Durul Ulutan
Dr. Öğr. Üyesi
Endüstri Mühendisliği
Kadir Has Üniversitesi, İstanbul
durul.ulutan@khas.edu.tr; (212) 533-6532 x1359

PROFESYONEL DENEYİM

Kadir Has Üniversitesi — *İstanbul*
Dr. Öğr. Üyesi, Endüstri Mühendisliği — *Mayıs 2019 –*

California State University – Northridge — *Northridge, CA*
Dr. Öğr. Üyesi, Üretim Sistemleri Mühendisliği — *2017 – 2019*

Bucknell University — *Lewisburg, PA*
Dr. Öğr. Üyesi, Makine Mühendisliği — *2015 – 2017*

Clemson University – ICAR — *Greenville, SC*
Doktora sonrası araştırmacı. Otomotiv Mühendisliği — *2013 – 2015*

Ford OTOSAN — *Gebze*
Ürün Mühendisi — *2007 – 2008*

ARAŞTIRMA ALANLARI

- Üretim sistemleri, talaşlı imalat ve ileri üretim
- Yardımlı üretim
- Üretim otomasyonu
- Mekatronik & robotik sistemler
- Eklemeli üretim
- Üretim kontrolü
- Sürdürülebilir üretim
- Üretim optimizasyonu
- Bilgisayar destekli tasarım, üretim ve mühendislik

EĞİTİM

Ph.D. Endüstri ve Sistem Mühendisliği, **Rutgers University**, *Piscataway*, *NJ*   *2013*
M.S. Makine Mühendisliği, **Koç University**, *Istanbul, Turkey*   *2007*
B.S. Makine Mühendisliği, **Koç University**, *Istanbul, Turkey*   *2005*

ÖDÜLLER

- **44. NAMRC Genç Hakemler Paneli**   *2016*
- **43. NAMRC Genç Hakemler Paneli**   *2015*
- **Yaz Okulu Bursu** (*NSF*) – Nanomechanics and Nanomaterials and Micro/Nanomanufacturing – A Short Course on Additive Manufacturing   *2013*

- **Öğrenci Kayıt Yardımı Ödülü** (*NSF*) – MSEC 2012   *2012*
- **Konferans Ödülü** (*Rutgers University Graduate School*) – MSEC 2012   *2012*
- **En iyi Lisansüstü Öğrenci Ödülü** (*Rutgers University Graduate School*)   *2012*
- **En Çok Okunan Makale** (*International Journal of Machine Tools & Manufacture*)   *2011*
- **Araştırma Bursu** (*Rutgers University*)   *2009*
- **Dean's Honor Roll** – *Koç University* (M.S.)   *2007*
- **Dean's Honor Roll** – *Koç University* (B.S.)   *2005*
- **Lisans Bursu** (100%) (*Koç University*)   *2001*

DEVAM EDEN ARAŞTIRMA PROJELERİ

- 5-eksenli makinede ultrasonik yardım kullanarak metal işleme performansının arttırılması
- Lazer cilalamanın üç boyutlu yazıcılarda eklemeli olarak üretilmiş parçaların kalitesini arttıracak yardımcı bir işlem olarak geliştirilmesi
- Üç boyutlu yazıcılarda üretilmiş metal parçaların yüzeylerinin lazer cilalama ile iyileştirilmesi
- Sensör füzyonu kullanarak metal işleme ve talaşlı imalat süreçlerinin gerçek zamanlı olarak tespiti, tahmini ve iyileştirilmesi
- Üç boyutlu yazıcılarda eklemeli olarak üretilmiş metal parçaların ek işlemden geçme metotlarının yüzey kalitesi ve mekanik özellikler açısından incelenmesi
- Üç boyutlu yazıcılarda eklemeli olarak üretilmiş parçaların yüzey kalitelerinin mekanik özellikleri üzerindeki etkisinin incelenmesi

