Prof. Dr. Savas Dilibal

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PROFESSIONAL SUMMARY

- Extensive experience in teaching and developing courses in ***Mechanics of Materials, Statics, Additive Manufacturing, Mechatronics System Design, Robotics Welding Technologies, Introduction to Robotics, Object-oriented Design, Robot Gripper System, and Hydraulics & Pneumatics Systems*** across multiple universities, including Istanbul Gedik University. Additionally, delivered *Fully Mechanized Welding Processes and Robotics lectures* at the International Welding Institute (IIW) and the European Welding Foundation (EWF).
- Leadership in research and innovation, collaborating with industry partners on **smart materials, soft robotic systems, and advanced manufacturing technologies**. Specialized expertise in additive manufacturing, with a focus on data-driven design methodologies integrated with cutting-edge techniques such as ***Selective Laser Melting (SLM), Multi Jet Fusion (MJF), and Wire Arc Additive Manufacturing (WAAM)*.**
- Expertise in ***application-driven design, analysis, and system integration*** of ***NiTi*** **shape memory alloys (SMAs)-based mechatronic systems**, as well as pneumatically actuated, **additively manufactured soft robotics systems** for industrial applications. demonstrated through ***7 patents and 80+ publications*** in leading international journals and conferences. Serve as an editorial board member for ***Scientific Reports and Advanced Manufacturing Research (AMR).*** Reviewed *30+ internation academic journal papers* for internationally recognized peer-reviewed journals.
- Supervised ***2 PhD students and 19 master's students***, contributing to several publications in esteemed academic journals. Taught courses and seminars at ***Istanbul Gedik University, the University of Akron (OH), and the University of Illinois at Urbana-Champaign (IL)***, showcasing a diverse academic teaching portfolio.
- Active member of professional organizations including ***National Additive Manufacturing Association (TAMA), IEEE, and IEEE Robotics and Automation Society.*** Chair/Vice-chair roles in national and international conferences, including the National Robotics Conference (ToRK) and International Conference on Advances in Welding and Metal Additive Manufacturing (WAM24).
- Proficient in ***design software*** (Autodesk Fusion 360, SolidWorks), ***robotics simulation tools*** (RoboDK), fluid dynamics simulation (FluidSim), *object-oriented programming* (Python, C#), and data analysis tools (MATLAB, Mathematica), demonstrating comprehensive research and development expertise.
- Principal Investigator (PI) and researcher in successful interdisciplinary ***university-industry collaboration projects*** funded by ***NASA GRC, NSF, TUBITAK, and ASELSAN*****,** contributing to technological advancements.

ACADEMIC BACKGROUND

Post-doctorate, Mechanical Science and Engineering
University of Illinois at Urbana-Champaign, Illinois, USA — Aug 2010

Doctor of Philosophy, Metallurgical and Materials Engineering
Yildiz Technical University, Istanbul, Turkey — Dec 2005

Master of Engineering, Mechanical Engineering
Istanbul Technical University, Istanbul, Turkey — June 2003

Master of Engineering, Industrial Engineering
Gazi University, Ankara, Turkey — Sept 1999

Bachelor of Engineering, System Engineering
Army Military Academy, Ankara, Turkey — Aug 1995

+ International Welding Engineer diploma (IIW-EWF)- Jan 2023

WORK EXPERIENCE

Istanbul Gedik University, Istanbul,

Professor, Mechatronics Engineering Department — July 2024 – Present

Assoc. Professor, Mechatronics Engineering Department — Jan 2019 – July 2024

Asst. Professor, Mechatronics Engineering Department — Jan 2015 – Jan 2019

- Developed and taught the following courses: MCT410 Mechatronics System Design, MCT212 Hydraulics & Pneumatics Systems, and MCT416 Robotics Welding Technologies, MCT110 Introductıon to Mechatronics Engineering
- Supervised 2 PhD students and 19 master's students, leading to several publications in reputable journals.
- PI of 2 national research projects in advanced manufacturing techniques, collaborations with industry partners.

