

METİN MURADOĞLU

Makine Mühendisliği Bölümü
Koç Üniversitesi
Rumelifeneri Yolu, Sarıyer
İstanbul, TÜRKİYE 34450

Tel: +90(212) 338 14 73
Faks: +90(212) 338 15 48
E-posta: mmuradoglu@ku.edu.tr
<http://home.ku.edu.tr/~mmuradoglu>

EĞİTİM

CORNELL ÜNİVERSİTESİ, Ithaca, NY, USA.

Doktora: Havacılık Mühendisliği, Ocak 2000.

Doktora Tezi: A Consistent Hybrid Finite-Volume/Particle Method for the PDF Equations of Turbulent Reactive Flows

Masır: Havacılık Mühendisliği, Ocak 1997.

Masır Tezi: Implicit Multigrid Solution of the Preconditioned Euler Equations

İSTANBUL TEKNİK ÜNİVERSİTESİ, İstanbul.

Lisans Derecesi: Uçak Mühendisliği, Temmuz 1992.

ATAMALAR

Eylül 2016-Halihazır	Profesör , Makine Mühendisliği Bölümü, Koç Üniversitesi, İstanbul, Türkiye.
Aralık 2007-Eylül 2016	Doçent , Makine Mühendisliği Bölümü, Koç Üniversitesi, İstanbul, Türkiye.
Eylül 2001-Aralık 2007	Yardımcı Doçent , Makine Mühendisliği Bölümü, Koç Üniversitesi, İstanbul, Türkiye.
Şubat 2000-Ağustos 2001	Doktora Sonrası Araştırmacı , Makine & Havacılık Mühendisliği, Cornell Üniversitesi, Ithaca, NY, ABD.
Ağustos 1998-Ocak 2000	Graduate Research Assistant , Makine & Havacılık Mühendisliği, Cornell Üniversitesi, Ithaca, NY, ABD.
Mayıs 1998-Ağustos 1998	DOE/AGTSR Industrial Intern , Rolls-Royce Uçak Motor Fabrikası, Indianapolis, IN, ABD.
Ağustos 1997-Mayıs 1998	Araştırma Görevlisi , Makine & Havacılık Mühendisliği, Cornell Üniversitesi, Ithaca, NY, ABD.
Ocak 1995-Ağustos 1997	Araştırma Görevlisi , Makine & Havacılık Mühendisliği, Cornell Üniversitesi, Ithaca, NY, ABD.
Temmuz 1993-Ağustos 1994	Araştırma Görevlisi , Uçak Mühendisliği, İstanbul Teknik Üniversitesi, İstanbul, Türkiye.

ZİYARETÇİ POZİSYONLAR

Haziran 2019-Ağustos 2019	Ziyaretçi Bilim İnsanı , Akıllı Fiziksel Sistemler Bölümü, Max Planck Enstitüsü, Stuttgart, Almanya.
Haziran 2017-Ağustos 2017	Ziyaretçi Profesör , Biyomedikal Mühendisliği Bölümü, Michigan Üniversitesi, Ann Arbor, MI, ABD.
Haziran 2014-Temmuz 2014	Ziyaretçi Profesör , Makine & Havacılık Mühendisliği Bölümü, Princeton Üniversitesi, Princeton, NJ, ABD.
Temmuz 2013-Ocak 2014	Ziyaretçi Profesör , Makine & Havacılık Mühendisliği Bölümü, Notre Dame Üniversitesi, Notre Dame, IN, ABD.
Temmuz 2007-Ağustos 2007	Ziyaretçi Bilim İnsanı , Mühendislik & Uygulamalı Bilimler Fakültesi, Harvard Üniversitesi, Cambridge, MA, ABD.

Temmuz 2006-Ağustos 2006	Ziyaretçi Bilim İnsanı , Mühendislik & Uygulamalı Bilimler Fakültesi, Harvard Üniversitesi, Cambridge, MA, ABD.
Jul. 2005-Aug. 2005	Ziyaretçi Bilim İnsanı , Mühendislik & Uygulamalı Bilimler Fakültesi, Harvard Üniversitesi, Cambridge, MA, ABD.
Jul. 2004-Aug. 2004	Ziyaretçi Bilim İnsanı , Mühendislik & Uygulamalı Bilimler Fakültesi, Harvard Üniversitesi, Cambridge, MA, ABD.

AKADEMİK SERVİSLER

2001-Halihazır	Staj Komitesi Üyesi , Makina Mühendisliği Bölümü, Koç Üniversitesi, İstanbul.
2001-Halihazır	Çift Ana Dal Komitesi Üyesi , Makina Mühendisliği Bölümü, Koç Üniversitesi, İstanbul.
2014-Halihazır	ASME Koç Üniversitesi Kolu Akademik Danışmanı , Koç Üniversitesi, İstanbul.
2008-2013	Bologna Esgüdüm Komitesi (BEK) Üyesi Koç Üniversitesi, İstanbul.
2001-2013	Erasmus Program Kordinatörü , Mühendislik Fakültesi, Koç Üniversitesi, İstanbul.
2008-2010	Disiplin Komitesi Üyesi , Koç Üniversitesi, İstanbul.
2001-2006	Akademik Kurul Üyesi , Mühendislik Fakültesi Koç Üniversitesi, İstanbul.
2001-2006	Yüksek Lisans ve Doktora Kabul Komitesi Üyesi , Makina Mühendisliği Bölümü, Koç Üniversitesi, İstanbul.

AKADEMİK ÖDÜLLER VE ONURLAR

- Assosiyе Üye, Türkiye Bilimler Akademisi (TÜBA) (2012-Halihazır).
- TÜBİTAK Teşvik Ödülü (2010).
- Mustafa Parlar Araştırma Ödülü, Ortadoğu Teknik Üniversitesi (ODTÜ) (2009).
- Fevzi Akkaya Bilimsel Etkinlikleri Destekleme Fonu (FABED), Genç Bilim İnsanlarına Üstün Başarı Ödülü (2009).
- Türkiye Bilimler Akademisi Genç Bilim İnsanlarını Ödüllendirme Programı (TÜBA-GEBİP) Ödülü (2009).
- NNIN Seyahat Ödülü , Harvard Üniversitesi (2006).
- American Physical Society (APS) Seyahat Ödülü (2005).
- Harvard Üniversitesi-Koç Üniversitesi Bilimadamı Değişim Bursu (2004).
- IUTAM Seyahat Ödülü (2004).
- En iyi öğrenci semineri ödülü (Jayesh Prize): Kararlılık, Geçiş ve Türbülans Seminerleri, Cornell Üniversitesi (1998).
- Clemson Internship Ödülü, DOE/AGTSR (1998).
- Milli Eğitim Bakanlığı Yurtdışı Doktora Bursu (1994).

AKADEMİK SERVİSLER VE KATILIMLAR

- **Bilim Kurulu Üyesi:** The International Conference on Computational Fluid Dynamics (ICCFD10), Barcelona, İspanya (2018).
- **Bilim Kurulu Üyesi:** The International Conference on Computational Fluid Dynamics (ICCFD9), İstanbul (2016).
- **Bilim Kurulu Üyesi:** Ulusal Havacılık ve Uzay Konferansı (2006-Halihazır).
- **Uluslararası Program Komite Üyesi:** The 10th Biennial ASME Conference on Engineering Systems Design and Analysis (ESDA2010), İstanbul (2010).
- **Bilim Kurulu Üyesi:** Ankara International Aerospace Conference (2009).
- **Düzenleme Kurulu Üyesi:** IUTAM Symposium on Recent Advances in Multiphase Flows: Numerical and Experimental, İstanbul (2007).

