Ergin Atalar, Ph. D. Curriculum Vitae

Personal Information

Address: Bilkent University
Department of Electrical and Electronics Engineering
Bilkent Ankara 06800
Turkiye
Contact Information Tel: +90 312 290 3272 **E-mail:** ergin.atalar@umram.bilkent.edu.tr
Web Page: http://ErginAtalarLab.bilkent.edu.tr/

Short Biosketch

I am an **Electrical and Electronics Engineering Professor** at **Bilkent University**, Turkiye. I was on sabbatical at the National Heart, Lung and Blood Institute, NIH at Bethesda, Maryland in 2024-2025 academic year. I spent almost half of my academic career at **Johns Hopkins University**. While I was at Hopkins, I became known for my contributions to the cardiovascular and interventional MRI fields. I was a PI of several NIH R01 grants. My patented inventions resulted in the formation of **ClearPoint Neuro, Inc**. (formerly Surgi-Vision Inc.). I left Hopkins after receiving my tenure position.

After returning to Turkiye in 2005, I switched my research focus to magnetic resonance engineering and the safety of MRI as enabling technologies of MRI interventions. I have received three major grants to form **UMRAM, the national magnetic resonance research center**. There are 15 faculty members in the center with more than 100 researchers. All research activities in the center are externally supported.

I supervised many young scientists who became faculty members in top universities, such as **Xiaoming Yang** (Professor of Radiology at the University of Washington, USA), **Jean-Michel Serfaty** (Professor of Radiology at CHU Nantes, France), **Harald H. Quick** (Professor and Managing Director, Erwin L. Hahn Institute for Magnetic Resonance Imaging, Germany), **Yigitcan Eryaman** (Associate Professor at University of Minnesota), **Alireza Sadeghi-Tarakameh** (Assistant Professor at University of Minnesota), **Emre Kopanoglu** (Lecturer at the Cardiff University, UK), **Esra Abaci Turk** (Assistant Professor at the Childrens Hospital, Boston, USA), and **Akbar Alipour** (Assistant Professor at Mount Sinai School of Medicine, USA).

I authored 130 peer-reviewed journal papers. My **h-index is 73,** according to Google Scholar, with more than **17500 citations** (h-index=47 and 7000+ citations according to Scopus) as of Dec 2025. I hold **54 US patents**. I am a **fellow of the International Society of Magnetic Resonance in Medicine** and **the National Academy of Inventors, USA**. I have received the **Science Award** from the Scientific and Technological Research Council of Turkiye. I am a member of the **Academia Europaea** and **Science Academy**, Turkiye.

Education

Ph. D. 1991, Department of Electrical and Electronics Engineering, *Project title: Motion Artifact Reduction Techniques in Magnetic Resonance Imaging,* Bilkent University, Ankara, Turkiye

M. S. 1987, Department of Electrical and Electronics Engineering, Project title: An Iterative Backprojection Algorithm for Electrical Impedance Imaging Using Finite Element Method, Middle East Technical University, Ankara, Turkiye

B. S. 1985, Department of Electrical and Electronics Engineering, Bogazici University, Istanbul, Turkiye

Employment History

Bilkent University, Ankara, Turkiye

+ 2004- Professor, Department of Electrical and Electronics Engineering
+ 2009-2023 Director, National Magnetic Resonance Research Center (UMRAM)
+ 2005-2011 Vice Chair, Department of Electrical and Electronics Engineering
+ 2002-2004 Visiting Professor, Department of Electrical and Electronics Engineering
+ 1996-1998 Visiting Assistant Professor, Department of Electrical and Electronics Engineering
+ 1988-1991 Instructor, Department of Electrical and Electronics Engineering
+ 1986-1988 Research Assistant, Department of Electrical and Electronics Engineering

National Heart, Lung and Blood Institute, NIH, Bethesda, Maryland

+ Sep 2024-June 2025- Scientist (on Sabbatical)

Johns Hopkins University, Baltimore, Maryland

+ 2005-2015 Adjunct Professor, Department of Radiology and Radiological Sciences
+ 2004-2005 Professor, Department of Radiology and Radiological Sciences
+ 2003-2005 Joint Appointment, Department of Electrical and Computer Engineering
+ 1998-2004 Associate Professor, Department of Radiology and Radiological Sciences
+ 1998-2005 Joint Appointment, Department of Biomedical Engineering
+ 1994-1998 Assistant Professor, Department of Radiology and Radiological Sciences
+ 1993-1994 Instructor, Department of Radiology and Radiological Sciences
+ 1991-1993 Postdoctoral Fellow, Department of Biomedical Engineering Johns Hopkins University, Baltimore, Maryland