GeKa Robot Welding Company, Istanbul

IIW - Welding Engineer — June 2022 – Jan 2023

- Lead the university-industry cooperation-based WAAM project.
- Taught Robot Welding lectures for robot operators.

Industrial Consultant — Jan 2014 – Jun 2017

- Provided robotic GMAW-related technical consultancy for industrial robot welding projects.

Ersan Rubber Company, R&D Center, Istanbul

Industrial Consultant — June 2020 – Jan 2022

- Specialized in providing consultancy for R&D projects aimed at advancing technology and optimizing product development processes.

Bahcesehir University, Istanbul

Adjunct Professor, Mechatronics Engineering Department — Sept 2014 - Jan 2015

- Taught MCH2011 Static and Strength of Materials

University of Akron, Akron, OH, USA

Adjunct Professor, Mechanical Engineering Department — Jan 2014 - June 2014

- Taught *ME 4900- 420 Object-oriented Design & Programming*

Post-doctoral Research Associate — Jan 2013 - June 2014

- *Studied in a **NASA** funded project (**NASA`s Subsonic Fixed Wing Program – NNX11AI57A**) Experiment, modeling and applications of NiTi and NiTiHf shape memory alloys*
- *NiTi shape memory alloys-based actuators (Experimental investigation on bio-inspired robotics gripper mechanisms and controlling modes)*

University of Illinois at Urbana-Champaign

Post-doctoral Research Associate — Sept 2009 – July 2010

- *Studied in an **NSF** funded project (DIC-based in-situ mechanical testing on shape memory alloys)*

Yeditepe University, Istanbul

Adjunct Professor, Mechanical Engineering Department — Sept 2007 – Sept 2009

- *Taught ME361 Engineering Materials*
- *ME492 Senior Mechanical Eng. Design Projects, Capstone Projects (SMA-based robotic actuator system, SMA-based functional locking system design)*

NATO Multi-national Headquarters

Logistics Officer Aug 1995 - Dec 2012

- *As* a System Engineer, served in multi-national NATO-led Headquarters providing engineering-based technical solutions in Peace Support Programs.

Courses and Seminars under ERASMUS+ Staff Mobility Program

Taught graduate-level courses and seminar under the ERASMUS+ Staff Mobility Program,

- **Soft Robotics** course at Scuola Superiore Sant'Anna (Pisa, Italy) 11-17 April 2022
- **Additively Manufactured Robotic Grippers** course at the Tech University of Cluj-Napoca (Romania) 1-7 May 2023 5-13 May 2024

PROJECTS

PI, Executive

- **Development of bimetallic components via robotic wire arc additive manufacturing system (WAAM) using metal-cored/solid wires**, supported by the Scientific and Technological Research Council of Turkiye (TUBITAK) under the scope of the University-Industry Cooperation Support Program with the project number of 5220023, June 2022 – Oct 2023
- University-Industry Cooperation project, **Istanbul Gedik University** – **ASELSAN**, Design of nickel-titanium shape memory alloy actuated underwater winglet system (IU0002-17I), Jan 2017 – July 2017

Researcher

- NASA Research Project, Modeling of nickel-titanium shape memory alloys- b a s e d actuator (**NASA Glenn Research Center, Fundamental Aeronautics Program, Subsonic Fixed- Wing Project No. NNH10ZEA001N-SFW1, Grant No.: NNX11AI57A**) University of Akron - NASA GRC, Ohio Jan 2013- Jan 2014
- NSF Research Project, ***In-Situ DIC experiments on shape memory alloys****, UIUC, IL, Sept 2009-July 2010*

CITATIONS

https://scholar.google.com.tr/citations?user=ZSCgNFIAAAAJ&hl=en
Citation indices: All Citations **935** h-index **18** i10-index **34**