GEÇMİŞ ARAŞTIRMA PROJELERİ

- Uçak parçalarının üretiminde robot programlama geliştirilmesi
- Talaşlı imalat sonucu oluşan yüzeylerin işleme ile oluşmuş tabaka kalınlığının azaltılması için lazerle cilalanması
- Üç boyutlu yazıcıyla eklemeli üretilmiş metal parçaların "depudralanması" için verimli bir tabanca ucu geliştirilmesi
- İşlenmesi zor sertleştirilmiş çelikler, nikel-bazlı alaşımlar ve titanyum-bazlı alaşımların talaşlı imalatının yüzey kalitesi ve takım aşınması parametreleri kullanılarak kontrolü ve optimizasyonu (GE Power & Water sponsorluğunda)
- Talaşlı imalatta yüksek yük altında dingil bozulmasının sensör entegrasyonu ve füzyonu ile tahmin edilmesi (GE Power & Water sponsorluğunda)
- Torna, freze ve bileme işlemlerinde X-ray Diffraction, Eddy Current ve Fine-Incremental Hole Drilling yöntemleri kullanılarak kalıntı gerilimlerinin optimizasyonu (GE Power & Water sponsorluğunda)
- Hafif metallerin elektrik yardımıyla şekillendirilmesi (Johnson Controls Inc. sponsorluğunda)
- Akan matkap tornavidalaması: farklı metal parçalarının tek taraflı ve tek işlemli birleştirilmesi (Honda sponsorluğunda)
- Paslanmaz güçlendirilmiş çeliklerin, titanyum ve nikel-bazlı alaşımların elektrik yardımlı işlenmesi
- Bayesian parametre tahmini yöntemi kullanılarak talaşlı imalat esnasındaki takım aşınmasının stokastik modellenmesi (NSF sponsorluğunda)

- Talaşlı imalat işlemlerinin tahminsel modellenmesi ve çoklu amaç fonksiyonlu optimizasyonu (NSF-CMMI 1130780)
- Talaşlı imalat işlemlerinin fizik-bazlı simülasyon modellemesi
- Yorulma aşınması modellemesinin dinamik sistem yaklaşımla çözülmesi
- Benzinli ve dizel motorlu araçlarda yakit enjeksiyon sistemi parcalarinin arastirilip geliştirilmesi (Ford OTOSAN)
- Talasli imalat işlemlerinde kalinti gerilimlerinin analitik olarak tahminsel modellenmesi ve optimizasyonu
- Bilyeli parmak frezeleme ve sert tornalama işlemlerinin termomekanik dinamiklerinin analitik tahminsel modellenmesi
- Torna ve freze işlemlerinde makine dinamiklerinin analitik modellenmesi
- Talaşlı imalat işlemlerinde üç boyutlu kuvvet, sıcaklık ve kalıntı gerilimi tahmini

ANLATILMIŞ DERSLER

California State University – Northridge   *2017 – 2019*
- MSE 410 Production Systems Modeling & Lab
- MSE 412 Manufacturing Processes & Lab
- MSE 415 Product Design
- MSE 488A Manufacturing Senior Design I
- MSE 488BCS Manufacturing Senior Design II
- MSE 511 Robotics: Fundamentals & Applications
- MSE 603 Computer-Integrated Manufacturing
- MSE 611 Robotics & Automation

Bucknell University   *2015 – 2017*
- MECH 401 Senior Design I
- MECH 402 Senior Design II
- MECH 392 Mechanical Design
- MECH 392L Mechanical Design Laboratory
- MECH 355 Manufacturing Processes
- MECH 355L Manufacturing Processes Laboratory

Clemson University   *2013 – 2015*

- Automotive Design and Project Management (Instructional Consultant)
- Vehicle Structural Design and Analysis (Co-Instructor)

Rutgers University   *2010 – 2011*
- Manufacturing Process Laboratory
- Work Design and Ergonomics Laboratory
- Automated Manufacturing Systems (Teaching Assistant)

University of Rhode Island   *2008 – 2009*
- Engineering Analysis (Teaching Assistant)
- Graphics for Mechanical Engineers (Teaching Assistant)

Koç Üniversitesi   *2002 – 2007*
- Heat Transfer (Teaching Assistant)
- Introduction to Mechanical Engineering Design (Teaching Assistant)
- Statics and Mechanics of Materials (Academic Assistant)
- Dynamics (Academic Assistant)
- Introduction to Computer Programming with C (Teaching Assistant)

YAYINLAR (Danışmanlığı yapılmış öğrenciler altı çizili gösterilmiştir; Google Scholar atıf sayısı: 1700+, h-index: 21)

Kitap Bölümleri

[B01] **D. Ulutan** & T. Özel. "Hard Machining," Chapter 13, in *Modern Manufacturing Processes*, (Ed.) M. Koç, T. Özel, John Wiley & Sons, 2019, ISBN-10:1118071921 ISBN-13: 978-1118071922.

