VAN ANH NGUYEN

OVERVIEW

- **Academic Roles**:
  - Lecturer in Mechanical engineering, University of Wisconsin, STOUT.
- **Contact Information**:
  - Personal Email: nguyenvananhbkhn@gmail.com
  - Office Emails: nguyenv@uwstout.edu
- **Online Profiles**:
  - Google Scholar
  - LinkedIn
- **Editorial Positions**:
  - Editorial Board Member, *Science and Technology of Welding and Joining*
  - Editorial board member, China welding journal

RESEARCH INTEREST

3D Printing, Welding and joining, X-ray imaging, High-speed imaging, Applied physics, Mechanical engineering, Material engineering, Manufacturing processes, Heat transfer, and Metallurgy.

SKILLS and ABILITIES

Material characterization techniques (SEM-EDS, TEM, EBSD), Non-destructive and Destructive tests, "In-situ" X-ray radiography/synchrotron/diffraction techniques, High-speed imaging techniques, Lab operation/instruction, project leadership, teamwork, Teaching experiences in small/large group, supervision of Undergraduate/Graduate students, Design software's (CAD, SolidWorks, Original, InDesign, Photoshop), Industrial standards, etc.

EDUCATION

3/2018: PhD in Materials and Manufacturing Science – Osaka University, Japan.
3/2014: MSc in Mechanical Engineering – Hanoi University of Science and Technology, Vietnam.

6/2012: BSc in Mechanical Engineering – Hanoi University of Science and Technology, Vietnam.

EMPLOYMENT

8/2024-Present: Lecturer in Mechanical Engineering, University of Wisconsin STOUT, USA

8/2024-7/2025: Lecturer in Industrial Engineering Systems and Logistics at International School, National Vietnam University, Vietnam
8/2021-7/2024: Lecturer/Assistant professor in School of Aerospace, Transport and Manufacturing, Cranfield University, UK
4/2018-8/2021: Research scientist of Murata Welding Laboratory, Osaka, Japan

GRANTS

2023-2025: "VINIF2023-DA.96" project of VinGroup (Nasdaq: VFS) Innovation foundation: *RESEARCH-DEVELOPMENT NOVEL TECHNOLOGY OF ADAPTIVE RESILIENT INTELLIGENT CONTROL AND DESIGN-INTEGRATE-MANUFACTURE AN UNKNOWN 3D OBJECTS AUTOMATIC INSPECTION SYSTEM FOR INTELLIGENT INDUSTRIAL ROBOTS APPLICATIONS UNDER COMPLEX UNCERTAINTIES ($130K)*. (Senior member and Expert in robotic and manufacturing systems).

2023-2025: Phenikaa University. *Research, Design and Manufacture metal 3D Printing system using arc heat source (WAAM) to manufacture large scale parts*. (Senior researcher/member). (*$55K*)

2023-2024: European Synchrotron Radiation Facility (ESRF), Beamline 19, France. *Revealing Internal Melt Pool Flow and Shape Achieving Equiaxed Microstructure in Wire-based Directed Energy Deposition of Titanium Alloys by X-ray Synchrotron*. (PI) (this is a sub-project in "NEWAM research program" (https://gow.epsrc.ukri.org/NGBOViewGrant.aspx?GrantRef=EP/R027218/1) lead by Prof. Stewart of Cranfield University that funded by Engineering & Physic Sciences Research Council-EPSRC UK)

2020-2022: "VINIF-DA.12" project of VinGroup (Nasdaq: VFS) Innovation foundation: *Research-develop a novel welding technology and design-manufacture an automatic welding robot system for frontier industrial fields ($220K)*. Co-PI.

2021-2022: National University of Ho Chi Minh-Ho Chi Minh University of Technology, *Investigation of Convection and Heat Transportation in Plasma Keyhole Arc Welding Process To Improve the Welding Quality and Reduce the Welding Defects*, Co-PI (PI: Prof. Nguyen Huu Loc).