ADMINISTRATIVE POSITIONS

- 2014- Present (Head of Mechatronics Engineering Department at Istanbul Gedik University)
- 2014- Present (Director of Robot Tech Research and Application Center at Istanbul Gedik University)
- 2014- 2018 (Vice Director of Institute of Science and Technology at Istanbul Gedik University)

SCI-SCI EXPANDED JOURNAL PUBLICATIONS

1. Akpınar DE, **Dilibal S,** Gurol U, (2024) Experimental investigation on WAAM-based functional hard-facing bimetallic part, Journal of Mining and Metallurgy, Section B: Metallurgy, doi.org/10.2298/JMMB240505020A

2. Kocaman, E., Koklu, U., Morkavuk, S., Coskun M., Kocar O., **Dilibal S.**, Gurol U., (2024) Comparison of the mechanical properties and drilling performance of the AISI 316 parts produced with casting, LPBF and WAAM. *J Braz. Soc. Mech. Sci. Eng.* **46**, 728 https://doi.org/10.1007/s40430-024-05315-w

3. Khabiyev, A., **Dilibal, S.** Mussulmanbekova, A. Kanapiya, M. Kerimkulov, D. (2024) Additively Manufactured Continuous Processing Reactor System for Producing Liquid-Based Pharmaceutical Substances. Appl. Sci., 14 doi.org/10.3390/app14166853

4. Gurol U., Turgut B., Kumek H., **Dilibal S.**, Kocak M. (2024) Fabrication and Characterization of Wire Arc Additively Manufactured Ferritic-Austenitic Bimetallic Structure, Metals and Materials International, 30, 1342–1355 doi.org/10.1007/s12540-023-01568-7

5. Gurol U., Kocaman E., **Dilibal S.,** Kocak M. (2023) A comparative study on the microstructure, mechanical properties, wear, and corrosion behaviors of SS 316 austenitic stainless steels manufactured by casting and WAAM technologies, CIRP Journal of Manufacturing Science and Technology 47, pp. 215-227

doi.org/10.1016/j.cirpj.2023.10.005

6. Gurol U., Tumer M., **Dilibal S.** (2023) Experimental Investigation of Wire Arc Additively Manufactured Inconel 625 Superalloy, Transactions of the Indian Institute of Metals 76 (5), 1371-1379 doi.org/10.1007/s12666-022-02797-x

7. Joula M., **Dilibal S**., Mafratoglu G., Owusu Danquah J., Alipour M (2022) Hybrid Battery Thermal Management System with NiTi SMA and Phase Change Material (PCM) for Li-ion Batteries, Energies 15(12) doi.org/10.3390/en15124403

8. Gurol U., **Dilibal S**., Turgut B., Koçak M (2022) Characterization of a low-alloy steel component produced with wire arc additive manufacturing process using metal-cored wire, Materials Testing 64 (6), 755-767 doi.org/10.1515/mt-2021-2155

9. Peduk G., **Dilibal S.,** Harrysson O., Ozbek S. (2021) Experimental Investigation on the EBM-Based Additively Manufactured Prismatic Nickel–Titanium SMA Components, Russian Journal of Non-Ferrous Metals 62 (3), 357–367, doi.org/10.3103/S1067821221030020

10. Gullu, A. Owusu Danquah, J. **Dilibal, S.** (2021) Characterization of energy dissipative cushions made of Ni-Ti shape memory alloy, Smart Materials and Structures, doi.org/10.1088/1361-665X/ac383d

11. Tanriver K., **Dilibal S.** Sahin H., Kentli A. (2021) A novel design on polymeric material recycling technology, Acta Scientiarum. Technology 43 doi.org/10.4025/actascitechnol. v43i1.56211

12. **Dilibal S.,** Sahin H., Owusu Danquah J., Choi, JW (2021) Additively Manufactured Custom Soft Gripper with Embedded Soft Force Sensors for an Industrial Robot, Additive Manufacturing, International Journal of Precision Engineering and Manufacturing 22 (4), 709-718 doi.org/10.1007/s12541-021-00479-0

