Assoc. Prof. Dr. Fatih SELİMEFENDİGİL

EDUCATION			
Degree	**University**	**Department / Program**	**Years**
Undergrad	Istanbul Technical University	Mechanical Eng.	2001-2004
M.S.	Technical University of Munich	Mechanical Eng. / Computational Mechanics	2004-2006
Ph.D.	Technical University of Munich	Mechanical Eng. / Thermodynamics	2006-2010

CONTACT INFORMATION	
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POSITIONS & EMPLOYMENT		
Affiliation	**Position**	**Years**
Celal Bayar University, Mechanical Eng.	Assistant Prof. Dr.	2011-2015
King Abdulaziz University (Saudi Arabia), Mechanical Eng.	Assistant Prof. Dr.	2010-2011
German Aerospace Center (DLR)	Research Engineer	2010 (8 m)

Assoc. Prof. , ÜAK (YÖK), Mechanical Engineering (**20.03.2015**)

THESIS	
M.S.	Sound propagation behavior of brake discs using numerical techniques (in English) (Advisors: Prof. Dr. Ing. Gerhard Müller, Dr. Matthias Lambrecht)
Ph.D.	Analysis and Identification of Nonlinear Heat Sources in Thermo-Acoustic Sytems (in English) (Advisors: Prof. Wolfgang Polifke, Prof. R.I. Sujith)

Research Interests	Thermoacoustics, Heat Transfer, System Identification, Computational Fluid Dynamics, Model Order Reduction, Ferrofluids, MHD flow, Nanofluids
Foreign Languages	English, German

ORIGINAL PUBLICATIONS

Articles Published in Journals Indexed by SCI	
55	**Selimefendigil, F.**, Öztop, H., Abu-Hamdeh, N.: (2016), Natural Convection and Entropy Generation in Nanofluid Filled Entrapped Trapezoidal Cavities under the Influence of Magnetic Field, **Entropy 18, 43**
54	**Selimefendigil, F.**, Chamkha, A. J: (2016), MHD mixed convection in a lid-driven cavity having a corrugated bottom wall and filled with a non-Newtonian power-law fluid under the influence of an inclined magnetic field, **ASME - Journal of Thermal Science and Engineering Applications, in press**
53	**Selimefendigil, F.**, Öztop, H., Chamkha, A. J: (2016), MHD mixed convection and entropy generation of nanofluid filled lid driven cavity under the influence of inclined magnetic fields imposed to its upper and lower diagonal triangular domains, **Journal of Magnetism and Magnetic Materials, in press**
52	**Selimefendigil, F.**, Öztop, H: (2016), Conjugate natural convection in a cavity with a conductive partition and filled with different nanofluids on different sides of the partition, **Journal of Molecular Liquids 216, pp. 67-77**
51	**Selimefendigil, F.**, Öztop, H: (2016), Mixed Convection Due to Rotating Cylinder in an Internally Heated and Flexible Walled Cavity Filled with SiO2-Water Nanofluids: Effect of Nanoparticle Shape, **International Communications in Heat and Mass Transfer 71, pp. 9-19**
50	**Selimefendigil, F.**, Öztop, H., Chamkha, A. J: (2016), Fluid-structure-magnetic field interaction in a nanofluid filled lid-driven cavity with flexible side wall**, European Journal of Mechanics - B/Fluids (accepted)**
49	**Selimefendigil, F.**, Öztop, H., Al-Salem, K.: (2016), Control of natural convection heat transfer in ferrofluid filled trapezoidal cavities with a magnetic dipole source, **Progress in Computational Fluid Dynamics, in press**
48	Chamkha, AJ., **Selimefendigil, F.,** Ismael , M.: (2016), Mixed Convection in a Partially Layered Porous Cavity with Inner Rotating Cylinder, **Numerical Heat Transfer- Part A , in press**
47	**Selimefendigil, F.**, Öztop, H: (2015), Influence of inclination angle of magnetic field on mixed convection of nanofluid flow over a backward facing step and entropy generation, **Advanced Powder Technology 26, pp. 1663-1675**
46	**Selimefendigil, F.**, Öztop, H: (2015), Mixed Convection in a Two-Sided Elastic Walled and SiO2 Nanofluid Filled Cavity with internal Heat Generation: Effects of inner Rotating Cylinder and nanoparticle's shape, **Journal of Molecular Liquids 212, pp. 509-516**
45	**Selimefendigil, F.**, Öztop, H: (2015), Natural convection and entropy generation of nanofluid filled cavity having different shaped obstacles under the influence of magnetic field and internal heat generation, **Journal of the Taiwan Institute of Chemical Engineers 56, pp. 42-56**
44	**Selimefendigil, F.**, Öztop, H: (2015), MHD mixed convection and entropy generation of power law fluids in a cavity with a partial heater under the effect of a rotating cylinder, **International Journal of Heat and Mass Transfer, (under review)**
43	**Selimefendigil, F.**, Öztop, H., Chamkha, A. J: (2016), MHD mixed convection in a nanofluid filled vertical lid-driven cavity having a flexible fin attached to its upper wall**, Journal of Hydrodynamics (under review)**
42	**Selimefendigil, F.**, Öztop, H: (2015), Mixed convection of ferrofluids in a lid driven cavity with two rotating cylinders, **Engineering Science and Technology 18, pp. 439-451**
41	**Selimefendigil, F.**, Öztop, H: (2015), Effects of phase shift on the heat transfer characteristics in pulsating mixed convection flow in a multiple vented cavity, **Applied Mathematical Modelling 39, pp. 3666-3677**
40	**Selimefendigil, F.**, Öztop, H: (2015), Numerical investigation and reduced order model of