Hakemli Dergi Makaleleri

[J20] F. Akhavan Niaki, **D. Ulutan**, L. Mears. "Parameter Inference Under Uncertainty in End-Milling γ'-Strengthened Difficult-to-Machine Alloy." *Journal of Manufacturing Science and Engineering 138.6* (2016).

[J19] F. Akhavan Niaki, L. Feng, **D. Ulutan**, L. Mears. "A Wavelet Based Data-Driven Modeling for Tool Wear Assessment of Difficult to Machine Materials." *International Journal of Mechatronics and Manufacturing Systems, Special Issue on Intelligent Manufacturing Systems 9.2* (2016): 97-121.

[J18] F. Akhavan-Niaki, **D. Ulutan**, L. Mears. "Stochastic Tool Wear Assessment in Milling Difficult to Machine Alloys." *International Journal of Mechatronics and Manufacturing Systems* 8.3/4 (2015): 134-159.

[J17] F. Akhavan Niaki, **D. Ulutan**, L Mears. "In-Process Tool Flank Wear Estimation in Machining Gamma-Prime Strengthened Alloys Using Kalman Filter." *Procedia Manufacturing 1* (2015): 696-707.

[J16] **D. Ulutan**, A. Pleta, A. Henderson, L. Mears. "Comparison and Cost Optimization of Solid Tool Life in End Milling Nickel-Based Superalloy." *Procedia Manufacturing 1* (2015): 522-533.

[J15] A. Pleta, **D. Ulutan**, L. Mears. "An Investigation of Alternative Path Planning Strategies for Machining of Nickel-Based Superalloys." *Procedia Manufacturing 1* (2015): 556-566.

[J14] J. Skovron, R. Prasad, **D. Ulutan**, L. Mears, D. Detwiler, D. Paolini, B. Baeumler, L. Claus. "Effect of Thermal Assistance on the Joint Quality of Al6063-T5A During Flow Drill Screwdriving." *Journal of Manufacturing Science and Engineering, Forming and Joining Special Issue 137.5* (2015).

[J13] J. Skovron, L. Mears, **D. Ulutan**, D. Detwiler, D. Paolini, B. Baeumler, L. Claus. "Characterization of Flow Drill Screwdriving Process Parameters on Joint Quality." *SAE International Journal of Materials and Manufacturing 8.1* (2015).

[J12] **D. Ulutan**, Y.M. Arisoy, T. Özel, L. Mears. "Empirical Modeling of Residual Stress Profile in Machining Nickel-Based Superalloys Using the Sinusoidal Decay Function." *Procedia CIRP 13* (2014): 365-370.

[J11] A. Kortabarria, A. Madariaga, E. Fernandez, J.A. Esnaola, P.J. Arrazola, C. Cappellini, **D. Ulutan**, T. Özel. "On the Machining Induced Residual Stresses in IN718 Nickel-Based Alloy: Experiments and Predictions with Finite Element Simulation." *Simulation Modelling Practice and Theory 41* (2014): 87-103.

[J10] T. Özel, **D. Ulutan**. "Effect of Machining Parameters and Tool Geometry on Serrated Chip Formation, Specific Forces and Energies in Orthogonal Cutting of Nickel-Based Super Alloy Inconel 100." *Journal of Engineering Manufacture 228.7* (2014): 673-686.

[J09] **D. Ulutan**, T. Özel. "Determination of Tool Friction in Presence of Flank Wear and Stress Distribution Based Validation using Finite Element Simulations in Machining of Titanium and Nickel Based Alloys." *Journal of Materials Processing Technology 213.12* (2013): 2217-2237.

[J08] **D. Ulutan**, T. Özel. "Multi-objective Optimization of Experimental and Simulated Residual Stresses in Turning of Nickel-alloy IN100." *Materials and Manufacturing Processes 28.7* (2013): 835-841.

