Mustafa Zahid YILDIZ Resume

Summary:
Dedicated academic, innovator, and entrepreneur with a strong background in Biotech and Electronics Engineering, and a passion for interdisciplinary research. An Associate Professor with expertise in biosensors, mechatronics, and cutting-edge technology solutions. Proven track record in academia and startup leadership, demonstrating a commitment to pushing the boundaries of innovation.

Academic and Entrepreneurial Contributions:

- **Academic Excellence:** Renowned Associate Professor with extensive experience in Biotech and Electronics Engineering. Played a pivotal role in advancing knowledge in biosensors and mechatronics through research and teaching.
- **Innovative Research:** Spearheading groundbreaking research in biosensors, contributing to the development of cutting-edge healthcare solutions. Continuously pushing the boundaries of technology.
- **Startup Leadership:** Co-founder and leader of startup ventures, applying academic expertise to real-world applications. Instrumental in transforming research into market-ready products.

Entrepreneurial Ventures:

- **Co-founder and Leader:** Co-founded and led startup initiatives focused on developing innovative technology solutions, particularly in the healthcare and biosensors sectors. Demonstrated a keen ability to translate academic knowledge into practical applications.

Education:

- **Ph.D. in Electronics Engineering:** Completed doctoral studies in Electronics Engineering, specializing in biosensors and mechatronics. Continually expanding knowledge and skills in the field.
- **Master of Science (MSc.) in Electronics Engineering:** Master's degree with a focus on advanced electronics and engineering concepts.
- **Bachelor of Science (BS) in Electronics Engineering:** Undergraduate degree with a strong foundation in electronics and engineering principles.

Academic Experience:

- **Associate Professor:** Held a distinguished academic position, contributing significantly to the field of Electronics Engineering through research, teaching, and mentorship.
- **Lecturer:** Engaged in teaching and academic activities, including coursework in Electronics Engineering, Data Structures, and Project Life Cycle.

Startup and Innovation:

- **Entrepreneurial Ventures:** Co-founded and led startup initiatives, leveraging academic knowledge to drive innovation in biosensors, mechatronics, and related fields.
- **Technology Transfer:** Successfully bridged the gap between academia and industry, facilitating the transfer of technology solutions into market-ready products.

Professional Experience:

Associate Professor, Sakarya University of Applied Sciences - 2018-Present

- Lead interdisciplinary medical device technology research projects.
- Head of the Biomedical Engineering Graduate Program.
- Professor in the Electronics Engineering Undergraduate Program.
- Mentor to diverse graduate students.
- Cultivated industry collaborations and secured research funding.

Co-Founder & Supervisor, MedixBot - 2020-Present

- Pioneered a dynamic research group focused on Continuous Health Monitoring and Auto-Drug Delivery via microneedle technologies.
- Accelerated international research publications and streamlined project proposal processes.
- Directed technical and electronic circuit design, scientific testing, calibration, and new project initiation.
- Upheld a rigorous scientific approach, nurturing innovation in R&D.

Co-Founder & Supervisor, Work3 - 2019-2020

- Led the formation of a dynamic research team specializing in Continuous Glucose Monitoring (CGM) technologies.
- Managed the Turkish Government grant relationship with KOSGEB.
- Oversaw technical and electronic circuit design, scientific testing, calibration, and project initiation.
- Championed a scientific ethos to drive innovation in R&D.

Assistant Professor, Sakarya University - 2013-2018

- Taught courses in biomedical device design, medical electronics, and medical image processing.
- Established and headed the biomedical postgraduate program.
- Orchestrated the setup of a dedicated biomedical research laboratory.
- Secured numerous interdisciplinary research projects, fueling biomedical engineering innovation.

Research Assistant, Boğaziçi University - 2006-2013

- Redesigned ECG-EMG-Pulsmeter devices for human and animal studies.
- Innovated an optical-based tactile sensor array for soft tissue lump/tumor detection.
- Contributed as an intern to various TÜBİTAK projects.
- Gained expertise and deepened passion for healthcare technology advancement.

Co-founder of MDO Tech, Ankara, Cyberpark Teknopark - 2009

- Co-founded an initiative in 2009 to develop a fetal ECG measurement device, funded by the Ministry of Industry and Technology's Techno-Entrepreneur Capital Support program.
- Led a multidisciplinary team, fostering interdisciplinary collaboration.
- Guided the project from design to prototyping, achieving a significant healthcare technology milestone.
- Leveraged collaboration, creativity, and problem-solving for technical and commercial success.

Awards and Honors:

- My team and university were honored with the Higher Education Council Outstanding Achievement Award (YÖK Üstün Başarı Ödülü) from the Government for our project on the Development of a Multimode Laser Device for Photodynamic Therapy Applications.

Publications:

My extensive research journey has resulted in an impressive portfolio of 90 international academic publications, covering diverse topics from innovative medical device designs to groundbreaking biomedical engineering studies. My dedication to advancing medical science is reflected in these publications, which have garnered attention for their contributions to photodynamic therapy, tactile sensors, and medical instrumentation/signal processing. A notable achievement includes my patented work in photodynamic therapy devices, with the potential to revolutionize cancer treatment.