- **Bilim Kurulu Üyesi:** Ankara International Aerospace Conference (2005-2012).
- **Yönetim Kurulu Üyesi:** Amerikan Makina Mühendisleri Odası (ASME) Türkiye Kolu (2006-2010).
- **TÜBİTAK:** Proje önerilerini değerlendirme paneli üyesi.
- **TEYDEB (TİDEB):** Proje değerlendirme ve izleme hakemliği.
- **Hakem:** Partnership for Advanced Computing in Europe (PRACE).
- **Hakem:** The Qatar National Research Fund (QNRF) and The Estonian Research Council (ETAG).
- **Hakemlikler:** Journal of Computational Physics, Computers and Fluids, Journal of Fluid Mechanics, Physics of Fluids, Physical Review Fluids, International Journal of Multiphase Flows, Journal of Non-Newtonian Fluid Mechanics, Combustion and Flame, Combustion Theory and Modelling, Flow Turbulence and Combustion, International Journal of Heat and Mass Transfer, Physical Review Letters, Physical Review E, European Journal of Mechanics-B/Fluids, Theoretical and Computational Fluid Dynamics, Langmuir, Journal of Colloid and Interface Science, Journal of Micromechanics and Microengineering, Microfluidics and Nanofluidics, Biomicrofluidics, The Journal of Supercritical Fluids, Colloids and Surfaces A: Physicochemical and Engineering Aspects, Journal of Industrial & Engineering Chemistry Research, Chemical Engineering & Processing: Process Intensification, Journal of Fluids and Structures, Journal of Physics A: Mathematical and General, Journal of Applied Mechanics-Transactions of ASME, Journal of Fluids Engineering-Transactions of ASME, Energy & Fuels, Computer Physics Communications, Mathematical Medicine and Biology: A Journal of the IMA, Turkish Journal of Mathematics, Applied Mathematics Letters.

ARAŞTIRMA ALANLARI

- **Biyolojik ve Mikro Sistemlerde Çok Fazlı Akışlar:** Biyo/mikro sistemlere uygulanan veya bu sistemler tarafından ilham edilen çok fazlı/çok akışkanlı akışların sayısal ve teorik modellenmesi; Akışkan-biyolojik membran etkileşimleri; Kabarcık ve damlacıklar; Çözülemez ve çözülebilir yüzey aktif maddelerinin etkileri; Çok-fazlı akış sistemlerinde faz değişimi ve yanma; Termokapileri (Marangoni) etkisi; Damlacık ve kabarcıkların üzerinde elektrik alan etkisi (elektrohidrodinamik); Optofluidics.
- **Türbülanslı Akışlar:** Kimyasal reaksiyon içeren türbülanslı akışların Olasılık Yoğunluk Fonksiyonu (OYF) yöntemiyle modellenmesi ve türbülans-yanma etkileşimleri. Filtre edilmiş olasılık yoğunluk fonksiyonu vasıtası ile kimyasal reaksiyon içeren türbülanslı akışların büyük çalkantı simülasyonu (PDF/LES).
- **Hesaplamalı Akışkanlar Dinamiği:** Olasılık yoğunluk fonksiyonu (OYF) model denklemlerinin çözümü için hibrit sonlu-farklar/partikül-tabanlı Monte-Carlo metodu; Serbest arayüz bulunan akış problemlerinin modellenmesi için sonlu-hacimler/arayüz izleme metodu; Büyük çalkantı yöntemi (LES); Daldırılmış sınır yöntemi; Düşük Mach sayılarında sıkıştırılabilir akış denklemlerinin çözümü için suni sıkıştırılabilirlik yöntemi; Şok dalgası da içeren sıkıştırılabilir transonik akışlar için kapalı (implicit) sonlu-hacimler metodu.

ATIFLAR¹: ISI Web of Science: **1390** (1453 konferanslar dahil); Google Scholar: **2300**.

H-İndeksi¹: ISI Web of Science: 21; Google Scholar: 25.

ULUSLARARASI HAKEMLİ DERGİLERDEKİ YAYINLAR

1. *M. Muradoglu, P. Jenny, S.B. Pope and D.A. Caughey, "A consistent hybrid finite-volume/particle method for the PDF equations of turbulent reactive flows", J. Comput. Phys., 154(2):342-371 (1999).*

¹Mayıs 3, 2021 itibarı ile

2. P. Jenny, S.B. Pope, *M. Muradoglu* and D.A. Caughey, “A hybrid algorithm for the joint PDF equations of turbulent reactive flows”, **J. Comput. Phys.**, 166(2):218-252 (2001).
3. P. Jenny, *M. Muradoglu*, K. Liu, S.B. Pope and D.A. Caughey, “PDF simulations of a bluff-body stabilized flow”, **J. Comput. Phys.**, 169(1):1-23 (2001).
4. *M. Muradoglu*, S.B. Pope and D.A. Caughey, “The hybrid method for the PDF equations of turbulent reactive flows: Consistency conditions and correction algorithms”, **J. Comput. Phys.**, 172(2):841-878 (2001).
5. *M. Muradoglu* and S.B. Pope, “Local time-stepping algorithm for solving probability density function turbulence model equations”, **AIAA Journal**, 40(9):1755-1763 (2002).
6. *M. Muradoglu*, K. Liu and S.B. Pope, “PDF modeling of a bluff-body stabilized turbulent flame”, **Combust. Flame**, 132:115-137 (2003).
7. *M. Muradoglu* and S. Gokaltun, “Implicit multigrid computations of buoyant drops through sinusoidal constrictions”, **J. Appl. Mech.-Transactions of the ASME**, 71(6):857-865 (2004).
8. *M. Muradoglu and H.A. Stone*, “Mixing in a drop moving through a serpentine channel: A computational study”, **Phys. Fluids**, 17(7), Art. No. 073305 (2005).
9. *M. Muradoglu* and A.D. Kayaalp, “An auxiliary grid method for computations of multiphase flows in complex geometries”, **J. Comput. Phys.**, 214(2):858-877 (2006).
10. S. Nas, *M. Muradoglu* and G. Tryggvason, “Pattern formation of drops in thermocapillary migration”, **Int. J. Heat Mass Trans.**, 49(13-14):2265-2276 (2006).
11. U. Olgac, A.D. Kayaalp and *M. Muradoglu*, “Buoyancy-driven motion and breakup of viscous drops in constricted capillaries”, **Int. J. Multiphase Flow**, 32(9):1055-1071 (2006).
12. *M. Muradoglu* and H.A. Stone, “Motion of large bubbles in curved channels”, **J. Fluid Mech.**, 570:455-466 (2007).
13. *M. Muradoglu*, Axel Günter and H.A. Stone, “A computational study of axial dispersion in segmented gas-liquid flow”, **Phys. Fluids**, 19(1), Art. No. 044706 (2007).
14. *M. Muradoglu* and G. Tryggvason, “A front-tracking method for computation of interfacial flows with soluble surfactants”, **J. Comput. Phys.**, 227(4):2238-2262 (2008).
15. S. Tasoglu, U. Demirci and *M. Muradoglu*, “The effect of soluble surfactant on the transient motion of a buoyancy-driven bubble”, **Phys. Fluids**, 20, Art. No. 040805, (2008). (**Featured the cover image of the April 2008 issue.**)
16. A. Kiraz, Y. Karadag and *M. Muradoglu*, “Large spectral tuning of a water/glycerol microdroplet by a focused laser: Characterization and modeling”, **Phys. Chem. Chem. Phys.**, 10(42):6446-6454 (2008).
17. A. Kiraz, Y. Karadag, S.C. Yorulmaz and *M. Muradoglu*, “Reversible photothermal tuning of a salty water microdroplet”, **Phys. Chem. Chem. Phys.**, 11(15):2597-2600 (2009). (**Highlighted inside the front cover of the journal.**)
18. S.C. Yorulmaz, M. Mestre, *M. Muradoglu*, B.E. Alaca and A. Kiraz, “Controlled observation of non-degenerate cavity modes in a microdroplet on a superhydrophobic surface”, **Optics Communications**, 282(14):3024-3027 (2009).
19. H. Dogan, S. Nas and *M. Muradoglu*, “Mixing of miscible liquids in gas-segmented serpentine channels”, **Int. J. Multiphase Flow**, 35:1149-1158 (2009).
20. *M. Muradoglu* and S. Tasoglu, “A front-tracking method for computational modeling of Impact and spreading of viscous droplets on solid walls”, **Comput. Fluids**, 39(4):615-625 (2010).