[J07] T. Özel, **D. Ulutan**. "Prediction of Machining Induced Residual Stresses in Turning of Titanium and Nickel Based Alloys with Experiments and Finite Element Simulations." *CIRP Annals - Manufacturing Technology 61.2* (2012): 547-550.

[J06] **D. Ulutan**, T. Özel. "Machining Induced Surface Integrity in Titanium and Nickel Alloys: A Review." *International Journal of Machine Tools and Manufacture 51.3* (2011): 250-280.

[J05] **D. Ulutan**, M. Sima, T. Özel. **"**Prediction of Machining Induced Surface Integrity using Elastic-Viscoplastic Simulations and Temperature-Dependent Flow Softening Material Models in Titanium and Nickel-Based Alloys." *Advanced Materials Research 223* (2011): 401-410.

[J04] T. Özel, T. Thepsonthi, **D. Ulutan**, B. Kaftanoğlu. "Experiments and Finite Element Simulations on Micro-Milling of Ti-6Al-4V Alloy with Uncoated and cBN Coated Micro-Tools." *CIRP Annals – Manuf. Tech. 60* (2011): 85-88.

[J03] **D. Ulutan**, I. Lazoğlu, C. Dinç. "Three-Dimensional Temperature Prediction in Machining Processes Using Finite Difference Method." *Journal of Materials Processing Technology 209* (2009): 1111-1121.

[J02] I. Lazoğlu, **D. Ulutan**, B. E. Alaca, S. Engin. "An Enhanced Analytical Model for Residual Stress Prediction in Machining." *CIRP Annals – Manuf. Tech. 57.1* (2008): 81-84.

[J01] **D. Ulutan**, B. Erdem Alaca, I. Lazoğlu. "Analytical Modeling of Residual Stresses in Machining." *Journal of Materials Processing Technology 183* (2007): 77-87.

Davetli Konuşmalar

[T03] **D. Ulutan**. "Precision 3D Printing – An Integrated Approach Using Stochastic Modeling, In-Situ Feedback Control, and Assisted / Hybrid Manufacturing." *San José State University, Department of Aviation and Technology*, April 4, 2017.

[T02] **D. Ulutan**. "Precision Biomanufacturing & A Look toward 4D-Printing." *Drexel University, Department of Mechanical Engineering and Mechanics*, February 28, 2017.

[T01] **D. Ulutan**. "Taking Manufacturing to the Next Step." *Rutgers University, Department of Industrial & Systems Engineering*, February 23, 2016.

Hakemli Konferans Tutanakları ve Konuşmalar

[C29] **D. Ulutan**. "Waste of time or learning experience? A quantitative and qualitative analysis on the effective use of office hours." *ASEE 126th Annual Conference & Exposition*, June 16-19, 2019, Tampa, Florida. (Accepted).

[C28] A. Qattawi, **D. Ulutan**, A. Alafaghani. "Prediction of Mechanical Properties of Direct Metal Laser Sintered 15-5PH Steel Parts Using Bayesian Inference - A Preliminary Study." *ASME 2019 International Manufacturing Science and Engineering Conference (MSEC 2019)*, June 10-14, 2019, Erie, Pennsylvania.

[C27] C. Nguyen, M. Laminen, **D. Ulutan**. "A Review of Assisted / Augmented Manufacturing Processes." *ASME 2019 International Manufacturing Science and Engineering Conference (MSEC 2019)*, June 10-14, 2019, Erie, Pennsylvania.

[C26] **D. Ulutan**. "Treating students like adults - can they manage their own grading scheme?" *2019 ASEE Pacific South West Section Annual Conference and Exposition (ASEE PSW 2019)*, April 4-6, 2019, Los Angeles, California.

[C25] M. Perez Dewey, **D. Ulutan**. "Development of laser polishing as an auxiliary post-process to improve surface quality in fused deposition modeling parts." *ASME 2017 International Manufacturing Science and Engineering Conference (MSEC 2017)*, June 4-8, 2017, Los Angeles, California.

[C24] F. Akhavan Niaki, **D. Ulutan**, L. Mears. "Wavelet Based Sensor Fusion for Tool Condition Monitoring of Hard to Machine Materials." *2015 IEEE International Conference on Multisensor Fusion and Integration for Intelligent Systems,* September 14-16, 2015, San Diego, California.