2020-2021: National University of Ho Chi Minh-Ho Chi Minh University of Technology, *Investigation of Ultrasonic Molding Injection for PA6 Material*, Co-PI (PI: Prof. Nguyen Thanh Hai).

2014-2016: AUN/SEED-Net project of the Japanese government in "Collaborative Research Program with Industry (CRI)": *Research and recovery of exhaust valve surface in internal combustion component by powder plasma welding technology*, Co-PI (PI: Prof. Bui Van Hanh).

PUBLICATION (Selected)

2025, *Van Anh Nguyen*, Le Quang Hung, Tran The Bach1, Dung Hoang Tien, Manh Ha Bui, Minh Hieu Nguyen, Tien-Dat Hoang, J. P. Oliveria. Wire-Arc Additive Manufacturing: Challenges, Solutions, and Emerging Frontiers (**Prepared**)

2025, Van Thao Le, Quang Huy Hoang, Tuan Nguyen Van, Nang Ho Xuan, Hung Dinh The, *Van Anh Nguyen*. Modeling and optimization of weld seam characteristics using NSGA-II and TOPSIS algorithms in wire-arc additive manufacturing of high-strength steels. "Progress in Additive Manufacturing **(Under review)**

2025, Duc Anh Nguyen, Giang Le Bui Truong, *Van Anh Nguyen (corresponding author)*, Minh Tuan Vu, Ha Manh Bui, Minh Thanh Le, Trong Duc Nguyen, Dung Hoang Tien, Xuan Hai Le. Artificial Intelligence in Metal Additive Manufacturing: Current Status, Challenges, and Future Developments. Journal of Intelligent Manufacturing (**Revised**)

2025, Nguyen Tien Duong, *Van Anh Nguyen (corresponding author)*. Development of Butt Fusion Welding Equipment and Technology for Welding Dissimilar Plastic Pipes. "Journal of the Mechanical Behavior of Materials Development". **(Revised)**

2025, *Van Anh Nguyen*, Dilen Damian, Duy Han Le, Quang Ngoc Trinh. A novel arc spot welding process for plating lines in manufacturing electronic components. "China welding journal". **(Accepted)**

2025, *Van Anh Nguyen*, Duy Han Le, Dilen Damian, The Bach Tran, Quang Hung Tran, Nhu Tung Nguyen. X-ray imaging technology for materials and manufacturing science: A review. Journal of Manufacturing Processes. 2025. 141. 15. Pages 1245-1295 (https://www.sciencedirect.com/science/article/abs/pii/S1526612525003019)

2025, Duy Han Le, Bui Van Hanh, Van Anh Nguyen, Trinh Quang Ngoc, Hiroshi Nishikawa. Effect of isothermal aging on the properties of In-Sn-xCu alloys and their joints on a Cu substrate. "Materials Science and Engineering A. 2025. 924. 147796 (https://www.sciencedirect.com/science/article/abs/pii/S0921509325000140)

2025, *Van Anh Nguyen*, Diana Supanri, Van Tuan Nguyen, Nang Ho Xuan, Supriyo Ganguly. Flow Melt Pool and Heat Transfer in Wire-arc Additive Manufacturing Process. "Progress in Additive Manufacturing". 2025. April. (https://doi.org/10.1007/s40964-025-01101-9)

2024, Van Thao Le, Nang Ho Xuan, Tuan Nguyen Van, Hung Dinh The, *Van Anh Nguyen*. Development of Predicting Models for Weld Bead and Melting Pool Size in Wire Arc Additive Manufacturing of SS 316L Using Artificial Neural Networks. International Conference on Material, Machines and Methods for Sustainable Development. Springer Nature Switzerland. 385-393

2024, Van-Truong Nguyen, Minh-Tri Phan, Gia-Duc Pham, Manh-Ha Bui, *Van-Anh Nguyen*. Augmented Nonlinear PID Controller for Human-Robot Collaboration with Uncertainties. International Conference on Green Technology and Sustainable Development. Springer Nature Switzerland. 80-89.