21. S. Tasoglu, G. Kaynak, U. Demirci, A.J. Szeri and *M. Muradoglu*, “Impact of a compound droplet on a flat surface: A model for single cell epitaxy”, **Phys. Fluids**, 22, Art. No. 082103 (2010).
22. *M. Muradoglu*, “Axial dispersion in segmented gas-liquid flow: Effects of channel curvature”, **Phys. Fluids**, 22, Art. No. 122106 (2010).
23. U. Olgac and *M. Muradoglu*, “Effects of surfactant on liquid film thickness in the Bretherton problem”, **Int. J. Multiphase Flow**, 48:58-70 (2013).
24. U. Olgac, D. Izbassarov and *M. Muradoglu*, “Direct numerical simulation of an oscillating droplet in partial contact with a substrate”, **Comput. Fluids**, 77:152-158 (2013).
25. U. Olgac and *M. Muradoglu*, “Computational modeling of unsteady surfactant-laden liquid plug propagation in neonatal airways”, **Phys. Fluids**, 25(7), Art. No. 071901 (2013).
26. *M. Muradoglu* and G. Tryggvason, “Simulations of soluble surfactants in 3D multiphase flow”, **J. Comput. Phys.**, 274:737-757 (2014).
27. R. Mokhtarpoor, H. Turkeri and *M. Muradoglu*, “A new robust consistent hybrid finite-volume/particle method for solving the PDF model equations of turbulent reactive flows”, **Comput. Fluids**, 105:39-57 (2014).
28. D. Izbassarov and *M. Muradoglu*, “A front-tracking method for computational modeling of viscoelastic two-phase systems”, **J. Non-Newtonian Fluid Mech.**, 223:122-140 (2015).
29. D. Izbassarov and *M. Muradoglu*, “A computational study of two-phase viscoelastic systems in a capillary tube with a sudden contraction/expansion”, **Phys. Fluids**, 28, Art. No.012110 (2016).
30. D. Izbassarov and *M. Muradoglu*, “Effects of viscoelasticity on drop impact and spreading on a solid surface”, **Physical Review Fluids**, 1(2), Art. No. 023302 (2016).
31. A. Mustafa, A. Erten, R.A. Ayaz, O. Kayillioglu, A. Eser, M. Irfan, *M. Muradoglu*, M. Tanyeri, A. Kiraz, “Enhanced dissolution of liquid microdroplets in the extensional creeping flow of a hydrodynamic trap”, **Langmuir**, 32:9460-9467 (2016).
32. J. Feng, *M. Muradoglu*, H. Kim, J.T. Ault and H. A. Stone, “Dynamics of a bubble bouncing at a liquid/liquid/gas interface”, **J. Fluid Mech.**, 807:324-352 (2016).
33. M. Nooranidoost, D. Izbassarov and *M. Muradoglu*, “Droplet formation in a flow focusing configuration: Effects of viscoelasticity”, **Phys. Fluids**, 28, 123102 (2016).
34. M. Irfan and *M. Muradoglu*, “A front-tracking method for direct numerical simulation of evaporation process in a multiphase system”, **J. Comput. Phys.**, 337:132-153 (2017).
35. J. Lu, *M. Muradoglu* and G. Tryggvason, “Effect of insoluble surfactant on turbulent bubbly flows in vertical channels”, **Int. J. Multiphase Flow**, 95:135-14 (2017).
36. H. Zolfaghari, D. Izbassarov and *M. Muradoglu*, “Simulations of viscoelastic two-phase flows in complex geometries”, **Comput. Fluids**, 156:548-561 (2017).
37. M. Irfan, *M. Muradoglu*, “A front-tracking method for particle-resolved simulation of evaporation and combustion of a fuel droplet”, **Comput. Fluids**, 174:283-299 (2018).
38. E. Lepowsky, *M. Muradoglu* and S. Tasoglu, “Towards preserving post-printing cell viability and improving the resolution: past, present, and future of 3D bioprinting theory”, **Bioprinting**, 11:e00034 (2018).
39. M. N. Farooqi, D. Izbassarov, *M. Muradoglu*, D. Unat, “Communication analysis and optimization of 3D front tracking method for multiphase flow simulations”, **International Journal of High Performance Computing Applications**, 33(1):67-80 (2019).