[C23] L. Feng, **D. Ulutan**, L. Mears. "Energy Consumption Modeling and Analysis in Automotive Manufacturing Final Assembly Process." *3rd Annual IEEE Conference on Technologies for Sustainability (SusTech)*, July 30-August 1, 2015, Ogden, Utah.

[C22] **D. Ulutan**, A. Pleta, A. Henderson, L. Mears. "Comparison and Cost Optimization of Solid Tool Life in End Milling Nickel-Based Superalloy." *43rd North American Manufacturing Research Conference (NAMRC),* June 8-12, 2015, Charlotte, North Carolina.

[C21] **D. Ulutan**, A. Pleta, L. Mears. "Electrically-Assisted Machining of Titanium Alloy Ti-6Al-4V and Nickel-Based Alloy IN-738: An Investigation." *ASME 2015 International Manufacturing Science and Engineering Conference (MSEC 2015)*, June 8-12, 2015, Charlotte, North Carolina.

[C20] V. Bardis, F. Akhavan Niaki, **D. Ulutan**, L. Mears. "Tool Wear Prediction through Vibration Data during End-Milling of Nickel-Based Superalloys." *ASME 2015 International Manufacturing Science and Engineering Conference (MSEC 2015)*, June 8-12, 2015, Charlotte, North Carolina.

[C19] F. Akhavan Niaki, **D. Ulutan**, L. Mears. "In-Process Tool Flank Wear Estimation in Machining Gamma-Prime Strengthened Alloys Using Kalman Filter." *43rd North American Manufacturing Research Conference (NAMRC),* June 8-12, 2015, Charlotte, North Carolina.

[C18] F. Akhavan Niaki, **D. Ulutan**, L. Mears. "Parameter Estimation using Markov Chain Monte Carlo Method in Mechanistic Modeling of Tool Wear during Milling." *ASME 2015 International Manufacturing Science and Engineering Conference (MSEC 2015)*, June 8-12, 2015, Charlotte, North Carolina.

[C17] J. Skovron, **D. Ulutan**, L. Mears, D. Detwiler, D. Paolini, B. Baemler, L. Claus. "Effect of Thermal Assistance on the Joining of Al6063 during Flow Drill Screwdriving." *ASME 2015 International Manufacturing Science and Engineering Conference (MSEC 2015)*, June 8-12, 2015, Charlotte, North Carolina.

[C16] A. Pleta, **D. Ulutan**, L. Mears. "An Investigation of Alternative Path Planning Strategies for Machining of Nickel-Based Superalloys." *43rd North American Manufacturing Research Conference (NAMRC),* June 8-12, 2015, Charlotte, North Carolina.

[C15] F. Akhavan Niaki, **D. Ulutan**, L. Mears. "Parameter Estimation in Mechanistic Tool Wear Model: A Bayesian Approach." *2015 TMS Annual Meeting & Exhibition*, March 15-19, 2015, Orlando, Florida.

[C14] J. Skovron, L. Mears, **D. Ulutan**, D. Detwiler, B. Baemler, L. Claus. "Characterization of Flow Drill Screwing Process Parameters on Joint Quality." *SAE 2014 Aerospace Manufacturing and Automated Fastening Conference & Exhibition,* September 23-25, 2014, Salt Lake City, Utah.

[C13] D. Ulutan, A. Pleta, L. Mears. "Multi-Objective Particle Swarm Optimization of Machining Parameters for End Milling Titanium Alloy Ti-6Al-4V." *ASME 2014 International Manufacturing Science and Engineering Conference (MSEC 2014)*, June 9-13, 2014, Detroit, Michigan.

[C12] A. Pleta, **D. Ulutan**, L. Mears. "Investigation of Trochoidal Milling in Nickel-Based Superalloy Inconel 738 and Comparison with End Milling." *ASME 2014 International Manufacturing Science and Engineering Conference (MSEC 2014)*, June 9-13, 2014, Detroit, Michigan.

[C11] C. Stanley, **D. Ulutan**, L. Mears. "Prediction of Tool Wear Based on Cutting Forces When End Milling Titanium Alloy Ti-6Al-4V." *ASME 2014 International Manufacturing Science and Engineering Conference (MSEC 2014)*, June 9-13, 2014, Detroit, Michigan.