13. Lin M., Vatani M., Choi J.W., **Dilibal S.**, Engeberg E.D. (2020) Compliant underwater manipulator with integrated tactile sensor for nonlinear force feedback control of an SMA actuation system, Sensors and Actuators A: Physical 315 doi.org/10.1016/j.sna.2020.112221

14. Ades C.J., **Dilibal S.,** Engeberg ED (2020) Shape memory alloy tube actuators inherently enable internal fluidic cooling for a robotic finger under force control, Smart Materials and Structures, 29 doi.org/10.1088/1361-665X/ab931f

15. **Dilibal S.** (2018). Stabilized actuation of a novel NiTi shape memory alloy actuated flexible structure under thermal loading. Materiali in Tehnologije, 52(5), 599-605, doi: 10.17222/mit.2018.042

16. **Dilibal S.**, Sahin H., Celik Y. (2018). Experimental and numerical analysis on the bending response of the geometrically gradient soft robotics actuator. Archives of Mechanics, 70(5), 391-404, doi: 10.24423/aom.2903

17. Peduk G., **Dilibal S.**, Harrysson O., Ozbek S., West H. (2018). Characterization of Ni–Ti alloy powders for use in additive manufacturing. Russian Journal of Non-Ferrous Metals, 59(4), 433-439, doi: 10.3103/S106782121804003X

18. **Dilibal Savas**, Hamilton Reginald F, Lanba Asheesh (2017). The effect of employed loading mode on the mechanical cyclic stabilization of NiTi shape memory alloys. Intermetallics, 89, 1-9, doi: 10.1016/j.intermet.2017.05.014

19. **Dilibal S.**, Sahin H., Dursun E., Engeberg E. D. (2017). Nickel–titanium shape memory alloy-actuated thermal overload relay system design. Electrical Engineering, 99(3), 923930, doi: 10.1007/s00202-016-0458-2

20. Engeberg E.D., **Dilibal S.**, Vatani M., Choi J.W., Lavery J. (2015). Anthropomorphic finger antagonistically actuated by SMA plates. Bioinspiration Biomimetics, 10(5), 1-15, doi: 10.1088/1748-3190/10/5/056002

21. Saleeb A., Dhakal B., **Dilibal S.**, Owusu-Danquah J., Padula II S. (2015). On the modeling of the thermo-mechanical responses of four different classes of NiTi-based shape memory materials using a general multi-mechanism framework. Mechanics of Materials, 80, 6786, doi: 10.1016/j.mechmat.2014.09.001

22. **Dilibal S.** (2013). Investigation of nucleation and growth of detwinning mechanism in martensitic single crystal NiTi using digital image correlation. Metallography, Microstructure, and Analysis, 2(4), 242-248, doi: 10.1007/s13632-013-0083-7

23. **Dilibal S.**, Sehitoglu H., Hamilton RF, Maier HJ, Chumlyakov Y. (2011). On the volume change in Co–Ni–Al during pseudoelasticity. Materials Science and Engineering: A, 528(6), 28752881, doi: 10.1016/j.msea.2010.12.056

24. Hamilton R.F., **Dilibal S.**, Sehitoglu H., Maier H.J. (2011). Underlying mechanism of dual hysteresis in NiMnGa single crystals. Materials Science and Engineering: A, 528(3), 1877-1881, doi: 10.1016/j.msea.2010.10.042

25. **Dilibal S.**, Tabanli R. M., Dikicioglu A. (2004). Development of shape memory actuated ITU Robot Hand and its mine clearance compatibility. Journal of Materials Processing Technology, 155156, 1390-1394, doi: 10.1016/j.jmatprotec.2004.04.221

26. **Dilibal S.**, Guner E., Akturk N. (2002). Three-finger SMA robot hand and its practical analysis. Robotica, 20(02), 175-180, doi: 10.1017/S0263574701003757

OTHER PUBLICATIONS

1. Ipek G., Dalkiran A., **Dilibal S.,** (2024) Development of Hybrid Actuator System for Recovery of the Model Rockets, International Conference on INnovations in Intelligent SysTems and Applications (INISTA), Craiova, Romania, 2024, pp. 1-4, doi: 10.1109/INISTA62901.2024.10683867.