40. H. Turkeri, X. Zhao, S.B. Pope and *M. Muradoglu*, “Large eddy simulation/probability density function simulations of the Cambridge turbulent stratified flame series”, **Combust. Flame**, 199:24-45 (2019).
41. H. Turkeri, S.B. Pope and *M. Muradoglu*, “A LES/PDF simulator on block structured meshes”, **Combust. Theory Model**, 23(1):1-41 (2019).
42. M. Nooranidoost, M. Haghshenas, *M. Muradoglu* and R. Kumar, “Cell encapsulation modes in a flow focusing microchannel: Effect of shell fluid viscosity”, **Microfluidics and Nanofluidics**, 23(3):Article Number:31 (2019).
43. Z. Rashid, A. Erten, B. Morova, *M. Muradoglu*, A. Jonas and A. Kiraz, “Passive sorting of emulsion droplets with different interfacial properties using laser-patterned surfaces”, **Microfluidics and Nanofluidics**, 23(5):Article Number:65 (2019).
44. M. Nooranidoost, D. Izbassarov, S. Tasoglu, *M. Muradoglu*, “A computational study of droplet-based bioprinting: Effects of viscoelasticity”, **Phys. Fluids**, 31(8):081901 (2019).
45. *M. Muradoglu*, F. Romano, H. Fujioka, J.B. Grotberg, “Effects of surfactant on propagation and rupture of a liquid plug in a tube”, **J. Fluid Mech.**, 872:407-437 (2019).
46. F. Romano, H. Fujioka, *M. Muradoglu*, J.B. Grotberg, “Liquid plug formation in an airway closure model”, **Physical Review Fluids**, 4(9):Article Number: 093103 (2019).
47. Z. Ahmed, D. Izbassarov, J. Lu, G. Tryggvason, *M. Muradoglu*, O. Tammisola, “Effects of soluble surfactant on lateral migration of a bubble in a pressure driven channel flow”, **Int. J. Multiphase Flow**, 126:103251 (2020).
48. Z. Ahmed, D. Izbassarov, P. Costa, M. Muradoglu, O. Tammisola, “Turbulent bubbly channel flows: Effects of soluble surfactant and viscoelasticity”, **Comput. Fluids**, 212, 104717 (2020)
49. F. Romano, *M. Muradoglu*, H. Fujioka, J.B. Grotberg, “The effect of viscoelasticity in an airway closure model”, **J. Fluid Mech.**, 913: A31 (2021).
50. H. Turkeri, X. Zhao, *M. Muradoglu*, “Large eddy simulation/probability density function modeling of turbulent swirling stratified flame series ”, *Phys. Fluids* 33(2): 025117 (2021).
51. H. Fujioka, F. Romano, *M. Muradoglu*, J.B. Grotberg, “A particle method for the propagation and split of a liquid plug at an airway bifurcation model”, **J. Fluid Mech.**, (submitted) (2021).
52. S.A. Bahrani, S. Hamidouche, K. Seck, C. Duc, *M. Muradoglu*, J.B. Grotberg, F. Romano, “Rupture of an elastoviscoplastic liquid plug with surfactant”, **Phys. Fluids**, (submitted) (2021).
53. D. Izbassarov, Z. Ahmed, P. Costa, V. Vuorinen, O. Tammisola, *M. Muradoglu*, “Polymer drag reduction in a surfactant-laden turbulent channel bubbly flow”, **Physical Review Fluids**, (submitted) (2021).
54. O. Erken, F. Romano, J.B. Grotberg, *M. Muradoglu*, “Capillary instability of a two-layer annular film: An airway closure model”, **J. Fluid Mech.**, (submitted) (2021).
55. F. Romano, *M. Muradoglu*, H. Fujioka, J.B. Grotberg, “The effect of surfactant in an airway closure model”, (preprint, to be submitted) (2021).

KİTAP BÖLÜMÜ

1. *M. Muradoglu*, “Finite-volume/front-tracking computations of dispersed multiphase flows in complex geometries”, **Frontiers of Computational Fluid Dynamics-2004**, D.A. Caughey and M. Hafez, Editors, World Scientific Publishing (2006).
2. *M. Muradoglu*, “The front-tracking method for multiphase flows in microsystems: Fundamentals”, **Microfluidics Based Microsystems: Fundamentals and Applications**, Book Series: NATO Science for Peace and Security Series A-Chemistry and Biology, pp: 203-220 (2010).

3. *M. Muradoglu*, “The front-tracking method for multiphase flows in microsystems: Applications”, **Microfluidics Based Microsystems: Fundamentals and Applications**, Book Series: NATO Science for Peace and Security Series A-Chemistry and Biology, pp: 221-242 (2010).
4. D. Izbassarov and *M. Muradoglu*, “Pendant droplets: Overview of dynamics and applications”, **Laser Optofluidics in Fighting Multiple Drug Resistance**, M.L. Pascu, Editor, Bentham e-Books, (2017).

RAPORLAR

1. *M. Muradoglu* and S.B. Pope, “Pilotlu jet alevlerinin olasılık yoğunluk fonksiyonu (OYF) yöntemiyle hesaplamaları”, United Technologies Araştırma Merkezi (UTRC) Proje Raporu, Cornell Üniversitesi, Ithaca, NY, ABD (2001).
2. *M. Muradoglu* and S.B. Pope, “Küt cisimle stabilize edilmiş türbülanslı alevlerin OYF yöntemiyle modellenmesi”, FDA Raporu, Cornell Üniversitesi, Ithaca, NY, ABD (2001).
3. *M. Muradoglu*, “Mikro laboratuvar (Lab-On-A-Chip), birim mikro operasyonlar ve bilgisayar simülasyonları”, Türkiye Bilimsel ve Teknolojik Araştırma Kurumu (TÜBİTAK), Türkiye (2008).
4. *M. Muradoglu*, “Çok fazlı/akışkanlı akışların sayısal modellenmesi: Multi-fizik etkiler”, Türkiye Bilimsel ve Teknolojik Araştırma Kurumu (TÜBİTAK), Türkiye (2011).
5. *M. Muradoglu*, “Filtre edilmiş olasılık yoğunluk fonksiyonu yöntemiyle türbülanslı yanmanın modellenmesi”, Türkiye Bilimsel ve Teknolojik Araştırma Kurumu (TÜBİTAK), Türkiye (2014).
6. *M. Muradoglu*, “Biyolojik/mikro-akışlarda Newtonsal olmayan damlacıkların sayısal modellenmesi”, Türkiye Bilimsel ve Teknolojik Araştırma Kurumu (TÜBİTAK), Türkiye (2016).
7. *M. Muradoglu*, “RANS/PDF ve LES/PDF yöntemleri çerçevesinde gölge-pozisyon karışım modeli için etkin bir sayısal çözüm yönteminin geliştirilmesi”, Türkiye Bilimsel ve Teknolojik Araştırma Kurumu (TÜBİTAK), Türkiye (2019).
8. *M. Muradoglu*, “Çözülebilir yüzey aktif maddesi ve viskoelastik etkilerin üç boyutlu çok fazlı akışlarda sayısal modellenmesi”, Türkiye Bilimsel ve Teknolojik Araştırma Kurumu (TÜBİTAK), Türkiye (2019).

ULUSLARARASI HAKEMLİ KONFERANSLARDAKİ YAYINLAR

1. *M. Muradoglu* and D.A. Caughey, “Implicit multigrid solution of the preconditioned Euler equations”, Proceedings of AIAA 13th Computational Fluid Dynamics Conference, pp.648-58, Snowmass, CO, USA, June 29-July 2 (1997).
2. *M. Muradoglu* and D.A. Caughey, “Implicit multigrid solution of the multi-dimensional preconditioned Euler equations”, 36th AIAA Aerospace Sciences Meeting and Exhibit, AIAA paper 98-0114, Reno, NV, USA, Jan. 12-15 (1998).
3. *M. Muradoglu*, S.B. Pope and D.A. Caughey, “Towards efficient PDF computations of non-premixed turbulent flames with local extinction and re-ignition”, 2nd Joint Meeting of the US Sections of the Combustion Institute, Oakland, CA, USA, March 25-28 (2001).
4. *M. Muradoglu*, “Efficient PDF simulations of a non-premixed bluff-body stabilized turbulent flame”, Proceedings of ESDA 2002: 6th Biennial Conference on Engineering Systems Design and Analysis, Istanbul, Turkey, July 8-11 (2002).
5. S. Gokaltun, H. Saygin and *M. Muradoglu*, “Implicit multigrid computations of unsteady multiphase flows in varying cross-sectional area channels”, IUTAM Symposium on Integrated Modeling of Fully Coupled Fluid-Structure Interactions Using Analysis, Computations, and Experiments, N.J., USA, June 2-6 (2003).