2023, Van Thao Le, Dinh Si Mai, Van Thuc Dang, Duc Manh Dinh, Thi Hong Cao, *Van Anh Nguyen*. Optimization of Weld Parameters in Wire and Arc-Based Directed Energy Deposition of High Strength Low Alloy Steels. Adv. Technol. innov., vol. 8, no. 1, pp. 01-11.

2023, Van Thao Le, Manh Cuong Bui, Thuy Duong Nguyen, *Van Anh Nguyen*, Van Canh Nguyen. On the connection of the heat input to the forming quality in wire-and-arc additive manufacturing of stainless steels. Vacuum 209, March, 111807.

2023, Manh Ngo Huu, Thao Le Van, *Van Anh Nguyen*, Han Le Duy, Nguyen Van Tuan, Nguyen Van Truong. *Unique characteristics of the novel GTAW process for the butt joint of ultra-thin silicon steel sheets*. Journal of Manufacturing Processes.

2022, Manh Ngo Huu, Le Van Thao, *Van Anh Nguyen*, Han Le Duy. The successful joining of ultra-thin AA3003 aluminum alloy sheets by the novel GTAW process. Journal of Vacuum 207, January 2023, 111558.

2022, Manh Ngo Huu, *Van Anh Nguyen*, Han Le Duy, Murata Akihisa, Van Thao Le, Trinh Quang Ngoc. Development of a Novel Hybrid GTAW-PAW Process for Joining Ultra-thin Metal Sheets. Journal of Manufacturing Processes 80, 683-691.

2022, Van Thao Le; Quang Thanh Doan; Dinh Si Mai; Manh Cuong Bui; Hoang Son Tran; Xuan Van Tran; *Van Anh Nguyen*. Prediction and optimization of processing parameters in wire and arc-based additive manufacturing of 316L stainless steel. Journal of the Brazilian Society of Mechanical Sciences and Engineering (online).

2022, Van Thao Le; Dinh Si Mai; Manh Cuong Bui; Kilian Wasmer; *Van Anh Nguyen*; Duc Manh Dinh; Van Canh Nguyen; Duong Vu. Influences of the process parameter and thermal cycles on the quality of 308L stainless steel walls produced by additive manufacturing utilizing an arc welding source, Welding in the world (online).

2021, Tran-The Chung V, Nguyen CT, Bui KD, Nguyen LH, *Nguyen AV* & Nguyen HT. Penetration and microstructure of steel joints by ultrasonic-assisted gas metal arc welding, Japanese Journal of Applied Physics, 61 (4) Article No. 046502.

2021, Huu Loc N, *Van Anh N*, Le Duy H, Nguyen T-H, Tashiro S & Tanaka M (2021) Relationship among welding defects with convection and material flow dynamic considering principal forces in plasma arc welding, Metals, 11 (9) Article No. 1444.

2020, *Nguyen Van Anh*, Shinichi Tashiro, Ngo Huu Manh, Bui Van Hanh, Manabu Tanaka. "Effect of the Eddies Formed inside a Weld Pool on Welding Defects during Plasma Keyhole Arc Welding," *Journal of Manufacturing Processes* 59: 649-657.

2020, Nguyen, T.-h, Thanh, L.Q, Loc N.H, Huu M.N, *Anh NV*. "Effects of Different Roller Profiles on the Microstructure and Peel Strength of the Ultrasonic Welding Joints of Nonwoven Fabrics," *Applied Science* 10(12): 4101.

2020, *Nguyen Van Anh*, Shinichi Tashiro, Ngo Huu Manh, Nguyen Van Tuan, Bui Van Hanh, Manabu Tanaka. "Influence of shielding gas composition on molten metal flow behavior during plasma keyhole arc welding process," *Journal of Manufacturing Processes* 53: 431-437.