2. Akpinar D.E. Turgut B. Gurol U. **Dilibal S.** (2023) Characterization of wire arc additively manufactured wear-resıstant bımetallic component, International October Conference on Mining and Metallurgy (IOP-2023)

3. Gulnergiz E.T., **Dilibal S.**, Gormus B., Danquah J.O. and Emon O.F. (2023) Additively Manufactured Soft Pneumatic Gripper Integrated Remotely Operated Underwater Vehicle (ROV) for Grasping Archeological Remains, 5th International Congress on Human-Computer Interaction, Optimization and Robotic Applications (HORA), pp. 01-05, doi: 10.1109/HORA58378.2023

4. Hazem Z.B., Ince R. and **Dilibal S.** (2022) Joint Control Implementation of 4-DOF Robotic Arm Using Robot Operating System, International Conference on Theoretical and Applied Computer Science and Engineering (ICTASCE), pp. 72-77, doi: 10.1109/ICTACSE50438.2022

5. Ayna T., **Dilibal S.** (2022) Experimental and numerical analysis for improving the suction capacity of the manufactured water jet ejectors, Journal of Vibroengineering 24 (7), 1364-1376 doi.org/10.21595/jve.2022.22518

6. Gulnergiz E.T. and **Dilibal S.** (2022) Experimental and Numerical Analysis of Additive Manufactured Pneumatic Artificial Muscle Hand Rehabilitation Orthosis, Innovations in Intelligent Systems and Applications Conference (ASYU) pp. 1-5, doi: 10.1109/ASYU56188.2022.9925499

7. Gurol U., **Dilibal S.,** Turgut B., Baykal H., Kumek H., Koçak M. (2022) Manufacturing and characterization of WAAM-based bimetallic cutting tool. International Journal of 3D Printing Technologies and Digital Industry 6(3) 548–555, doi: 10.46519/ij3dptdi.1210836

8. **Dilibal S.** et al. (2022) Grasping of Li-ion Batteries via Additively Manufactured Soft Gripper and Collaborative Robot, International Congress on Human-Computer Interaction, Optimization and Robotic Applications (HORA), pp. 1-5, doi: 10.1109/HORA55278.2022.9799902.

9. Joula M., **Dilibal S**., Owusu-Danquah J. (2021) Smart Adaptronic Thermal Management System Designs for the Li-ion Battery Packs, IEEE International Conference on Mechatronics (ICM2021) doi: 10.1109/ICM46511.2021.9385607

10. Sapmaz A.R., **Dilibal S.,** Ozbaran C. and Gercek M. (2021) Development of Bioinspired Robotic Pectoral Fin Structure Using Radial Scissor Mechanism," 2021 3rd International Congress on Human-Computer Interaction, Optimization and Robotic Applications (HORA), pp. 1-4, doi: 10.1109/HORA52670.2021.9461379.

11. Gurol U., Turgut B., Gulecyuz N., **Dilibal S.,** Kocak M. (2021) Development of Multi-Material Components Via

Robotic Wire Arc Additive Manufacturing, International Journal of 3D Printing Technologies and Digital Industry 5(3) doi: 10.46519/ij3dptdi.1033374

12. Peduk G., **Dilibal S.,** Gurol U. (2021) Effect of Wire Electrical Discharge Machining on The Surface of Ebm-Additive Manufactured NiTi Alloys, International Journal of 3D Printing Technologies and Digital Industry 5(3) doi.org/10.46519/ij3dptdi.962015

13. Demiroz O.B. **Dilibal S.** (2021) Design and production of aluminum alloy heat sinks using the direct metal laser sintering manufacturing method for thermoelectric modules, Int. Journal of 3D Printing Technologies and Digital Industry 5 (1) doi.org/10.46519/ij3dptdi.860678