6. *M. Muradoglu*, U. Olgac and A.D. Kayaalp, “A finite-volume/front-tracking method for computations of multiphase flows in complex geometries”, IUTAM Symposium on Computational Approaches to Dispersed Multiphase Flows, Argonne National Laboratory, Argonne, IL, USA , Oct. 4-7 (2004). Also published in IUTAM Symposium on Computational Approaches to Multiphase Flow Book Series: Fluid Mechanics and Its Applications edited by S. Balachandar and A. Prosperetti, 81:301-310 (2004).
7. *M. Muradoglu*, M.B. Soydan and S. Nas, “Computational modeling of biofluid mechanics of white blood cells”, IUTAM Symposium on Computational Approaches to Dispersed Multiphase Flows, Argonne National Laboratory, Argonne, IL, USA, Oct. 4-7 (2004).
8. *M. Muradoglu*, “Computational modeling of interfacial flows in microchannels”, NNIN/C Conference: Synergy Between Experiment and Computational Science, Harvard University, Cambridge, MA, USA, May 29-June 3 (2006).
9. I. Filiz and *M. Muradoglu*, “A computational study of drop formation in an axisymmetric flow-focusing device”, ASME Proceedings of 4th International Conference on Nanochannels, Microchannels and Minichannels (ICNMM4), Limerick, Ireland, June 19-21 (2006).
10. *M. Muradoglu*, “A front-tracking method for simulation of interfacial flows with soluble surfactants”, IUTAM Symposium on Recent Advances in Multiphase Flows: Numerical and Experimental, Istanbul, Turkey, June 11-14 (2007).
11. I. Filiz, O. Eren and *M. Muradoglu*, “Assessment of performance of PDF velocity models for computations of turbulent reacting flows”, Ankara International Aerospace Conference (AIAC), Ankara, Turkey, Sep. 10-12 (2007).
12. S. Tasoglu, G. Kaynak and *M. Muradoglu*, “Impact and spreading of a microdroplet on a solid wall”, IV. National Biomechanics Conference, Erzurum, Turkey, Oct.16-17 (2008).
13. A. Kiraz, Y. Karadag, S.C. Yorulmaz, *M. Muradoglu* “Large spectral tuning of liquid microdroplets by local heating with a focused infrared laser - art. no. 703811”, Optical Trapping and Optical Micro-manipulation V, Proceedings of the Society of Photo-Optical Instrumentation Engineering (SPIE), 7038:I381-I381 (2008).
14. *M. Muradoglu* and S. Tasoglu, “Computational modeling of single cell epitaxy”, ASME Proceedings of 7th International Conference on Nanochannels, Microchannels and Minichannels (ICNMM7), POSTECH, Pohang, S. Korea, June 22-24 (2009).
15. *M. Muradoglu* and G. Kaynak, “Computational modeling of impact and spreading of a microdroplet on a solid wall”, 5th Ankara International Aerospace Conference (AIAC), Ankara, Turkey, Aug. 17-19 (2009).
16. G. Gursel, U. Olgac and *M. Muradoglu*, “Effects of surfactant on the motion of a large bubble in a capillary tube”, ASME Proceedings of 9th International Conference on Nanochannels, Microchannels and Minichannels (ICNMM9), Edmonton, Canada, June 19-22 (2011).
17. U. Olgac and *M. Muradoglu*, “Unsteady surfactant-laden liquid plug propagation: A model for surfactant replacement therapy”, Proceedings of the ECCOMAS Thematic International Conference on Simulation and Modeling of Biological Flows (SIMBIO2011), Vrije Universiteit Brussel, Brussels, Belgium, Sep. 21-23 (2011).
18. *M. Muradoglu* and G. Kaynak, “Effects of surfactant on liquid film thickness in the Bretherton problem”, 6th Ankara International Aerospace Conference (AIAC), Ankara, Turkey, Sep. 14-16 (2011).
19. *M. Muradoglu* and U. Olgac, “Computational modeling of surfactant-laden liquid plug propagation in capillary tubes”, ASME Proceedings of International Conference on Nanochannels, Microchannels and Minichannels (ICNMM12), Puerto Rico, July 8-12 (2012).

20. D. Izbassarov, U. Olgac and *M. Muradoglu*, “The effect of viscoelasticity on the transient motion of a buoyancy-driven bubble”, The 8th Annual European Rheology Conference, Leuven, Belgium, April 2-5 (2013).
21. R. Mokhtarpoor, H. Turkeri, *M. Muradoglu*, “JPDF simulations of swirling flames using a new hybrid FV/particle method”, Eighth Mediterranean Combustion Symposium (MCS-13), Cesme, Izmir, Turkey, Sep. 8-13 (2013).
22. R. Mokhtarpoor, S.V. Inmas, *M. Muradoglu*, “A New Consistent Hybrid Algorithm for Solution of the PDF Equations of Turbulent Reactive Flow”, 11th International Conference of Numerical Analysis and Applied Mathematics (ICNAAM), Greece, Sep. 21-27 (2013). Book Series: AIP Conference Proceedings, 1558:322-325 (2013).
23. D. Izbassarov, H. Nozari and *M. Muradoglu*, “A front-tracking method for computations of viscoelastic interfacial flows”, Euromech Colloquium 555, Pessac, Bordeaux, France, Aug. 28-30 (2013).
24. *M. Muradoglu* and G. Tryggvason, “Computational modeling of soluble surfactant in 3D multiphase flows”, 2nd International Conference on Numerical Methods in Multi- phase Flows (ICNMMF-II), Darmstadt, Germany, June 30-July 2 (2014).
25. D. Izbassarov and *M. Muradoglu*, “Computational modeling of viscoelastic two-phase systems in a microchannel with an abrupt contraction and expansion”, 2nd International Conference on Numerical Methods in Multiphase Flows (ICNMMF-II), Darmstadt, Germany, June 30-July 2 (2014).
26. H. Turkeri, *M. Muradoglu* and S.B. Pope, “A New LES/PDF method for computational modeling of turbulent reacting flows”, 10th International ERCOFTAC Symposium on Engineering Turbulence Modelling and Measurements, Don Carlos Resort, Marbella, Spain, Sep. 17-19 (2014).
27. H. Turkeri and *M. Muradoglu*, “Large-eddy simulation/probability density function modeling of Cambridge stratified flame”, 15th International Conference on Numerical Combustion, Palais des Papes, Avignon, France, April 19-22 (2015).
28. M. Irfan and *M. Muradoglu*, “A Front-Tracking Method for Computational Modeling of Evaporation Process in Two-Phase Flows”, 8th International Conference on Computational Heat and Mass Transfer (ICCHMT 2015), Istanbul, Turkey, May 25-28 (2015).
29. H. Turkeri and *M. Muradoglu*, “A New LES/PDF Implementation for Computational Modeling of Turbulent Reacting Flows”, Frontiers in Computational Physics: Energy Sciences, Zurich, Switzerland, June 3-5 (2015).
30. *M. Muradoglu*, J. Feng, H. Kim and H. A. Stone, “Computational Modeling of a Bubble Bouncing at a Water-Oil Compound Interface”, 6th International Workshop on Bubbles and Interfaces, Potsdam, Golm, Germany, July 6-10 (2015).
31. D. Izbassarov and *M. Muradoglu*, “Effects of viscoelasticity on impact of a compound droplet on a surface”, A Special Rheology Symposium in honor of Professor Roger I. Tanner on the occasion of his 82nd birthday, Vathi, Samos, Greece, June 29-July 2 (2015).
32. M. Nooranidoost, D. Izbassarov and *M. Muradoglu*, “A computational Modeling of Viscoelastic Effects on Droplet Formation in a Flow-Focusing Configuration”, International Conference on Applied and Computational Mechanics, ACM2015, Izmir, Turkey, Aug. 5-7 (2015).
33. *M. Muradoglu*, J. Feng, H. Kim and H. A. Stone, “Dynamics of a bubble bouncing at a compound interface”, Droplets 2015, The University of Twente, The Netherlands, Oct. 6-8 (2015).
34. *M. Muradoglu*, “The effects of viscoelasticity on drop impact and spreading on a solid surface”, Smart and green interfaces (SGIC2016), Athens, Greece, May 3-6 (2016).
35. *M. Muradoglu* and G. Tryggvason, “Effects of soluble surfactant on lateral migration of a bubble in a shear flow”, The 9th International Conference on Multiphase Flow- ICMF2016, Firenze, Italy, May 22-27 (2016).