2020, Bin Xu, Shun Chen, Shinichi Tashiro, Fan Jiang, *Nguyen Van Anh*, Manabu Tanaka. "Material flow analyses of high-efficiency joint process in VPPA keyhole flat welding by X-ray transmission system," *Journal of Cleaner Production* 250 (20): 119450.

2020, Ngo Huu M, *Nguyen Van A*, Nguyen Van T, Tran Hai D, Nguyen Van T, Nguyen Tien D, Nguyen T.-H. "Material Flow Behavior on Weld Pool Surface in Plasma Arc Welding Process Considering Dominant Driving Forces," *Applied Science* 10 (10): 3569.

2019, Ngo Huu Manh, *Van Anh Nguyen*, Van Tuan Nguyen, Xu Bin, Akihisa, Murata. "Research and Development of a Novel TIG Welding Torch for Joining Thin Sheets," *Applied Science* 19 (23): 5260.

2019, *Nguyen Van Anh*, Dong Seng Wu, Shinichi Tashiro, Manabu Tanaka. "Undercut Formation Mechanism in Keyhole Plasma Arc Welding," *Welding Journal* 98: 204s-212s.

2018, Dong Seng Wu*, *Nguyen Van Anh**, Shinichi Tashiro, Manabu Tanaka. "Elucidation of the weld pool convection and keyhole formation mechanism in the keyhole plasma arc welding," *International Journal of Heat and Mass Transfer* 131: 920-931. **(* first joint author)**.

2018, Bin Xu, Shun Chen, Shinichi Tashiro, Fan Jiang, *Nguyen Van Anh*, Manabu Tanaka. "Numerical analysis of plasma arc physical characteristics under additional constraint of keyhole," *Chinese Physics B* 27: 034701.

2018, *Nguyen Van Anh*, Akihisa Murata, Tadasuke Murata, Shinichi Tashiro, Manabu Tanaka. "Influence of Welding Current on Formation of Weld Bead in TIG Welding for Joining Thin Plates," *Advanced Engineering Forum* 29: 1-11.

2018, *Nguyen Van Anh*, Shinichi Tashiro, Bui Van Hanh, Manabu Tanaka. "Experimental investigation on the weld pool formation process in plasma keyhole arc welding," *Journal of Physics D: Applied Physics* 51: 015204.

2018, *Anh Nguyen Van*, Tashiro Shinichi, Huu Manh Ngo, Akihisa Murata, Tadasuke Murata, Manabu Tanaka. "Behavior of Exit Keyhole Diameter during Switch-off Period in Plasma Keyhole Arc Welding," *Advanced Engineering Forum* 26: 87-92.

2017, *Nguyen Van Anh*, Shinichi Tashiro, Bui Van Hanh, Manabu Tanaka. "Development of Plasma-MIG Hybrid Welding Process," *Quarterly Journal of the Japan Welding Society* 35 (2): 132s-136s.

2017, Tashiro Shinichi, *Nguyen Anh Van*, Sadaike Mikio, Matsumoto Yoshio, Yamaguchi Yoshihiro, Tanaka Manabu. "Influence of Preheating on Oxygen Plasma Cutting Process," *Quarterly Journal of the Japan Welding Society* 35(2): 94s-97s.

2017, *Nguyen Van Anh*, Shinichi Tashiro, Bui Van Hanh, Manabu Tanaka. "Influence of Pilot Gas Composition on Convective Pattern of Weld Pool Surface in Plasma Keyhole Arc Welding," *Quarterly Journal of the Japan Welding Society* 35(2): 98s-102s.

2017, Tran Lam, *Nguyen Van Anh*, Shinichi Tashiro, Nguyen Thuc Ha, Mannabu Tanaka. "Development of Plasma-Mig Hybrid Welding Process for Butt Joint Welding of Thick Plate Steel," *Journal of Science & Technology* 119: 11-15.