14. Ilter I.S., **Dilibal S.** and Zengin H. (2021) Piezoelectric Force Sensor-based Measurement System for Recoil Force Analysis, 5th International Symposium on Multidisciplinary Studies and Innovative Technologies (ISMSIT), pp. 596-601, doi: 10.1109/ISMSIT52890.2021.9604676

15. Ozbaran C., **Dilibal S.** (2020) Mechatronic system design of a smart mobile warehouse robot for automated storage/retrieval systems, IEEE Innovations in Intelligent Systems and Applications Conference, pp. 1-6, doi: 10.1109/ASYU50717.2020.9259882

16. Ozbaran C., **Dilibal S.** (2020) Parallel jaw robotic gripper design and production with additive manufacturing method by using horizontal and vertical rack and pinion gear mechanism, Int. J. of 3D Printing Tech. Dig. Ind., 4(2): 139-151, doi:10.46519/ij3dptdi.773133

17. Dilibal C., Hacimustafaoglu A.M. and **Dilibal. S.,** (2020) Development of IoMT Device for Mobile Eye Examination Via Cloud-based TeleOphthalmology, 21st International Conference on Research and Education in Mechatronics (REM), pp. 1-5, doi: 10.1109/REM49740.2020.9313903

18. Gaga L.A., **Dilibal S.** (2020) Investigation of the parameters affecting machining process properties of carbon prepreg composite materials used in the aerospace industry, Int. Journal of 3D Printing Technologies and Digital Industry 4 3 225–238, doi: 10.4651/ ij3dptdi.817343

19. Sapmaz A.R., **Dilibal S.** (2020) Design and additive manufacturing of two-degree of freedom wired radial scissor system using scissor-joint mechanism, Int. Journal of 3D Printing Technologies and Digital Industry 4 (3) doi.org/10.46519/ij3dptdi.832922

20. Gülnergiz, E.T., Yekdaneh, A., **Dilibal, S.**, Sahin, H. (2019) Multiple degrees of freedom pneumatic rehabilitation orthosis produced by additive manufacturing method, TORK Robotics Conference

21. Bozkurt B., **Dilibal S.,** Sahin M.Y. (2019) Investigation of the cooling performance of the thermoelectric modules for mobile cooling system, International Conference on Energy and Sustainable Built Environment, June 19-20

22. **Dilibal S**, Owusu-Danquah J. (2019) The effect of contact surface on the grasping capability of additively manufactured soft robotic gripper, 4th International Congress on 3D Printing (Additive Manufacturing) Technologies and Digital Industry, 372-377, Antalya, ISBN: 978-975-96797-3-6

23. **Dilibal S.,** Owusu-Danquah J. (2019) The effect of contact surface on the grasping capability of additively manufactured soft robotic gripper, 4th International Congress on 3D Printing (Additive Manufacturing) Technologies and Digital Industry, 372-377 ISBN: 978-975-96797-3-6

24. Peduk G., **Dilibal S.**, Harrysson O. and Ozbek S. (2019) Investigation of microstructural behavior of nickel-titanium alloy produced via additive manufacturing, 4th International Congress on 3D Printing (Additive Manufacturing) Technologies and Digital Industry, 1139-1143, ISBN: 978-975-96797-3-6

25. Yuguran E., **Dilibal S.,** Icli D., Cetinkaya F., Macit U., Sonmez E., Karakaya E., Lale B. (2019) Mechatronic system design of semi-autonomous unmanned underwater robot system, National Robotic Conference, June 26-28, 2019, ISBN: 978605625160.