	mixed convection at a backward facing step with a rotating cylinder subjected to nanofluid , **Computers and Fluids 109, pp.27-37**
39	**Selimefendigil, F.**, Öztop, H: (2015), Numerical study of forced convection of nanofluid flow over a backward facing step with a corrugated bottom wall in the presence of different shaped obstacles, **Heat Transfer Engineering, (in press)**
38	**Selimefendigil, F.**, Öztop, H: (2015), A fuzzy-POD based estimation of unsteady mixed convection in a partition located cavity with inlet and outlet ports , **International Journal of Computational Methods 12,** 1350107.
37	**Selimefendigil, F.:** (2015), Numerical investigation and recurrence plot analysis of pulsating magnetohydrodynamic mixed convection over a backward facing step, **Nonlinear Analysis: Modelling and Control, (in press)**
36	**Selimefendigil, F., Öztop, H: (2015),** Numerical study and POD-based prediction of natural convection in ferrofluids filled triangular cavity with generalized neural networks (GRNN), **Numerical Heat Transfer- Part A 67, pp.1136–1161**
35	**Selimefendigil, F.**, Öztop, H: (2014), Natural convection of ferrofluids in partially heated square enclosures, **Journal of Magnetism and Magnetic Materials** 372, pp. 122–133
34	**Selimefendigil, F.**, Öztop, H: (2014), Forced convection of ferrofluids in a vented cavity with a rotating cylinder, **International Journal of Thermal Sciences** 86, pp. 258–275
33	**Selimefendigil, F.**, Öztop, H: (2014), MHD mixed convection of nanofluid filled partially heated triangular enclosure with a rotating adiabatic cylinder, **Journal of the Taiwan Institute of Chemical Engineers 45**, pp. 2150–2162
32	**Selimefendigil, F.**, Öztop, H: (2014), Numerical study of MHD mixed convection in a nanofluid filled lid driven square enclosure with a rotating cylinder 78, pp. 741–754
31	**Selimefendigil, F.**, Öztop, H: (2014), Control of laminar pulsating flow and heat transfer in backward facing step by using a square obstacle, **ASME- Journal of Heat Transfer 136 (8),** 081701
30	**Selimefendigil, F.**, Öztop, H: (2014), Effect of a rotating cylinder in forced convection of ferrofluid over a backward facing step , **International Journal of Heat and Mass Transfer 71**, pp. 142–148
29	**Selimefendigil, F.**, Öztop, H: (2014), Numerical study and identification of cooling of heated blocks in pulsating channel flow with a rotating cylinder, **International Journal of Thermal Sciences 79**, pp. 132-145
28	**Selimefendigil, F.**, Öztop, H: (2014), Numerical investigation and dynamical analysis of mixed convection in a vented cavity with pulsating flow, **Computers and Fluids** 91, pp. 57–67
27	**Selimefendigil, F.**, Öztop, H: (2014), Soft Computing Methods for thermo-acoustic Simulation, **Numerical Heat Transfer, Part A** 66, pp. 271-288
26	**Selimefendigil, F**: (2014), Turbulent forced convection over a backward facing step with a located partition on the upper wall, **Heat Transfer Research, (accepted)**
25	**Selimefendigil, F.**, Öztop, H: (2014), Pulsating nanofluids jet impingement cooling of a heated horizontal surface, **International Journal of Heat and Mass Transfer** 69, pp. 54–65
24	**Selimefendigil, F.**, Polifke, W.: (2014), A Nonlinear, POD-based Model of Forced Convection Heat Transfer in Pulsating Flow, **AIAA Journal** 52, pp. 131–145
23	**Selimefendigil, F.**, Öztop, H: (2014), POD-based Reduced Order Model of a Thermoacoustic Heat Engine, **European Journal of Mechanics - B/Fluids** 48, 135-142
22	**Selimefendigil, F.**: (2014) Numerical investigation and POD-based interpolation of natural convection cooling of two heating blocks in a square cavity, **The Arabian Journal for Science and Engineering** 39, pp. 2235-2250
21	**Selimefendigil, F.**, Öztop, H: (2013), Numerical analysis of laminar pulsating flow at a backward facing step with an upper wall mounted adiabatic thin fin, **Computers & Fluids** 88, pp. 93–107