36. *M. Muradoglu*, “Computational modeling of soluble surfactant in multiphase flows”, 9th International Conference on Computational Fluid Dynamics (invited talk), Istanbul, Turkey, July 11-15 (2016).
37. M. Irfan and *M. Muradoglu*, “A front-tracking method for computational modeling of temperature and species gradient based phase change”, 9th International Conference on Computational Fluid Dynamics, Istanbul, Turkey, July 11-15 (2016).
38. D. Izbassarov and *M. Muradoglu*, “A front-tracking method for direct numerical simulation of viscoelastic interfacial flows”, 9th International Conference on Computational Fluid Dynamics, Istanbul, Turkey, July 11-15 (2016).
39. D. Izbassarov and *M. Muradoglu*, “Impact and spreading of a viscoelastic droplet on a solid surface”, 24th International Congress of Theoretical and Applied Mechanics (ICTAM 2016), Montreal, Canada, Aug. 21-26 (2016).
40. *M. M. Muradoglu*, H. Fujioka, J.B. Grotberg, “Propagation and rupture of a surfactant-laden liquid plug in distal airways”, The 8th World Congress of Biomechanics, Dublin, Ireland, July 8-12 (2018).
41. *M. Muradoglu*, H. Turkeri, X. Zhao, S.B. Pope, “LES/PDF simulation of Cambridge/Sandia turbulent stratified flames with differential diffusion”, 17th International Conference on Numerical Combustion, Aachen, Germany, May 6-8, (2019).
42. H. Turkeri, X. Zhao, S.B. Pope, *M. Muradoglu*, “LES/PDF simulations of swirling turbulent premixed flames”, 17th International Conference on Numerical Combustion, Aachen, Germany, May 6-8, (2019).
43. D. Izbassarov, *M. Muradoglu*, P. Costa, Z. Ahmed and O. Tammisola, “Combined effects of soluble surfactant and viscoelasticity on pressure-driven turbulent bubbly channel flows”, 10th International Conference on Multiphase Flow (ICMF 2019), Rio de Janeiro, Brazil, May 19-24 (2019).
44. Z. Ahmed, D. Izbassarov, M.N. Farooqi, D. Unat, *M. Muradoglu*, “Parallel scalable front-tracking method for multi-phase flow simulations in 3D”, 31st International Conference on Parallel Computational Fluid Dynamics (ParCFD2019), Antalya, Turkey, May 13-15, (2019).
45. *M. Muradoglu*, Z. Ahmed, D. Izbassarov, O. Tammisola, J. Lu, G. Tryggvason, “Effect of soluble surfactant on turbulent bubbly channel flow undergoing topology changes”, 17th European Turbulence Conference, ETC 2019, Torino, Italy, September 3-6 (2019).

DAVETLİ KONUŞMALAR

1. “PDF modeling of turbulent reacting flows”, 11th Istanbul Statistical Physics Days, Istanbul Technical University, Istanbul, Turkey (2004).
2. “Computational modeling of chaotic mixing in gas-segmented microchannels”, Analysis and Control of Mixing with an Application to Micro and Macro flows Processes, Advanced Summer School, Udine, June 27-July 1 (2005).
3. “Computational modeling of interfacial flows in microchannels”, NNIN/C conference: Synergy between Experiment and Computational Science, Harvard University, Cambridge, MA, USA, May 29-June 3 (2006).
4. “Computational modeling of soluble surfactants and applications to drops and bubbles in microchannels”, Nano-TR3, Nano Science & Technology, Bilkent University, Ankara, Turkey, June 11-14 (2007).
5. “Impact and spreading of a droplet on a solid wall”, COST-P21&WG, Bucharest, Romania, May 4-6 (2009).
6. The front-tracking method for multiphase flows in microsystems: Fundamentals and applications”, NATO Advanced Study Institute on Microsystems for Security-Fundamentals and Applications, Golden Dolphin Hotel, Cesme-Izmir, Turkey, Aug. 23-Sep. 4 (2009).

7. “Computational modeling of soluble surfactant in 3D interfacial flows”, XIX. National Congress of Mechanics, Karadeniz Technical University, Trabzon, Turkey, Aug. 24-28 (2015).
8. “Computational modeling of soluble surfactant in multiphase flows”, 9th International Conference on Computational Fluid Dynamics (ICCFD9), Istanbul, Turkey, July 11-15 (2016).
9. “LES/PDF Modeling of Turbulent Reacting Flows”, 10th Ankara International Aerospace Conference, METU, Ankara, Turkey, September 18-20 (2019).

SUNUMLAR

1. Proceedings of the Fourth International Workshop on Measurement and Computation of Non-premixed Flames (TNF4), Darmstadt, Germany (1999).
2. Proceedings of the Fifth International Workshop on Measurement and Computation of Nonpremixed Flames (TNF5), Delft, The Netherlands (2000).
3. The Combustion Institute 28th International Symposium on Combustion, Edinburgh, Scotland (2000).
4. The 53rd Annual Meeting of the American Physical Society’s Division of Fluid Dynamics (DFD00), Washington, D.C., USA (2000).
5. The Department of Mechanical Engineering, The University of Nebraska-Lincoln, Lincoln, NE, USA (2001).
6. Los Alamos National Lab, The Theoretical Mechanics Section, Los Alamos, NM, USA (2001).
7. College of Engineering, Koc University, Sariyer, Istanbul, Turkey (2001).
8. Proceedings of the Fourth International Workshop on Measurement and Computation of Non-premixed Flames (TNF6), Sapporo, Japan (2002).
9. 7th US National Congress on Computational Mechanics, Albuquerque, NM, USA (2003).
10. . Chemical Kinetics & Diffusion Processes in Reactive Flows, CDRF2004, Istanbul Technical University, Istanbul, TURKEY (2004).
11. SEAS, Harvard University, Cambridge, MA, USA (2004).
12. Department of Mechanical Engineering, WPI, Worcester, MA, USA (2004, 2005).
13. Biological Engineering Division, MIT, Cambridge, MA, USA (2005).
14. Crimson computing Circle, SEAS, Harvard University, Cambridge, MA, USA (2005).
15. The 58th Annual Meeting of the American Physical Society’s Division of Fluid Dynamics (DFD05), Chicago, IL, USA (2005).
16. Department of Chemical Engineering, The University of Illinois at Chicago, Chicago, IL, USA (2005).
17. Department of Physics, Bilkent University, Ankara, Turkey (2006).
18. Proceedings of the 8th International Workshop on Measurement and Computation of Nonpremixed Flames (TNF8), Heidelberg, Germany (2006).
19. Division of Engineering and Applied Sciences, Harvard University, Cambridge, MA, USA (2006).
20. The 59th Annual Meeting of the American Physical Society’s Division of Fluid Dynamics (DFD06), Tampa, FL, USA (2006).
21. The 60th Annual Meeting of the American Physical Society’s Division of Fluid Dynamics (DFD07), Salt Lake City, UT, USA (2007).