Industry

+ 1998- Founder ClearPoint Neuro, Inc. (formerly known as MRI Interventions, Inc and SurgiVision Inc.), Columbia, Maryland
+ 2007-2015 Founder, Troyka Med AS, Ankara, Turkiye
+ 1981-1986 Engineer PETAS, Ankara, Turkiye

Awards

+ 2024 Distringuished Teacher Award, Bilkent University
+ 2023 Technology Award, Elginkan Foundation
+ 2016 Fellow, National Academy of Inventors
+ 2013 Member, Academia Europaea
+ 2012 Member, Science Academy, Turkiye
+ 2011 Fellow, ISMRM
+ 2006 Science Award, TUBITAK
+ 2001 Melvin Judkins Young Investigator Award, American Heart Association
  X. Yang, E. Atalar, D. Lim J. M. Serfaty, D. Wang, A. Kumar, L. Cheng, In vivo MR imaging of catheter-based vascular gene transfer
+ 2000 Melvin Judkins Young Investigator Award, American Heart Association
  J. M. Serfaty, X. Yang, H. H. Quick, P. Aksit, E. Atalar, MR-guided coronary artery intervention
+ 1999 Samuel A. Levine Young Investigator Award, American Heart Association
  K. A. Shunk, J. A. C. Lima, C. Rochitte, E. Atalar, Transesophageal MRI of Thoracic Aorta in Vivo in Patients with and without Atherosclerosis
+ 1995 Frank T. McClure Fellow

Current Research Group Members

Research Associates

1. **Erkan Dorken,** 2020-

Postdoctoral Fellows

2. **Sadeq Ashrafi,** 2023-

Engineers

3. **Metin Can Isık**, 2022-

Graduate Students

1. **Abdullah Erkam Arslan**, 2022 Ph.D. Student
2. **Muhammed Ali Khan,** 2025 Ph.D. Student
3. **Ege Aydin**, 2023 M.S. Student
4. **Dora Özkara,** 2024 M.S. Student

Past Research Group Members

Postdoctoral Fellows

1. **Mehdi Ghasemzadeh**, 2023-2025 (current position: Postdoctoral Fellow at B'lkent University, Ankara)
2. **Reza Babaloo**, 2023-2024 (Current position: Postdoctoral Fellow at the Robarts Research Institute, ON, Canada)
3. **Ehsan Kazemivalipour**, 2020-2021 (Current position: Postdoctoral Fellow at the Matinos Center of MGH, USA)
4. **Akbar Alipour**, 2017-2017 (Current position: Assistant Professor at Mount Sinai School of Medicine, USA)
5. **Yusuf Oner**, 2001-2002 (Current position: Professor of Radiology at Gazi University, Turkiye)
6. **Jean Michel Serfaty**, 1998-2000 (Current position: Professor of Radiology at CHU Nantes, France)
7. **Xiaming Yang**, 1997-1998 (Current position: Professor of Radiology at University of Washington, USA)
8. **Ogan Ocali**, 1995-1997 (Current position: Deceased. Formed startup companies in USA and Turkiye)

Supervised Ph.D. Theses

1. **Reza Babaloo,** Ph.D. Thesis: Technical innovations in gradient array systems for MRI application, Bilkent University, 2023. (Current position: Postdoctoral fellow at Bilkent University)
2. **Ariyurek, Cemre,** Ph.D. Thesis: Frequency Response Analysis and Reconstruction Weighting Schemes for MR Elastography, Bilkent University, 2020 (Current position: Postdoctoral fellow at the Childrens Hospital, Boston, USA)
3. **Kazemivalipour, Ehsan,** Ph.D. Thesis: *Innovative Designs of RF Transmit Array Coils and RF Heating Analysis of Patients with Implanted DBS,* Bilkent University, 2020 (Current position: Postdoctoral Fellow at the Matinos Center of MGH, USA)
4. **Sadeghi-Tarakameh, Alireza,** Ph.D. Thesis: *Novel Techniques and Innovative DDesign for the RF Chain of Magnetic Resonance Imaging Scanners,* Bilkent University, 2020 (Current position: Postdoctoral Fellow at University of Minnesota, USA)
5. **Ertan, Koray N.,** Ph.D. Thesis: *Design and Applications of a z-Gradient Array in Magneric Resonance Imaging,* Bilkent University, 2019. (Current position: Postdoctoral Fellow at the Stanford University, USA)
6. **Kerse, M. Can,** Ph.D. Thesis: *Ablation Cooled Material Removal With Bursts of Ultrafast Pulses,* Bilkent University, 2016. (Role: Co-advisor. Primary advisor is F. Omer Ilday). (Current position: Senior System and Design Engineer, Meteksan Savunma, Turkiye)