20	**Selimefendigil, F.**, Öztop, H: (2014), Estimation of mixed convection heat transfer of rotating cylinder in a vented cavity subjected to nanofluid by using generalized neural networks, **Numerical Heat Transfer, Part A** 65, 165-185,
19	**Selimefendigil, F.**, Öztop, H: (2014), MHD free convection in a corrugated cavity filled with a porous medium saturated with nanofluids, **Applied Math. Computations, (under review)**
18	**Selimefendigil, F.**, Öztop, H., Chamkha, AJ: (2015), MHD mixed convection in a nanofluid filled vertical lid-driven cavity having a flexible fin attached to its upper wall, **Journal of Hydrodynamics, (under review)**
17	**Selimefendigil, F.**, Öztop, H: (2014), Numerical study of natural convection in a ferro-fluid filled corrugated cavity with internal heat generation, **ASME- Journal of Heat Transfer , (under review)**
16	**Selimefendigil, F.**, Öztop, H: (2014), Numerical study and reduced order model of MHD mixed convection oscillating lid-driven porous cavity, Mathematical and Computer Modelling of Dynamical Systems , **(under review)**
15	**Selimefendigil, F.**, Öztop, H: (2013), Identification of forced convection in pulsating flow at a backward facing step with a stationary cylinder subjected to nanofluid, **International Communications in Heat and Mass Transfer** 45, pp. 111-121
14	**Selimefendigil, F**.: (2013), Numerical analysis and POD based interpolation of mixed convection heat transfer in a horizontal channel with a cavity heated from below, **Engineering Applications of Computational Fluid Mechanics** 7(2), pp.261-271
13	**Selimefendigil, F.**: (2013) Effect of rectangular and triangular thin adiabatic fins on the mixed convection in a square cavity with two ventilation ports, **Heat Transfer Research**, 44 (7), pp. 621-643
12	Foeller, S , **Selimefendigil, F.**, Polifke, W.: (2013) The linear response of heat transfer of a cylinder in cross flow to velocity fluctuations, **Heat and Mass Transfer**, **(under review)**
11	**Selimefendigil, F.**, Öztop, H: (2012), Fuzzy-based estimation of mixed convection heat transfer in a square cavity in the presence of an adiabatic inclined fin, **International Communications in Heat and Mass Transfer** 39, pp. 1639-1646,
10	**Selimefendigil, F.**, Öztop, H: (2014) 'Effects of an adiabatic inclined fin on the mixed convection heat transfer in a square cavity, Progress in Computational Fluid Dynamics **14**, pp. 268-275
9	**Selimefendigil, F.**: (2013), Numerical analysis of mixed convection in pulsating flow for a horizontal channel with a cavity heated from below, **Thermal Science**, **(in press)**
8	**Selimefendigil, F.**, Öztop, H: (2013), Effects of an adibatic fin on the mixed convection heat transfer in a square cavity with two ventilation ports, **Thermal Science 18**, pp.377-389
7	**Selimefendigil, F.**, Yurddas, A.: (2012) Numerical analysis of mixed convection heat transfer in pulsating flow for a horizontal channel with a cavity heated from vertical side and below, **Heat Transfer Research** 43 (6), pp. 509-525
6	**Selimefendigil, F.**: (2012) Numerical analysis and identification of mixed convection in pulsating flow in a square cavity with two ventilation ports in the presence of a heating block, **Journal of the Brazilian Society of Mechanical Sciences and Engineering**, 35 (3), pp. 265-273
5	**Selimefendigil, F.**, Foeller, S., Polifke, W.: (2012) Non-linear identification of the unsteady heat transfer of a cylinder in pulsating cross flow, **Computers and Fluids** 53, pp. 1-14
4	**Selimefendigil, F.**: (2011) Non-Normal Investigations of a Thermo-Acoustic Heat Engine, **AIP Conference Proceedings** 1389, pp. 54-57, (Indexed by ISI)
3	**Selimefendigil, F.:** (2011) Network Model of a Thermo-Acoustic Heat Engine Assisted with Unsteady CFD and System Identification, **AIP Conference Proceedings** 1389, pp. 58-61, (Indexed by ISI)