2016, *Nguyen Van Anh*, Shinichi Tashiro, Bui Van Hanh, Manabu Tanaka. "Visualization of weld pool convective flow in Plasma keyhole arc welding," *Frontier of Applied Plasma Technology* 9: 1-6.

CONFERENCE PRESENTATIONS

2025, Dung Tien Hoang, *Van Anh Nguyen*, Tien-Dat Hoang, Quang Tu Ngo, and Van Nhat Chu. Melt Pool Dynamics and Droplet Transfer in Wire-Arc Additive Manufacturing Processes. The 2nd International Conference on Sustainability and Emerging Technologies for Smart Manufacturing (SETSM 2025). Accepted.

2025, Tran The Bach, Le Quang Hung, Nguyen Minh Hieu, Phan Tuan Phong, *Van Anh Nguyen*, Xuan Hai Le, and Dilen Damian. Wire Arc Additive Manufacturing: A Review on Technology, Challenges, and Applications. The 2nd International Conference on Sustainability and Emerging Technologies for Smart Manufacturing (SETSM 2025). Accepted.

2025, Van-Truong Nguyen, Minh-Tri Phan, Gia-Duc Pham, Manh-Ha Bui, *Van-Anh Nguyen*. Augmented Nonlinear PID Controller for Human-Robot Collaboration with Uncertainties. International Conference on Green Technology and Sustainable Development. Springer Nature Switzerland. page. pp. 80-89.

2024, Van Tuan Nguyen, *Van Anh Nguyen*, Van Thao Le, Nguyen Van Truong, Ngo Huu Manh. "In-situ" X-ray Image for Material Sciences and Manufacturing: A Review. MMMS2024 - The Fourth International Conference on Material, Machines, and Methods for Sustainable Development. Da Nang, 19-22 September. Accpted.

2024, Van Tuan Nguyen, Dilen Damian, *Van Anh Nguyen*, Van Thao Le, Ho Xuan Nang, Yuming Zhang. Research and Develop Novel Arc-Plasma-Spot Welding Process. MMMS2024 - The Fourth International Conference on Material, Machines, and Methods for Sustainable Development. Da Nang, 19-22 September. Accepted.

2024, Van Thao Le, Van Tuan Nguyen, *Van Anh Nguyen*, Ho Xuan Nang. Development of predicting models for weld bead and melting pool size in wire-arc additive manufacturing of SS 316L using artificial neural networks. MMMS2024 - The Fourth International Conference on Material, Machines, and Methods for Sustainable Development. Da Nang, 19-22 September. Accepted.

2024, *Van Anh Nguyen*, Anand Narayanan, Supriyo Ganguly. Residual street in laser powder bed processes of 316L material. International Institute of Welding Intermediate meeting, Cambridge UK 4-6 March.

2024, *Van Anh Nguyen*, Dilen Damian, Supriyo Ganguly, Van Thao Le, Van Tuan Nguyen. Melt pool behavior of wire-arc additive manufacturing. International Institute of Welding Intermediate meeting, Cambridge UK 4-6 March.

2024, Dilen Damian, *Van Anh Nguyen*, Supriyo Ganguly, Van Thao Le, Manh Ngo Huu. Breakthrough wire-arc additive manufacturing process for microscale in electronic and healthcare sectors. IC2024 conference, India, paper 78.

2024, Dilen Damian, *Van Anh Nguyen*, Supriyo Ganguly, Van Thao Le, Manh Ngo Huu. Innovated hybrid TIG-Plasma welding process for butt-joint of ultra-thin metals in the semiconductor sector. IC2024 conference, India, paper 74.

2023, Nguyen V-T, Giap H-B, Tran N-T, Manh N-H & *Nguyen V-A*. A study on fuzzy nonsingular fast terminal sliding mode control for pendulous with uncertainties. In: Intelligent Systems and Networks: ICISN 2023, Hanoi, 18-19 March 2023.

