George E. Willis. It is presented to an individual for promoting the advancement of welding internationally, by fostering cooperative participation in areas such as technology transfer, standards rationalization, and promotion of industrial good will.

Recipients of award:

Scotchmer, N. (2010)
Sindel, A. W. (2011)
Chin, B. A. (2012)
Miller, D. K. (2013)
Bernasek, M. (2014)
Shaw, Jr. R. J. (2015)
Rager, D. D. (2016)
Perdomo, J. J. (2017)
Davis, A. (2018)
No presentation (2019)
Melfi, T. (2020)
Henson, R. M. (2021)
DeCorte, D. (2022)
Flohn, T. A. (2023)

PROF. PATRICIO F. MENDEZ is the Weldco/Industry Chair in Welding and Joining and Director of Canadian Centre for Welding and Joining at University of Alberta. His teaching and research focus on physics and mathematics of welding and materials processing. Applications include wear protection overlays, procedure development, laser cladding, handheld laser welding, and additive manufacturing.

Before joining the University of Alberta, he was a professor at the Colorado School of Mines and a consulting engineer at Exponent Inc. In 1995 Dr. Mendez co-founded Semi-Solid Technologies Inc. in the US. Prof. Mendez holds a PhD and an MS degree in Materials Engineering MIT, and a Mechanical Engineer degree from the University of Buenos Aires. His work is known for its depth into the physics and mathematics and has been sponsored by companies and branches of the government in the US and Canada. He is a Fellow of the IIW, AWS, and CWBA, and has received numerous international awards and patents. His students are active leaders in the welding community worldwide.

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