7. **Acikel, Volkan,** Ph.D. Thesis: *Analysis of Current Induction on Thin Conductors Inside the Body During MRI Scan,* Bilkent University, 2015. (Current position: Senior Design Engineering at ASELSAN, Turkiye)
8. **Turk, Esra A.,** Ph.D. Thesis: *Novel Methods and Analysis of B0 and B1 Gradients in Magnetic Resonance Imaging,* Bilkent University, 2013 (Current position: Assistant Professor at the Childrens Hospital, Boston, USA)
9. **Kopanoglu, Emre,** Ph.D. Thesis: *Novel Techniques Regarding Specific Absorbtion Rate and Field of View Reducing in Magnetic Resonance Imaging,* Bilkent University, 2012 (Current position: Lecturer at the Cardiff University, UK)
10. **Eryaman, Yigitcan,** Ph.D. Thesis: *Novel SAR Reduction Methods for Magnetic Resonance Imaging,* Bilkent University, 2011 (Current position: Associate Professor with tenure at University of Minnesota, USA)
11. **Celik, Haydar,** Ph.D. Thesis: *Novel Magnetic Resonance Technologies for Image-Guided Interventions,* Bilkent University, 2010 (Current position: Clinical Researcher at Promaxo Inc, USA)
12. **Susil, Robert C.,** Ph.D. Thesis: *Interventional MRI: Targeting, Monitoring, and Assessment of Minimally Invasive Therapies,* Johns Hopkins University, 2003. (Current position: Deceased)
13. **Yeung, Chistopher J.,** Ph.D. Thesis: *RF Heating Due to Metallic Devices in MRI,* Johns Hopkins University, 2002 (Current Position: The pastoral associate to the Western Vicar for the Archdiocese of Baltimore, USA)
14. **Bolster, Bradley.D.,** Ph.D. Thesis: *Rapid Determination of Local Vascular Tissue Material Properties using Magnetic Resonance Imaging,* Johns Hopkins University, 2000 (Current Position: Sr. Staff Scientist at Siemens Healthcare, Utah, USA)

Supervised M.S. Theses

1. **Ege Aydin**, 2025 M.S. Thesis, Scalable and compact eGaN based gradient and RF transmit/receive systems for MRI, Bilkent University, 2025.
2. **Muhammed Ali Khan,** 2025 M.S. Thesis, Development of a multi-channel optical communication system for MRI gradient, RF-transmit and RF-receive array chains using FPGAs, Bilkent University, 2025.
3. **Mehmet Emin Ozturk**, 2024 M.S. Thesis, Spectrometer frameworks for gradient arrays, Bilkent University, 2025.
4. **Elnaz Mahmoudi,** M.S. Thesis, Optimized RF safety monitoring for cerebellar imaging at 7T, Bilkent University, 2024.
5. **Eskandarian, Laleh**, M.S. Thesis, (CoSupervised together with Kader Karli Oguz) Structural connectivity alters in pediatric systemic lupus erythematosus prior to neuropsychiatric manifestations, Bilkent University, 2022
6. **Arghiani, Ziba,** M.S. Thesis, Driving mutually coupled coils using an array of class-E amplifiers, Bilkent University, 2022
7. **Arslan, Abdullah E.**, M.S. Thesis, A 600W on-coil Class-E RF power amplifier array with dynamic phase control for 3T MRI, Bilkent University, 2022
8. **Tasdelen, B.,** M.S. Thesis: *Dynamic Decoupling and Noise Analysis for Simultaneous Transmission and Reception in MRI and MPI,* Bilkent University, 2020
9. **Ashfaq, Bismillah N.,** M.S. Thesis: *A Gate Modulated Digitally Controlled Modified Class-E Amplifier for On-Coil Application in MRI,* Bilkent University, 2018
10. **Tu Zahra, Fatima,** M.S. Thesis: *Highly Efficient 300 W Modified Class-E RF Amplifiers for 64 MHz Transmit Array System,* Bilkent University, 2017
11. **Poni, Redi,** M.S. Thesis: *A Digitally Controlled Class-E Amplifier for MRI,* Bilkent University, 2016
12. **Sadeghi-Tarakameh, Alireza,** M.S. Thesis: *Design of a Birdcage-Like Radio Frequency Transmit Array Coil for the Magnetic Resonance Imaging Using Equivalent Circuit Model,* Bilkent University, 2016
13. **Salim, Maryam,** M.S. Thesis: *Full-Duplex MRI for Zero TE Imaging,* Bilkent University, 2016
14. **Taraghinia, Soheil,** M.S. Thesis: *A z-Gradient Coil Array System for Magnetic Resonance Imaging,* Bilkent University, 2016
15. **Ariyurek, Cemre,** M.S. Thesis: *Modes of Shear Waves In Magnetic Resonance Elastography,* Bilkent University, 2014