2023, Vu MD, My CA, Nguyen TN, Duong XB, Le CH, Gao J, Zlatov N, Hristov G, *Nguyen VA*, Mahmud J & Packianather MS. Prediction of the welding process parameters and the weld bead geometry for robotic welding applications with adaptive neuro-fuzzy models. In: Intelligent Systems and Networks: ICISN 2023, Hanoi, 18-19 March 2023.

2022, *Van Anh Nguyen*, Manh Ngo Huu, Murata Akihisa, Han Le Duy. Develop a novel welding process for butt-joint of ultra-thin sheets. American Welding Society AWAMR, 11-16 June 2022.

2022, *Van Anh Nguyen*, Manh Ngo Huu, Ngoc Trinh Van, Bharat Graham, Sinichi Tashiro, Manabu Tanaka. 3-Dimentional X-ray Image of the melt pool and convection flow in Welding and additive manufacturing processes. American Welding Society AWAMR, 11-16 June 2022.

2022, *Van Anh Nguyen*, Manh Ngo Huu, Thao van Le, Chi Hieu Le. Develop a Novel Tig-Plasma-Spot welding process. American Welding Society AWAMR, 11-16 June 2022.

2021, Nguyen T-H, Vu TL, Duy Phong VV, Tien Dat TN, *Van Anh N*, Son Minh P & Loc NH (2021) Investigation the ultrasonic injection molding of polyamide 6. In: 10th International Conference on Manufacturing Engineering and Processes (ICMEP 2021), Singapore, 11-14 March 2021.

2021, Nguyen T-H, *Van Anh N*, Tashiro S, Le Quy T & Tanaka M (2021) Elucidate fluid vortex in plasma arc welding. In: 10th International Conference on Manufacturing Engineering and Processes (ICMEP 2021), Singapore, 11-14 March 2021.

2021, *Van Anh N*, Manh NH, Le CH, Williams S, Ganguly S, Van Hanh B & Thanh Bui T (2021) Material flow observation by 4-Dimensional innovated X-ray image technology. In: AMAS 2021: The International Conference on Advanced Mechanical Engineering, Automation and Sustainable Development, Ha Long, 4-7 November 2021.

2021, *Nguyen VA*, Seongming H, Manh NH, Murata A, Tinh DH, Quy LT, Tashiro S & Tanaka M (2021) A novel welding solution of intelligent production system for heat exchanger equipment and lithium battery in the electric vehicle. In: Sheet Metal Welding Conference XIX: Welding Solutions for Lightweight and Electric Vehicle Production, Livonia, 2-4 November 2021.

2020, *Nguyen Van Anh*, Ngo Huu Manh, Akihisa Murata, Shinichi Tashiro, Manabu Tanaka. "Research and Development of Comprehensive Solution for Joining Ultra-thin Sheet Using in Smart Production Lines," *American Welding Society Meeting*, Las Vegas, US, November 2020.

2020, *Nguyen Van Anh*, Ngo Huu Manh, Akihisa Murata, Shinichi Tashiro, Manabu Tanaka. "Research and development of novel welding technology for joining thin plates applying in metal forming fields," *The International Institute of Welding Assembly 79th*, Singapore, July 2020.

2020, *Nguyen Van Anh*, Akihisa Murata, Shinichi Tashiro, Manabu Tanaka. "Efficiency of Narrowing Nozzle in TIG Welding Process," *Japanese Welding Society Meeting*, Hokkaido of Japan, April 2020.

2019, Bin Xu, Shun Chen, Shinichi Tashiro, Fan Jiang, *Nguyen Van Anh*, Manabu Tanaka. "In-situ observation of keyhole detouring flow in VPPA flat welding of aluminum alloy by X-ray transmission system and tracer particles," *The International Institute of Welding Assembly 78th*, Shanghai, China, July 2019.