26. Peduk G., **Dilibal S.**, Ozbek S. and Harrysson O. (2018) Evaluation of the structural differences between additive manufacturing and traditional manufacturing for production of nickel-titanium alloys. 3rd International Congress

on 3D Printing Technologies, 370-371, ISBN: 978-975-96797-2-9

27. **Dilibal S.**, Sahin H. Candas C. (2018) Flexible wing design and additive manufacturing for new generation bioinspired unmanned aerial vehicles. 3rd International Congress on 3D Printing Technologies, 36-37 ISBN: 978-975-96797-2-9

28. Elbaba O., Sezer S., Sahin H., **Dilibal S.** (2018) Analysis of the basic parameters of additively manufactured elastomeric materials, International Journal of 3D Printing Technologies and Digital Industry 2:1 69-75.

29. **Dilibal S**., Sahin H., (2018) Collaborative industrial robots and digital industries, International Journal of 3d Printing Technologies and Digital Industry 2:1 86-95.

30. Peduk G., **Dilibal S.,** Ozbek S., Harrysson O. (2017) Comparison of the production processes of nickel-titanium shape memory alloy through additive manufacturing. International Symposium on 3D Printing Technologies 3D-PTS2017, 391-399.

31. **Dilibal S. (2017)** The effect of heat treatment on the superelastic behavior of nickel-titanium shape memory alloys. Polytechnic Journal, 20(3), 623-627. Doi: 10.2339/politeknik.339387.

32. **Dilibal S. (2016)** The effect of long-term heat treatment on the thermomechanical behavior of NiTi shape memory alloys in defense and aerospace applications. Defense Science Journal, 15(2), 1-23.

33. Ades, C., **Dilibal S.,** Engeberg ED. (2016) Exoskeleton for Tubular Shape Memory Alloy Finger with Internal Cooling and A Superelastic SMA Spring Return, ASME Florida Conference on Recent Advances in Robotics, Miami, Florida, USA

34. Tepeyurt S., **Dilibal S.**, Sahin H. (2016) Design of industrial robot gripper using additive manufacturing technique and manipulation by operator joint movements. Robot Science Conference (ToRK-2016), 135-137.

35. Altug G., Ozistek TD., **Dilibal S.**, Ozbek S. (2015) Transparent armour systems and general applications, MSI May,3.

36. Akkus T., **Dilibal S.** (2015) The use of image processing technique on the touchless volume and dimension measurements of passengers lagguage and cargo, Automation.

37. **Dilibal S.**, Tansug D., Kocak M. (2015) Operator training on robot, mechanized and orbital welding, IXth National Welding Congress, Ankara.

38. **Dilibal S.**, Engeberg E.D. (2015) Finger-like manipulator driven by antagonistic NiTi shape memory alloy actuators, IEEE Int. Conference on Advanced Robotics, Istanbul

39. Yurtsever O., **Dilibal S.** (2014) Material characterization of nickel-titanium root canal files used in endodontic treatment. IV. Workshop on Advanced Technologies (ITC-2014)

40. Aktas G., Atapek H., Polat S., **Dilibal S.** (2014) Physical metallurgical approaches for shape memory alloys used in earthquake engineering. Workshop on Advanced Technologies (ITC-2014)

41. **Dilibal S.**, Kazancı M. (2014) Bioengineering applications of metallic and polymeric smart materials. Workshop on Advanced Technologies (ITC-2014)

42. **S. Dilibal**, A. F. Saleeb, B. Dhakal, A.E. Hurley, J. S. Owusu-Danquah, S. A. Padula II, R. D. Noebe and G.S. Bigelow (2013) Characterization Capabilities of a 3D Multi-mechanism Material Model for the Prediction of the Thermo-mechanical Behavior of Different Classes of Shape Memory Materials, ASME 2013 Conference on Smart Materials, Adaptive Structures and Intelligent Systems, September 16-18, 2013, in Snowbird, Utah

43. J.S. Owusu-Danquah, A. F. Saleeb, B. Dhakal, A.E. Hurley , **S. Dilibal**, S. A. Padula II, R. D. Noebe, and G.S. Bigelow (2013) Large-scale Simulation of a Torque-Tube Actuator Using a 3D Multi-mechanism Material Model: A Comparative Study with $Ni_{49.9}Ti_{50.1}$ and $Ni_{50.3}Ti_{29.7}Hf_{20}$ Shape Memory Alloys, ASME 2013 Conference on