16. **Ozen, Ali C.,** M.S. Thesis: *A Method of Decoupling of Radio-frequency Coils in Magnetic Resonance Imaging: Application to MRI with Ultra-short Echo-time and Concurrent Excitation and Acquisition,* Bilkent University, 2013
17. **Acikel, Volkan,** M.S. Thesis: *Modeling of Radio Frequency Induced Currents on Lead Wires During MR Imaging Using a Modified Transmission Line Method (MoTLiM),* Bilkent University, 2010
18. **Kerse, M. Can,** M.S. Thesis: *Imitation of Radiofrequency Ablation with Fiber Delivered Laser System for Magnetic Resonance Guided Treatment of Atrial Ablation,* Bilkent University, 2010
19. **Viskusenko, V. Nikolay,** M.S. Thesis: *Endoluminal MR Coils for Interventional Procedures,* 2010
20. **Bayindir, Haldun O.,** M.S. Thesis: *A Novel VERSE Optimal RF Pulse Design Method for Parallel Transmission in Magnetic Resonance Imaging,* Bilkent University, 2009
21. **Abaci, Esra.,** M.S. Thesis: *Analysis of the Electromagnetic Field Inside the Gradient Coils and Investigation of the Nerve and Cardiac Stimulation Risk for the Patients during MRI,* Bilkent University, 2008
22. **Aydogdu, Elif,** M.S. Thesis: *Variable Capacitor Based Mechanical Energy to Electrical Energy Converter,* Bilkent University, 2007
23. **Ermeydan, Ahmet,** M.S. Thesis: *MRI Compatible Implantable Devices,* Bilkent University, 2007
24. **Eryaman, Yigitcan,** M.S. Thesis: *Optimization of Internal MRI Coils,* Bilkent University, 2007
25. **Irak, Halise,** M.S. Thesis: *Modeling RF Heating of Active Implatable Medical Devices During MRI using Safety Index,* Bilkent University, 2007
26. **Afacan, Onur,** M.S. Thesis: *Piezoelectric Power Generation Using the Vibration of Heart,* Bilkent University, 2006
27. **Celik, Haydar,** M.S. Thesis: *Novel RF Coil Technologies for MRI,* Bilkent University, 2006
28. **Tasci, T. Onur,** M.S. Thesis: *Focused RF Ablation using Magnetic Fluids,* Bilkent University, 2006
29. **Ferhanoglu, Onur,** M.S. Thesis: *Safety of Metallic Implants in Magnetic Resonance Imaging,* Bilkent University, 2005
30. **Memis, O. Gokalp,** M.S. Thesis: *Miniaturized Fiber Optic Transmission System for Magnetic Resonance Imaging Signals,* Bilkent University, 2005
31. **Shah, Vashali C.,** M.S. Thesis: *Thermal Mapping Techniques using MRI,* Johns Hopkins University, 2002
32. **Yung, Andrew C.H.,** M.S. Thesis: *Development and Applications of Intraluminal Coils for MRI,* Johns Hopkins University, 2002
33. **Abdel-Hafez, Imad A.,** M.S. Thesis: *Ultimate Intrinsic SNR in Magnetic Resonance Imaging by Optimization the EM Field Generated by Internal Coils,* Bilkent University, 2000
34. **Aksit, Pelin,** M.S. Thesis: *Multiple FOV MR Flouroscopy,* Johns Hopkins University, 2000
35. **Lee, Joanna S.,** M.S. Thesis: *Post-Processing for the Real-Time Visualization of the Intravascular MR Images, Johns Hopkins University, 1999*