[C10] D. Ulutan, Y.M. Arisoy, T. Özel, L. Mears. "Empirical Modeling of Residual Stress Profile in Machining Nickel-Based Superalloys Using the Sinusoidal Decay Function." *2nd CIRP Conference on Surface Integrity (CIRP-CSI)*, May 28-30, 2014, Nottingham, UK.

[C09] D. Ulutan, H. Potluri, A. Pleta, L. Mears. "Insert Comparison in High-Speed Cutting of Titanium Alloy Ti-6Al-4V and Nickel-Based Alloy IN-738." *3rd International Conference on Virtual Machining Process Technology (VMPT)*, May 20-23, 2014, Calgary, Alberta, Canada.

[C08] T. Özel, Y.M. Arisoy, **D. Ulutan**. "Prediction of Machining Induced Microhardness using Finite Element Simulations and Machine Learning in Titanium Alloys." *7th International Conference and Exhibition on Design and Production of Machines and Dies/Molds*, June 20-23, 2013, Antalya, Turkey.

[C07] D. Ulutan, T. Özel. "Determination of Constitutive Material Model Parameters in FE-Based Machining Simulations of Ti-6Al-4V and IN-100 Alloys: An Inverse Methodology." *41st North American Manufacturing Research Conference (NAMRC),* June 10-14, 2013, Madison, Wisconsin.

[C06] D. Ulutan, T. Özel. "A Methodology to Determine Friction in Orthogonal Cutting with Application to Machining Titanium and Nickel Based Alloys." *2012 ASME International Conference on Manufacturing Science and Engineering (MSEC 2012),* June 4-8, 2012, South Bend, Indiana.

[C05] T. Özel, T. Thepsonthi, **D. Ulutan**, B. Kaftanoğlu, "Micro-Milling of Ti-6Al-4V Alloy with Uncoated and cBN Coated Micro-Tools." *6th International Conference and Exhibition on Design and Production of Machines and Dies/Molds*, June 23-26, 2011, Ankara, Turkey.

[C04] M. Sima, **D. Ulutan**, T. Özel. "Effects of Tool Micro-Geometry and Coatings in Turning of Ti-6Al-4V Titanium Alloy." *39th North American Manufacturing Research Conference (NAMRC),* June 13-17, 2011, Corvallis, Oregon.

[C03] D. Ulutan, M. Sima, T. Özel. "Prediction of Machining Induced Surface Integrity using Elastic-Viscoplastic Simulations and Temperature-Dependent Flow Softening Material Models in Titanium and Nickel-based alloys." *13th CIRP International Workshop on Modeling of Machining Operations (MMO)*, May 12-13, 2011, Sintra, Portugal.

[C02] I. Lazoğlu, **D. Ulutan**, B.E. Alaca, S. Engin. "An Enhanced Analytical Model for Residual Stress Prediction in Machining." *58th CIRP General Assembly*, August 2008, Manchester, England.

[C01] I. Lazoğlu, **D. Ulutan**, C. Dinç, "3D Temperature Fields in Machining." *3rd CIRP International HPC Conference*, June 2008, Dublin, Ireland.

Yapım ve Yazım Aşamasındaki Çalışmalar

- **D. Ulutan**. "WIP: A Methodology to Complete the Students' Learning Sequence: Teaching" (in progress).
- M. Kuttolamadom, F. Akhavan-Niaki, Y. Huang, T. Kurfess, S. Liang, L. Mears, T. Özel, S. Schmid, **D. Ulutan**, J. Wang. "Review of the State-of-the-Art on Machining Tool Wear: Mechanisms, Metrology, and Modeling" (under review).
- C. Nguyen, **D. Ulutan**. "Ultrasonically-Assisted Machining of Difficult-to-Machine Metals" (in progress).
- M. Laminen, **D. Ulutan**. "True Variable-Depth Milling of Metals Using a 5-axis Vertical Machining Center" (in progress).
- A. Qattawi, **D. Ulutan**, A. Ala'aldin. "A Stochastic Approach to Predictive Modeling of Mechanical Properties of Direct Metal Laser Sintered Steel and Nickel-Based Alloys Based on Fabrication Temperature and Direction" (in progress).
- F. Akhavan-Niaki, **D. Ulutan**, J. Outeiro, J. Karandikar. "Tool Condition Monitoring in Machining of Nickel- and Titanium-based Alloys – A Critical Review" (in progress).
- M. Laminen, C. Nguyen, **D. Ulutan**. "Assisted, Augmented & Hybrid Manufacturing Processes – A Critical Review of Materials, Modeling Efforts, Processes, and Industrial Applications" (in progress).
- F. Akhavan Niaki, **D. Ulutan**. "A Review of Tool Failure Prediction Methods in Machining Processes" (in progress).
- **D. Ulutan**, A. Pleta, J. Tarbutton. "Methods of Machining Optimization: A Review" (in progress).
- A. Pleta, **D. Ulutan**, L. Mears. "Empirical Modeling of Electrically-Assisted Machining in Steel, Titanium, and Nickel Materials" (in progress).