2	**Selimefendigil, F.**, Sujith, R.I., Polifke, W.: (2011) Identification of Heat Transfer Dynamics for Non- Modal Analysis of Thermo-Acoustic Stability, **Applied Mathematics and Computation** 217, pp. 5134-5150
1	**Selimefendigil, F.**, Sujith, R.I., Polifke, W.: (2009) Identifcation of Heat Transfer Dynamics for Nonmodal Stability Analysis of Thermoacoustic Systems, **AIP Conference Proceedings** 1168, pp. 605-608, (Indexed by ISI)

Articles Published in Other International Refereed Journals	
5	Oztop, H., **Selimefendigil, F.**, Abu-Nada, E., Al-Salem, K: (2015), Recent developments of computational methods on natural convection in curvilinear shaped enclosures, Journal of Thermal Engineering , (accepted)
4	**Selimefendigil, F.,** Oztop, H: (2015), MHD natural convection of nanofluid filled trapezoidal enclosure with a stationary adiabatic cylinder, International Journal Of Advancements In Mechanical And Aeronautical Engineering, Vol. 2, pp. 157-160
3	Ersayın, E., **Selimefendigil, F.** : (2013) Numerical investigation of impinging jets with nanofluids on a moving plate, Mathematical and Computational Applications, Vol. 18, No. 3, pp. 428-437
2	Basaran, A., **Selimefendigil, F.** : (2013) Numerical study of heat transfer due to twinjets impingiment onto an isothermal moving plate,, Mathematical and Computational Applications, Vol. 18, No. 3, pp. 340-350
1	**Selimefendigil, F.**, Polifke,W.: (2011) A Frequency Domain System Model with Coupled Modes for Limit Cycle Prediction of Thermoacoustic Systems, Int. Journal of Spray and Combustion Dynamics 3(4), pp. 303-330

International Conferences	
9	**Selimefendigil, F.**, Öztop, H: Magnetic Field Effect of Mixed Convection of Pulsating Flow over a Backward Facing Step, INT. CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING, ISTANBUL, 2015
8	**Selimefendigil, F.**, Öztop, H: MHD natural convection of nanofluid filled trapezoidal enclosure with a stationary adiabatic cylinder, Proc. of the Second Intl. Conf. on Advances In Mechanical and Robotics Engineering- **AMRE 2014**, Switzerland, 2014.
7	**Selimefendigil, F.** : Numerical Simulation and Reduced Order Model of a Thermoacoustic Heat Engine, n3l - Non-Normal and Nonlinear Effects in Aero-and Thermoacoustic, Munich, Germany, 2013
6	Basaran, A. and **Selimefendigil, F.** : Numerical Study of Heat Transfer Due to Twinjets Impigement onto an Isothermal Moving Plate, ICMA 2013, Manisa, Turkey, 2013
5	Ersayın, E. and **Selimefendigil, F.** : Numerical Investigation of Impinging Jets with Nanofluids on a Moving Plate", ICMA 2013, Manisa, Turkey, 2013.
4	**Selimefendigil, F.**, Polifke, W.: A frequency domain system model with coupled modes for limit cycle prediction of thermoacoustic systems, n3l - Non-Normal and Nonlinear Effects in Aero- and Thermoacoustic, Munich, Germany, 2010
3	**Selimefendigil, F.**, Sujith, R.I., Polifke, W.: Identification of heat transfer dynamics for nonmodal stability analysis of thermoacoustic systems, 7th International Conference of Numerical and Applied Mathematics (ICNAAM 09), 18-24 September, Crete, Greece, 2009
2	Foeller, S., **Selimefendigil, F.,** Polifke,W.: Linear identification of the unsteady heat transfer of a cylinder in pulsating crossflow, 2nd International Conference on Jets, Wakes and Separated Flows, Berlin, Germany, 2008
1	**Selimefendigil, F.**, Foeller, S., Polifke, W.: Non-linear identification of the unsteady heat transfer of a cylinder in pulsating crossflow, 2nd International Conference on Jets, Wakes and Separated Flows, Berlin, Germany, 2008