22. Proceedings of the Ninth International Workshop on Measurement and Computation of Non-premixed Flames (TNF9), Montreal, Canada (2008).
23. The 61st Annual Meeting of the American Physical Society's Division of Fluid Dynamics (DFD08), San Antonio, TX, USA (2008).
24. Faculty of Engineering and Natural Sciences, Sabanci University, Istanbul, Turkey (2008).
25. Department of Mechanical Engineering, Hanyang University, Seoul, S. Korea (2009).
26. The 62nd Annual Meeting of the American Physical Society's Division of Fluid Dynamics (DFD09), Minneapolis, MN, USA (2009).
27. The 63rd Annual Meeting of the American Physical Society's Division of Fluid Dynamics (DFD10), Long Beach, CA, USA (2010).
28. EUROMECH Colloquium 521 - Biomedical Flows at Low Reynolds Numbers, ETH-Zurich, Switzerland (2011).
29. The 64th Annual Meeting of the American Physical Society's Division of Fluid Dynamics (DFD11), Baltimore, MD, USA (2011).
30. Faculty of Engineering and Natural Sciences, Sabanci University, Istanbul, Turkey (2012).
31. Polish Academy of Sciences, Warsaw, Poland (2012).
32. The 66th Annual Meeting of the American Physical Society's Division of Fluid Dynamics (DFD13), Pittsburgh, PA, USA (2013).
33. Department of Aerospace and Mechanical Engineering, The University of Notre Dame, Notre Dame, IN, USA (2013).
34. Department of Mechanical and Aerospace Engineering, Princeton University, Princeton, NJ, USA (2014).
35. Department of Mechanical and Aerospace Engineering, Cornell University, Ithaca, NY, USA (2014).
36. Department of Physics, Istanbul Technical University (ITU), Istanbul, Turkey (2014).
37. Faculty of Engineering and Natural Sciences, Sabanci University, Turkey (2014).
38. The 67th Annual Meeting of the American Physical Society's Division of Fluid Dynamics (DFD14), San Francisco, CA, USA (2014).
39. Department of Chemical Engineering, University of California-Davis, Davis, CA, USA (2014).
40. Faculty of Aeronautics and Astronautics, Istanbul Technical University (ITU), Istanbul, Turkey (2015).
41. ITU-MEMS laboratory, Istanbul Technical University (ITU), Istanbul, Turkey (2015).
42. 6th International Workshop on Bubble and Drop Interfaces, Potsdam/Golm, Germany (2015).
43. International Conference on Advances in Applied and Computational Mechanics (ACM2015), Izmir, Turkey (2015).
44. Droplets 2015, University of Twente, Twente, The Netherlands (2015).
45. The 68th Annual Meeting of the American Physical Society's Division of Fluid Dynamics (DFD15), Boston, MA, USA (2015).
46. Department of Mechanical Engineering, Bilkent University, Ankara, Turkey (2016).

47. Joint workshop between Koc University and the University of Bath on Applied and numerical analysis, with applications to differential equations, optimization and eigenvalue problems”, University of Bath, Bath, U.K. (2016).
48. Workshop on fluid mechanics research, Middle East Technical University, The Northern Cyprus Campus, Guzelyurt, Northern Cyprus (2016).
49. Department of Chemical Engineering, Bosphorus University, Istanbul, Turkey (2017).
50. Department of Mechanical Engineering, University of Connecticut, Storrs, CT, USA (2017).
51. The 70th Annual Meeting of the American Physical Society’s Division of Fluid Dynamics (DFD17), Denver, CO, USA (2017).
52. Department of Mechanical Engineering, Colorado School of Mines, Golden, CO, USA (2017).
53. Department of Mechanics, KTH, Stockholm, Sweden (2018).
54. 8th World Congress of Biomechanics, 8-12 July, Dublin, Ireland (2018).
55. New Developments in Thermal and Flow Sciences, Izmir Institute of Technology, Urla, Turkey (2018)
56. 12th European Fluid Mechanics Conference, 9-13 September, Vienna, Austria (2018).
57. The 71st Annual Meeting of the American Physical Society’s Division of Fluid Dynamics (DFD18), Atlanta, GA, USA (2018).
58. The Max-Planck Intelligent Systems, Stuttgart, Germany (2019).
59. Bundeswehr University Munich, Munich, Germany (2019).
60. University of Stuttgart, Stuttgart, Germany (2019).
61. The 72nd Annual Meeting of the American Physical Society’s Division of Fluid Dynamics (DFD19), Seattle, WA, USA (2019).
62. University of Lille, Lille, France (2020).

ÖDENEKLİ PROJELER

1. “Taşıtlarda 2025-2030 regülasyonlarına uyum amacıyla sera gazı ve zararlı egzoz emisyonlarının azaltılması için teknolojilerin geliştirilmesi”, TÜBİTAK, 119C176, 2020-2027.
2. CTFF-Control of turbulent friction force, Research and innovation staff exchange (RISE), H2020- MSCA-RISE-2017, 2017-2021. (Bütçe: 54.000 Euro)
3. Havayolu kapanması ve yeniden açılmasının sayısal modellenmesi, TÜBİTAK, 2019-2022. (Bütçe: 476.000 TL)
4. ComSUV-Combined effects of surfactant and viscoelasticity on turbulent bubbly flows, PRACE, 2019-2020².
5. Çözülebilir yüzey aktif maddesi ve viskoelastik etkilerin üç boyutlu çok fazlı akışlarda sayısal modellenmesi. TÜBİTAK, 115M688. Kasım 2015-Kasım 2018. (Bütçe: 246300 TL)
6. RANS/PDF ve LES/PDF yöntemleri çerçevesinde gölge-pozisyon karışım modeli için etkin bir sayısal çözüm yönteminin geliştirilmesi. TÜBİTAK, 214M309. Mayıs 2015-Mayıs 2018. (Bütçe: 301.050 TL)
7. Biyolojik/mikro-akışlarda Newtonsal olmayan damlacıkların sayısal modellenmesi, TÜBİTAK, 112M181. Ağustos 2012-Ağustos 2015. (Bütçe: 267.723 TL)

²Budget: 18M core-saat bilgisayar zamanı.

8. Filtre edilmiş olasılık yoğunluk fonksiyonu (OYF)) yöntemiyle türbülanslı yanmanın modellenmesi, TÜBİTAK, 111M067. Ekim 2011-Ekim 2014. (Bütçe: 253.890 TL)
9. Çok fazlı/akışkanlı akışların sayısal modellenmesi: Multi-fizik etkiler, TÜBİTAK, 108M238. Eylül 2008-Ağustos 2010. (Bütçe: 147.050 TL)
10. Mikro laboratuvar (Lab-On-A-Chip), birim mikro operasyonlar ve bilgisayar simülasyonları, TUBITAK, 105M043. Eylül 2005-Ağustos 2008. (Bütçe: 89.700 TL)
11. Physics of droplets, European cooperation in the field of scientific and technical research (COST), Action P21. October 2006-October 2010³.