2019, *Nguyen Van Anh*, Akihisa Murata, Ngo Huu Manh, Shinichi Tashiro, Manabu Tanaka. "Novel TIG Welding Equipment for Butt-joint of Ultrathin Metal Sheets," *Japanese Welding Society Meeting*, Tokyo of Japan, April 2020.

2018, *Nguyen Van Anh*, Shinichi Tashiro, Manabu Tanaka, Akihisa Murata. "An investigation of high precision welding process in high-speed press-line," *Japanese Welding Society Meeting*, Kyushu of Japan, April 2018.

2017, *Nguyen Van Anh*, Shinichi Tashiro, Bui Van Hanh, Manabu Tanaka. "Influence of Welding Current on Molten Pool Flow during Plasma Keyhole Arc Welding," *The 3rd International Workshop on Welding and Joining (IWWJ)*, Hanoi of Vietnam, November 2017.

2017, Bin Xu, Fan Jiang, Shun Chen, Shinichi Tashiro, *Nguyen Van Anh*, Manabu Tanaka. "Numerical analysis of plasma arc physical characteristics under additional constraint of the keyhole," *The International Institute of Welding Assembly 78th*, Bali of Indonesia, July 2017.

2016, *Nguyen Van Anh*, Shinichi Tashiro, Manabu Tanaka. "Convection Pattern of Weld Pool in Plasma Keyhole Arc Welding," *International Welding/Joining Conference*, Busan of Korea, April 2017.

2016, *Nguyen Van Anh*, Shinichi Tashiro, Manabu Tanaka. "Weld pool formation mechanism in plasma keyhole arc welding," *Trends in Welding Research of American Welding Society*, Tokyo of Japan, November 2016.

2016, *Nguyen Van Anh*, Shinichi Tashiro, Manabu Tanaka. "Observation of weld pool in plasma arc welding," *The International Institute of Welding Assembly 68th*, Melbure of Australia, July 2016.

2016, *Nguyen Van Anh*, Shinichi Tashiro, Manabu Tanaka. "Observation of three-dimensional weld pool convection in plasma keyhole arc welding," *Intermediate Meeting of International Institute of Welding (IIW)*, Genova of Italia, March 2016.

2016, *Anh Nguyen Van*, Shinichi Tashiro, Manabu Tanaka. "Influence of preheating on Oxygen plasma cutting process," *Visual-JW 2016*, Osaka of Japan, October 2016.

2015, *Anh Nguyen Van*, Shinichi Tashiro, Manabu Tanaka. "Observation of three-dimensional convection flow in weld pool in plasma arc keyhole welding of stainless steel," *Japanese Welding Society Meeting*, Hokkaido of Japan, September 2015.

PATENT

2025, *Nguyen Van Anh*. "Metal 3D printing equipment" (VN patent**, pending**)
2024, *Nguyen Van Anh*, Dilen Damian, Van Ha Nguyen. "Printing head, wire-feeder system, and mobile inovate-3D printing (WAAM) apparatus" (US patent, **pending**)
2024, *Nguyen Van Anh*, Dilen Damian, Van Ha Nguyen, Le Thu Quy. "innovative-wire-arc additive manufacturing: a novel printing head" (VN patent, **pending**)
2024, *Van Anh Nguyen*, Dilen Damian, Van Ha Nguyen, Le Thu Quy, Van Thao Le. "innovative-wire-arc additive manufacturing: a novel wire feeder apparatus" (VN patent, **pending**)
2022, *Nguyen Van Anh*, Ngo Huu manh, Akihisa Murata. "A novel auto-fixture and clamp system for butt-joint of ultra-thin sheets," May, US patent (World Intellectual Property Organization-WIPO) (**online, granted**)