PROJELER

- **D. Ulutan** (PI). 2018. "Ultrasonically-Assisted Variable-Depth Milling of Metals." *CSUN College of Engineering and Computer Science Research Fellows Program* (not funded).
- B. Li, S. Gandhi, L. Liu, X. Hang & **D. Ulutan** (Co-PI, 20% share). 2018. "Smart Manufacturing (SM) Workforce Development Model Program." *Clean Energy Smart Manufacturing Innovation Institute* (under review).
- **D. Ulutan** (PI). 2018. "Automation of Robot Programming for Roughing of Lip Skins." *Klune Industries* (under review).
- **D. Ulutan** (PI). 2018. "Ultrasonically-Assisted Machining of Difficult-to-Machine Alloys." *CSUN Probationary Faculty Support Program* (funded – reassigned time).
- **D. Ulutan** (PI). 2018. "Ultrasonically-Assisted Machining of Difficult-to-Machine Alloys." *CSUN Research, Scholarship, and Creative Activity (RSCA) Award* (not funded).
- **D. Ulutan** (PI). 2017. "Learning through MATLAB: Increasing the Use of Programming in Engineering Curriculum." *CSUN Campus Quality Fee (CQF) Award* (not funded).
- **D. Ulutan** (PI). 2017. "Robot Programming for Roughing of Lip Skins." *Klune Industries* (funded - $8542).
- S. Cohen (PI), **D. Ulutan** (co-PI). 2016. "Depowdering Assistance Tool for 3D Printed Parts." *ExOne* (funded - $2500).

PROFESYONEL SERVİS

Yayın Kurulu

- *International Journal of Mechatronics and Manufacturing Systems,* 2015 – devam ediyor

Uluslararası Komite

- *International Conference and Exhibition on Design and Production of Machines and Dies/Molds,* 2016 – devam ediyor

Konferans Yöneticiliği

- *MSEC 2019*, Erie, PA, Haziran 2019
  - *Sempozyum Başkanı, "Advances in Assisted / Augmented Manufacturing"*
- *MSEC 2018*, College Station, TX, Haziran 2018
  - *Sempozyum Başkanı, "Advances in Assisted / Augmented Manufacturing"*
- *MSEC 2017*, Los Angeles, CA, Haziran 2017
  - *Sempozyum Başkanı, "Advances in Assisted / Augmented Manufacturing"*
- *MSEC 2016*, Blacksburg, VA, Haziran 2016
  - *Konferans Bölümü Başkanı, Processing*
  - *Sempozyum Başkanı, "Advances in Assisted / Augmented Manufacturing"*
- *MSEC 2015,* Charlotte, NC, Haziran 2015
  - *Sempozyum Başkanı, "Advances in Assisted / Augmented Manufacturing"*
- *MSEC 2014,* Detroit, MI, Haziran 2014
  - *Teknik Konu Başkanı, "Machining"*
  - *Teknik Konu Başkanı, "Constitutive Properties & Modeling"*
  - *Teknik Konu Başkan Yardımcısı, "Sensing, Control and Optimization"*
  - *Teknik Konu Başkan Yardımcısı, "Systems Modeling"*