Smart Materials, Sept 16-18, 2013 in Snowbird, Utah

44. A.E. Hurley, A. F. Saleeb, **S. Dilibal**, B. Dhakal, J.S. Owusu-Danquah, and S. A. Padula II (2013) Finite Element Modeling of NiTi Shape Memory Alloy Stents and Bone Staples for Biomedical Applications, ASME 2013 Conference on Smart Materials, Adaptive Structures and Intelligent Systems, Sept 16-18, 2013, in Snowbird, Utah,

45. **S. Dilibal**, H. Sehitoglu, R. Hamilton, H.J.Maier, Y. Chumlyakov **(2010)** "Detwinning on NiTi SMAs" June 20-24, 2010, Special Workshop on Shape Memory Alloy, Koc University, Istanbul.

46. **S. Dilibal**, N. Cansever **(2008)** "Material characterization of the manufactured NiTi SMAs", The International Conference for Shape Memory and Superelastic Technologies (SMST), 21-25 Sept., Stresa, Italy.

47. **Dilibal S.**, Sonmez N, Dilibal H. **(2003)** Nickel-titanium shape memory alloys and their technological usage, 3rd International Advanced Technology Symposium, 18-20 August, Ankara.

48. **Dilibal S.**, Tabanli M, Dikicioglu A. (2003) Development of shape memory actuated ITU Robot Hand and its mine clearence compatibility, Proceeding of AMPT03 Dublin, Ireland.

49. **Dilibal S.**, Dilibal H. **(2002)** ITUHand Robotic Hand and its mine clearance compatibility, pp.31-37, Defense Technology Congress, METU.

50. **Dilibal S**, Guner E. **(2000)** Design of three-finger shape memory alloy actuated SMA robot hand and application analysis. Dokuz Eylul University Engineering Faculty, Engineering Journal, 2(1), 159-173.

51. **Dilibal S.**, Guner E., **(1999)** Three fingered SMA robotic hand, XXth National Operations Research and Industrial Engineering Congress, Army Military Academy, Ankara, June 8-9, pp.98-99.

INTERNATIONAL/NATIONAL BOOKS OR CHAPTERS IN BOOKS

Book Chapter: Dilibal S., Nohut S., Kurtoglu C., Owusu-Danquah J. (2021) "Data-Driven Generative Design Integrated with Hybrid Additive Subtractive Manufacturing (HASM) for Smart Cities" C. Chakraborty et al. (eds.) Data-Driven Mining, Learning and Analytics for Secured Smart Cities: Trends and Advances, **Springer.**

Book Chapter: Dilibal, S., Sahin H. (2019) "Industry 4.0 and Additive Manufacturing with Robotic Arc Welding", Industry 4.0 Technological Fields and Applications, Pegem Academy, Istanbul.

Editor: Kocak M., **Dilibal S.** (2024) International Hybrid Conference and Exhibition on Advances in Welding and Metal Additive Manufacturing Technologies (WAM2024) ISBN: 9786259412979.

Editor: Dilibal S., Sahin E., Sahin H., Kalkan S., Sarıel S. (2017) National Robotics Conference (ToRK-2016) Proceedings Book. Istanbul Gedik University, ISBN: 9786058557215.

PATENT ISSUED

1. **Dilibal S.,** Engeberg ED., Antagonistically actuated shape memory alloy manipulator
   USPTO 2017, 9744055 B2 USA
2. **Dilibal S.,** Key and safe padlock system using nickel-titanium shape memory alloys
   TR 2008 02546 B
3. Emeksiz C., **Dilibal S**., Prismatic wind turbine blade fastener developed using superelastic nickel-titanium alloy, **TR 2014 11465B**
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