YÖNETTİĞİ DOKTORA TEZLERİ

1. R. Mokhtarpoor, “A robust consistent hybrid finite-volume/particle method for solving the PDF model equations of turbulent reactive flows”, Doktora tezi, Koç Üniversitesi (2014). (Sonraki Pozisyonu: Postdoc, Department of Mathematics, University of Wyoming, ABD)
2. D. Izbassarov, “Computational modeling of viscoelastic two-phase systems”, Doktora tezi, Koç Üniversitesi (2016). (Sonraki Pozisyonu: Postdoc, Department of Mechanics, KTH Royal Institute of Technology, Stockholm, İsveç)
3. H. Turkeri, “A general purpose large-eddy simulation/probability density function simulator on block structured grid”, Doktora tezi, Koç Üniversitesi (2017). (Sonraki Pozisyonu: Postdoc, Department of Mechanical Engineering, University of Connecticut, Storrs, CT, ABD)
4. M. Irfan, “Direct numerical simulation of evaporation/vaporization and burning of a fuel droplet”, Doktora tezi, Koç Üniversitesi (2017). (Sonraki Pozisyonu: Profesör, Department of Mechanical Engineering, The Capital University of Science and Technology (CUST), Islamabad, Pakistan)
5. Z. Ahmed, “Effects of surfactant and viscoelasticity on turbulent bubbly flows”, PhD Thesis, Koc University (2020). (Next position: Professor in Department of Mechanical Engineering, Mehran University of Engineering and Technology, SZAB Campus, Khairpur Mir’s 66020, Sindh, Pakistan)

YÖNETTİĞİ MASTIR TEZLERİ

1. A.D. Kayaalp, “A finite-volume/front-tracking method for computations of multiphase flows in complex geometries”, Mastır tezi, Koç Üniversitesi (2004). (Sonraki Pozisyonu: OMV Group, Viyana, Avusturya)
2. M.B. Soydan, “Computational modeling of bio-fluid mechanics of white blood cells”, Mastır tezi, Koç Üniversitesi (2004). (Sonraki Pozisyonu: Mercedes-Benz, İstanbul, Türkiye)
3. U. Olgac, “Dynamics of buoyancy-driven viscous drops in constricted capillaries including effects of soluble surfactants”, Mastır tezi, Koç Üniversitesi (2005). (Sonraki Pozisyonu: Doktora öğrencisi, ETH-Zurich, İsviçre)
4. E. Golbasi, “A front-tracking method for simulation of interfacial flows with soluble surfactants”, Mastır tezi, Koç Üniversitesi (2006). (Sonraki Pozisyonu: BOSCH, Bursa, Türkiye)
5. S. Kassabbashi, “An implicit pressure-correction (SIMPLE) based finite-volume/front-tracking method for computations of multiphase flows in complex geometries”, Mastır tezi, Koç Üniversitesi (2006). (Sonraki Pozisyonu: Bilgi yok)
6. O. Eren, “A new hybrid finite-volume/particle method for the PDF equations of turbulent reactive flows”, Mastır tezi, Koç Üniversitesi (2006). (Sonraki Pozisyonu: Doktora öğrencisi, Georgia Tech, ABD)

³Budget: Dört yıl boyunca AB’de seyahat masraflarını karşıladı.

7. S. Tasoglu, “The effects of soluble surfactant on the transient motion of a buoyancy-driven bubble”, Mastır tezi, Koç Üniversitesi (2008). (Sonraki Pozisyonu: Doktora öğrencisi, UC Berkeley, ABD)
8. H. Dogan, “Mixing of miscible liquids in gas-segmented serpentine channels”, Mastır tezi, Koç Üniversitesi (2009). (Sonraki Pozisyonu: Doktora öğrencisi, Wessex Institute of Technology Southampton, İngiltere)
9. G. Kaynak, “Computational study of impact and spreading of a compound droplet on a at surface as a model for single cell epitaxy”, Mastır tezi, Koç Üniversitesi (2010). (Sonraki Pozisyonu: Doktora öğrencisi, Iowa State University, ABD)
10. G. Gursel, “Effects of surfactant on the motion of a large bubble in a capillary tube”, Mastır tezi, Koç Üniversitesi (2011). (Sonraki Pozisyonu: Doktora öğrencisi, Eindhoven University of Technology, Hollanda)
11. H. Zolfaghari, “Dynamics of viscoelastic droplets in complex geometries”, Mastır tezi, Koç Üniversitesi (2015). (Sonraki Pozisyonu: Doktora öğrencisi, University of Bern, İsviçre)
12. M. Nooranidoost, “Effects of viscoelasticity on drop dynamics in microfluidic systems”, Mastır tezi, Koç Üniversitesi (2016). (Sonraki Pozisyonu: Doktora öğrencisi, Florida State University, ABD)
13. M. Nabizadehmashhadtoroghi, “Combined effects of surfactant and viscoelasticity on drop dynamics”, Mastır tezi, Koç Üniversitesi (2018). (Sonraki Pozisyonu: Doktora öğrencisi, Northeastern University, ABD)
14. I.N. Yıldırım, “An adaptive mesh refinement (AMR) method for particle-resolved simulations of multiphase flows”, Mastır tezi, Koç Üniversitesi (2019). (Sonraki Pozisyonu: Doktora öğrencisi, The George Washington University, ABD)
15. B. Altunçeyik, “Immersed boundary method for fluid-fluid-solid three phase flows”, Mastır tezi, Koç Üniversitesi (2020). (Sonraki Pozisyonu: Doktora öğrencisi, University of Birmingham, İngiltere)

MEVCUT ÖĞRENCİLER

1. O. Erken, “Two-layer model for air-way closure”, Doktora, Koç Üniversitesi. (Beklenen mezuniyet: Temmuz 2023).
2. M. Yapar, “Fluid-structure interactions in airway closure and reopening”, Doktora, Koç Üniversitesi. (Beklenen mezuniyet: Temmuz 2023).
3. A. Kozhabergenov, “Simulations of droplet evaporation and burning in 3D multiphase flow systems”, Doktora, Koç Üniversitesi. (Beklenen mezuniyet: Temmuz 2023).
4. O.U. Çağlar, “Computational modeling of hybrid hydrogen-Diesel combustion”, Doktora, Koç Üniversitesi. (Beklenen mezuniyet: Temmuz 2024).
5. H.U. Naseer, “Viscoelastic turbulent bubbly flows”, Doktora, Koç Üniversitesi. (Beklenen mezuniyet: Temmuz 2024).

ÜYELİKLER

1. Amerikan Fizik Derneği (APS)
2. Amerikan Makine Mühendisleri Derneği (ASME)
3. Avrupa Mekanik Derneği, (EUROMECH).
4. Uygulamalı ve Endüstriyel Matematik Derneği (SIAM)
5. Amerikan Makine Mühendisleri Derneği Türkiye Kolu (ASME-Turkey)
6. TUMTMK (Teorik ve Uygulamalı Mekanik Türk Milli Komitesi)