Other Publications	
1	**Selimefendigil, F., Güney A.,** R744 / R134a kaskad soğutma sisteminin enerji ve ekserji analizi , Termodinamik 261, May 2014.
2	**Selimefendigil, F.**, Polifke, W.: Low order model of heat source in pulsating flow based on proper orthogonal decomposition, in SFB-TR 40 Jahresbericht, Editors: Adams, N. A., Radespiel, R., Sattelmayer, T., Schroeder, W. and Weigand, B., 2009
3	**F. Selimefendigil:** Identification and Analysis of Nonlinear Heat Sources in Thermo-Acoustic Systems, PhD thesis, Technische Universität München, ISBN 978-3-86853-547-1, July 2010
4	**F. Selimefendigil.** Sound propagation behavior of brake discs using numerical techniques. Master's thesis, Technische Universität München, 2006

PROJECTS				
	Date	**Institution**	**Subject**	**Position**
1	2006-2010	DFG (Germany)	Local and Global Nonlinearities in Thermoacoustics	PhD scholar
2	2010 (8 m)	FFAST (Airbus, DLR)	Reduced Order Models of Aerodynamics	**Researcher**
3	2013	SFB-TR40 (Germany), Summer Reseach Program	Analysis of Nonlinear Acoustic Damping at Duct Discontinuities with LES and System Identification	**Researcher**
4	2015-2017	CBU-BAP (2015-049)	Numerical study of forced convection of ferrofluids in pulsating flow over a backward facing step	**Principal Investigator**
5	2015-2017	TUBITAK-TEYDEB 1505- (5150047)	TİCARİ BUZDOLAPLARINDA ENERJİ VERİMLİLİĞİ YÜKSEK YENİ NESİL EVAPORATÖR VE KONDENSER TASARIMININ SAYISAL VE DENEYSEL OLARAK İNCELENMESİ VE OPTİMİZASYONU	**Principal Investigator**
6	2016-(8m)	CBU-BAP (under review)	Nanopartiküllerin soğutucu sistemde kullanılmasının enerji verimine etkisinin deneysel olarak araştırılması	**Principal Investigator**
7	2016-2019	TUBITAK-1001 MAG 215M892	Enerji depolamalı Fotovoltaik-Termoelektrik hibrid güç üretim cihazının tasarım ve performans karakteristiklerinin incelenmesi	**Researcher**

Reviewer Activity
Computers and Fluids
International Journal of Thermal Sciences
Numerical Heat Transfer, Part A
International Comm. Heat and Mass Transfer
Journal of Chemical Engineering of Japan
Engineering Science and Technology: an International Journal (Elsevier)
Energy Conversion and Management

Advances in Mechanical Engineering
Powder Technology
Thermal Science
Journal of Thermal Science and Technology
Journal of Energy Engineering
Journal of Chemical Engineering of Japan
Turkish Journal of Engineering and Environmental Sciences
Journal of Applied Mathematics
International Communications in Heat and Mass Transfer
Heat Transfer – Asian Research (Wiley)
International Journal of Heat and Mass Transfer
The European Physical Journal
Alexandria Engineering Journal (Elsevier)
Neural Computing and Applications (Springer)
International Journal of Numerical Methods for Heat & Fluid Flow
Inverse Problems in Science & Engineering
Physica A: Statistical Mechanics and its Applications
Tübitak projects

ACADEMICAL AWARDS
Scientific publication award, TUBITAK, 2012, 2013, 2014, 2015
Publication-performance award, Celal Bayar University, 2013, 2014, 2015
Reviewer performance award, Celal Bayar University, 2014

COURSES GIVEN
Undergraduate and graduate level courses: **Fluid Dynamics, Thermoacoustic Systems, Adv. Heat and Mass Transfer, Computational Fluid Dynamics, Thermodynamics I-II, Engineering Mechanics, Heat Exchanger Design, Heat Transfer I-II, Numerical Heat Transfer**

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