Selected Articles:

1. Development of a new multi-mode NIR laser system for photodynamic therapy.
    - Authors: KAMANLI ALİ FURKAN, YILDIZ MUSTAFA ZAHİD, ARSLAN HALİL, ÇETİNEL GÖKÇEN, KENAR NECLA, Lim Hyun Soo
    - Published in: Optics & Laser Technology, 2020
    - DOI: 10.1016/j.optlastec.2020.106229
2. Development of a low-cost microcomputer-based vein imaging system.
    - Authors: YILDIZ MUSTAFA ZAHİD, BOYRAZ ÖMER FARUK
    - Published in: Infrared Physics & Technology, 2019
    - DOI: 10.1016/j.infrared.2019.02.010
3. Investigation of the therapeutic effect of 5-aminolevulinic acid-based photodynamic therapy on hepatocellular carcinoma.
    - Authors: ÖZTEN ÖZGE, GÜNEY ESKİLER GAMZE, SÖNMEZ FATİH, YILDIZ MUSTAFA ZAHİD
    - Published in: Lasers in Medical Science, 2022

    - DOI: 10.1007/s10103-021-03398-8
4. DWT-SVD Based Watermarking for High-Resolution Medical Holographic Images.
    - Authors: Horasan Fahrettin, Pala Muhammed Ali, Durdu Ali, Akgül Akif, Akmeşe Ömer Faruk, Yıldız Mustafa Zahid
    - Published in: Complexity, 2022
    - DOI: 10.1155/2022/3154650
5. A novel security and authentication method for infrared medical images with discrete time chaotic systems.
    - Authors: BOYRAZ ÖMER FARUK, Güleryüz Emre, AKGÜL AKİF, YILDIZ MUSTAFA ZAHİD, KIRAN HARUN EMRE, Ahmad Jawad
    - Published in: Optik, 2022
    - DOI: 10.1016/j.ijleo.2022.169717
6. Fractal dimension-based viability analysis of cancer cell lines in lens-free holographic microscopy via machine learning.
    - Authors: PALA MUHAMMED ALİ, ÇİMEN MURAT ERHAN, AKGÜL AKİF, YILDIZ MUSTAFA ZAHİD, BOZ ALİ FUAT
    - Published in: The European Physical Journal Special Topics, 2022
    - DOI: 10.1140/epjs/s11734-021-00342-3
7. CNN-Based Approach for Overlapping Erythrocyte Counting and Cell Type Classification in Peripheral Blood Images.
    - Authors: PALA MUHAMMED ALİ, ÇİMEN MURAT ERHAN, YILDIZ MUSTAFA ZAHİD, ÇETİNEL GÖKÇEN, AVCIOĞLU EMİR, ALACA YUSUF
    - Published in: Chaos Theory and Applications, 2022
    - DOI: 10.51537/chaos.1114878
8. Piezoelectric micropumps: state of the art review.
    - Authors: Deresgi Hamid Asadi, DAL HÜSEYİN, YILDIZ MUSTAFA ZAHİD
    - Published in: Microsystem Technologies, 2021
    - DOI: 10.1007/s00542-020-05190-0
9. A simple fractional-order chaotic system based on memristor and memcapacitor and its synchronization application.
    - Authors: Akgül Akif, Pala Muhammed Ali, Karthikeyan Anitha, Durdu Ali, Poyraz Ömer Faruk, Yıldız Mustafa Zahid
    - Published in: Chaos, Solitons & Fractals, 2021
    - DOI: 10.1016/j.chaos.2021.111306
10. A Novel Inductive Tactile Probe Design for Lump Detection in Soft Tissue Phantoms.
    - Authors: YILDIZ MUSTAFA ZAHİD, ASADI DERESHGI Hamid, KAMANLI ALİ FURKAN
    - Published in: Scientia Iranica, 2020
    - DOI: N/A (Yayın No: 7391901)

Selected Projects:

1. Development of a Position and Optically Dose-Controlled LED System for Photodynamic Therapy Applications, Tested with Colon Cancer Cell Culture Studies
    - Principal Investigator: Mustafa Zahid YILDIZ
    - Funding Source: TUBITAK 3501 (2018-2022)
2. Design and Development of a Vein Imaging Device using Image Processing Techniques
    - Principal Investigator: Mustafa Zahid YILDIZ
    - Funding Source: BAP Project (2019-2020)
3. Motorized Medical Helmet Design Facilitating and Protecting Breathing
    - Principal Investigator: Mustafa Zahid YILDIZ
    - Funding Source: Tubitak TEYDEB 1501 Project (2020-2022)
4. Design of an Active Dynamic and Portable Device for Hand Muscle Rehabilitation
    - Principal Investigator: Mustafa Zahid YILDIZ
    - Funding Source: BAP Project (2015-2017)
5. Development of Multi-Beam Mode Photodynamic Therapy Laser System
    - Principal Investigator: Mustafa Zahid YILDIZ
    - Funding Source: Tubitak 1005 Project (2017-2018)

Skills:

- **Interdisciplinary Project Management:** Experienced in leading diverse teams on projects spanning multiple disciplines.
- **Team Leadership and Mentoring:** Successfully supervised and mentored numerous graduate students and research teams.
- **Research and Development:** Proficient in conducting research and developing innovative solutions, particularly in medical device technology.
- **Medical Device Technology:** Expertise in designing and developing medical devices, including photodynamic therapy and rehabilitation equipment.
- **Data Analysis and Software Development:** Skilled in data analysis and proficient in software development for research purposes.
- **Academic Research and Publishing:** Extensive track record of academic research and publishing in various international forums.
- **Entrepreneurship and Startup Management:** Co-founded and managed a successful startup, demonstrating entrepreneurship and management skills.
- **Regulatory Compliance:** Knowledgeable in ensuring compliance with regulatory standards for medical devices.

Links and Contact:

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