Özel Amaçlı Hakemlik

- International Journal of Modeling and Simulation
- International Journal of Mechatronics and Manufacturing Systems
- International Journal of Manufacturing Research
- Journal of Advanced Manufacturing Technology
- Journal of Manufacturing Science and Engineering
- Journal of Manufacturing Systems
- Journal of Engineering Manufacture
- Journal of Manufacturing Processes
- Applied Thermal Engineering
- Sensors
- Machining Science and Technology: An International Journal
- ASME International Conference on Manufacturing Science and Engineering (*MSEC*)
- SME North American Manufacturing Research Conference (*NAMRC*)
- CIRP Conference on High Speed Machining
- Transactions of the Canadian Society for Mechanical Engineering
- American Society for Engineering Education

Diğer Servis

- CSUN Mühendislik ve Bilgisayar Bilimi Fakültesi Öğrenci İşleri Komitesi Üyesi (2017-2019)
- CSUN Üretim Sistemleri Mühendisliği Bölümü Lisansüstü Çalışmalar Komitesi Üyesi (2017-2019)

- CSUN Üretim Sistemleri Mühendisliği Bölümü Ekipman Komitesi Üyesi (2017-2019)
- CSUN Mühendislik ve Bilgisayar Bilimi Fakültesi Araştırma Bursluları Komitesi Üyesi (2017-2019)
- Bucknell Üniversitesi Mühendislik Fakültesi Uluslararası Eğitim Komitesi Üyesi (2016-2017)
- Bucknell Üniversitesi Makine Mühendisliği Bölümü Müfredat Komitesi Üyesi (2015-2016)
- Clemson Üniversitesi Doktora Sonrası Araştırmacılar Birliği (CUPDA) **Kurucu Üyesi** (2014)

PROFESYONEL ÜYELİKLER

- Society of Manufacturing Engineers (*SME*)
- American Society of Mechanical Engineers – Manufacturing Engineering Division (*ASME-MED*)
- Institute of Industrial Engineers (*IIE*)
- American Society for Engineering Education (*ASEE*)

PROFESYONEL AKTİVİTELER

• NSF Panelisti, MME Machining and Metrology	*2017*
• National Forum on Additive Manufacturing Education & Training	*2016*
• SME Additive Manufacturing Training	*2013*
• BMW Lean Six-Sigma Black Belt Training	*2013*
• NSF Workshop on Frontiers of Additive Manufacturing Research and Education	*July 2013*
• NSF Summer Institute on Nanomechanics and Nanomaterials and Micro/Nanomanufacturing – Additive Manufacturing	*May 2013*

DANIŞMANLIK

- **Doktora Öğrencileri**
  - Yujie Chen, PhD, Kavit Antani, PhD, Lujia Feng, PhD, Peng Cao, MS, Farbod Akhavan Niaki, PhD, Vasileios Bardis, MS, Jamie Skovron, PhD, Abram Pleta, PhD, Brandt Ruszkiewicz, PhD
- **Yüksek Lisans Öğrencileri**
  - Sharon Mashal, Valerie Pezzullo, MS, Hemanth Potluri, MS, Xin Yao, MS, Harshal Date, MS, Raphael Roche, MS
- **Ziyaretçi Öğrenciler**
  - Christoph Spindler, Michael Schmitt, Moritz Schmidt, Deniz Sürenkök, Philipp Klee
- **Lisans Öğrencileri**
  - Osmar Estrada, Juan Espericueta, Marshall Tucker Laminen, Christy Nguyen, Jayshawna Jones, Mario Perez Dewey, Rebecca Skovron, Branden Hing, Can Sarlayan, Isa Bjorkeson, Mitch Stauffer, Kurtis Monahan, Nathan Ortiz, Alexandra Hrabchak, Rohan Prasad, Ryan Herrick, Corey Benson, Greg Wilson, Nathan DeVol, Cindy Stanley, Andrew Barrett, Elizabeth Jones, Ertugrul Deniz Akbay, Özen Özdemir

<u>YETENEKLER</u>

- **Yazılım:** MS Office Suite, Apple iWork Suite, LabView, Unigraphics, Solidworks, DEFORM, FeatureCAM, MasterCAM, RoboGuide, CATIA, SIMPROCESS
- **Programlama:** C, MATLAB, SAS, GAMS, Mathematica, Minitab, CNC Programlama, Arduino & Microprocessor programlama, Robot programlama
- **Dil:** İngilizce, İspanyolca (başlangıç), Almanca (başlangıç)