INVITED TALK

2020, *Nguyen Van Anh*, "Development of Ultra-thin Sheet Welding Technologies and Future Trends," *METAEX 2020*, October, Ho Chi Minh of Vietnam, 2020
2022, *Nguyen Van Anh*, "Introduction on development of metal 3D printing/AM and commercial trends in the future, *METAEX 2022*, October, Ho Chi Minh of Vietnam, 2022
2022, *Nguyen Van Anh*, "From Welding to Metal 3D printing", Global Scientific Collaboration Towards Sustainable Development Goals, Cranfield, UK. (Even_September 2022 | GSC (internationalcollaboration.org))

TEACHING EXPERIENCE

Teaching courses/modules

- 3D printing processes, 2021-2024 (Fall)
- Robotics (hardware) in 3D printing, 2021-2024 (Fall)
- Advanced Manufacturing Technologies, 2021-present (Fall)
- Sustainable aerospace materials, 2021-2024
- Physics in welding and 3D printing, 2021-present (Fall)
- Fundamentals of Mechanical Engineering, 2024-present (Fall)
- Descriptive Geometry and Engineering Graphics, 2024 (Fall)
- Quality management, 2021- present (Spring/Fall)
- Forecasting technologies, 2024 - present (Fall)
- Industry internship program, 2024-present (Spring/Fall)
- Project I and II, 2024-present (Spring/Fall)

SUPERVISION of STUDENTS

2024: 2 MSc students
2023: 3 MSc students
2022: 2 MSc students

HONORS / AWARDS/SCHOLARSHIPS/CERTIFICATE

2025: supervised a group of 4 students to win the first prize of Vietnam National University-International School
2025: supervised one UG student to win the best thesis of Vietnam National University-International School
2024: VIFOTEC prize for breakthrough welding technology and novel welding robot
2022: Supervised one MSc student to win the best thesis at manufacturing field, Cranfield University
2021: Prize of Ministry of Economy, Trade and Industry, Japan for innovation of auto-welding robot for welding electrical material in manufacturing motors of electric vehicles
2020: Outstanding young researcher award 2020 of Vietnam welding society
2020: Science and Technology Prize of Ministry in Industry and Trade, Vietnam
2019: American Welding Society (AWS) prize-William Spraragen Memorial Award for the best paper in the welding journal whole 2020 year
2015-2018: Japanese Government Scholarship (MEXT) for PhD
2014-2015: Exchange student Scholarship at Osaka University
2013 September: Internship certificate of Osaka University on integration of humanities and sciences for the project to create research and educational hubs for innovative manufacturing in Asia
2009-2012: Excellence Student Scholarship, Hanoi University of Science and Technology
2012: Attended certificate of the student scientific research conference
2010: The second prize at the Contest on Machine Elements of Hanoi University of Science and Technology
2009: Study promotion scholarship, Namviet Industrial Equipment Co., Ltd

PROFESSIONAL SERVICE

2018-Present: Reviewed more than 200 times for more than 20 journals including: Nature communication, Scientific report, Journal of Materials Processing and Technology, Journal of Manufacturing Processes, Metals, Material, Material Research Express, Progress in Additive Manufacturing, Additive Manufacturing Letters, Physic of Fluid, Engineering, Science and Technology of Welding and Joining, Applied sciences, Lubricants, Welding in the world, Journal

of Adhesion Science and Technology, Journal of Manufacturing Systems, Corrosion Engineering Science and Technology, Mechanics of Advanced Materials and Structures, Nondestructive Testing and Evaluation, Steel Research International, Journal of the Brazilian Society of Mechanical Sciences and Engineering, Engineering, etc.

2015-Present: Foundation: International Workshop on Welding and Joining (IWWJ)
2014-Present: Foundation and Chair: Vietnamese Welding Community
2022-Present: External reviewer for PhD/Master's thesis of the University of Manchester, UK
2023-Present: External reviewer for proposals of the Natural Sciences and Engineering Research Council of Canada

MEMBERSHIP

- ✓ American Welding Society
- ✓ Japan Welding Society
- ✓ The Iron and Steel Institute Japan
- ✓ Vietnam Welding Society
- ✓ TWI-UK welding Society