Staff

1. **Manoucher Takrimi**, (**Research Associate)** 2019-2025,
2. **Fatma Gul Uyar**, **(Engineer)** 2022-2025
3. **Civan Serhat Cevik (Eng. Candidate),** 2023-2024
4. **Ayfer Akbaba (Eng. Candidate),** 2023-2024
5. **Mehmet Demir**, **(Engineer)** 2022-2022
6. **Nurbanu Alparslan**, **(Engineer)** 2021-2022
7. **Mert Bozkurt**, **(Engineer)** 2019-2021
8. **Ahmet Fatih Yaprak**, **(Engineer)** 2019-2020
9. **Muhammed Said Aldemir**, **(Engineer)** 2019-2021
10. **Ozan Koray Esen**, **(Engineer)** 2018-2018
11. **Gamze Zeynep Bilici**, **(Engineer)** 2018-2019
12. **Erhan Erkoseoglu**, **(Engineer)** 2018-2019
13. **Ozan Emir**, **(Engineer)** 2017-2018
14. **Ugur Yilmaz**, **(Engineer)** 2017-2020
15. **Soheil Taraghinia**, **(Engineer)** 2017-2021

16. **Berk Silemek**, **(Engineer)** 2013-2018
17. **Umut Gundogdu**, **(Engineer)** 2012-2019
18. **Taner Demir**, **(Engineer)** 2009-2016
19. **Burak Akin**, **(Engineer)** 2008-2012
20. **Di Qian**, **(Engineer)** 2004-2005
21. **Parag V Karmarkar**, **(Engineer)** 2003-2005
22. **Ananda Kumar**, **(Engineer)** 2001-2003
23. **Harald Quick**, **(Engineer)** 2000-2000

Research Funding: Current

+ 2023-2026 European Commission, HORIZON-CSA**,** Project Title: Twinning of Magnetic Resooance Imaging Research Institutes, Acronym: MRTwins, **Coordinator,** 1 500 000 Euros, Bilkent Budget: 750 000 Euros.
+ 2023-2026 TUBITAK 1004 23AG005 Project Title: İnsan Fonksiyonunu Tehdit Eden Zorluklara Karşı Nöroteknolojik Çözümler Platformu**, Leader of Bilkent University Component,** Coordinator: Can Yucesoy, Bilkent Funding: 12 000 000TL
+ 2025-2027 TUBITAK BIDEB 2247B**,** Project Title: A Massive Gradient Array for Magnetic Resonance Imaging: More is Different, **Principal Investigator,** 1 500 000 TL.

Research Funding: Past

+ 2023-2025 TUBITAK 1001 123E024 Project Title: Manyetik Rezonans Görüntüleme Cihazları Için Gradyan Dizisi Ve Rf Verici Dizisi Sürme Yetenekli Spektrometrenin Tasarımı Ve Gerçekleştirilmesi, **Principal Investigator** 1 200 000TL
+ 2021-2023 TUBITAK 1001 121E128 Project Title: Design and Implementation of a Set of Z-Gradient Array and an Active-Shield Array for Magnetic Resonance Imaging, **Co-Investigator,** PI: Manoucher Takrimi**,** 1 200 000TL
+ 2021-2023 TUBITAK JPCOFUND 121N028 The EU Joint Programme - Neurodegenerative Disease Research (JPND) Project, Title: Spinocerebellar ataxias: Advanced imaging with ultra-high field MRI, **Principal Investigator of Work Package 5,** PI: Tony Stoecker, Bilkent funding: 1 200 000TL.
+ 2019-2022 TUBITAK 1001 119E116 Project Title: *Manyetik Rezonans Goruntuleme Cihazlari icin Dairesel Radyo-Frekans Sargi Dizilerinin Analizi, Tasarimi ve Yapimi* **Principal Investigator** 696,300TL
+ 2019-2021 ASELSAN Project Title: *MR Goruntuleme Sistemi Gelistirme Projesi* **Principal Investigator** 350,000USD
+ 2018-2021 TUBITAK 1001 117E817 Project Title: *Beyin Manyetik Rezonans Elastografisinin Guvenligi ve Optimizasyonu* **Principal Investigator** 341,181TL
+ 2017-2020 Strateji ve Butce Baskanligi Project Title: *Preklinik Goruntuleme Yaridimi ile Asi Test ve Gelistirme* **Principal Investigator** 9,400,000TL
+ 2017-2022 ASELSAN, (supported by TUBITAK TEYDEB) Project Title: *Cok Kanalli Gradyan Bobin Dizisi Tasarimi, Sinyal Ureteci ve Kontrol Karti Gelistirilmesi ve Prototip Uretimi* **Principal Investigator** 1,100,000TL
+ 2017-2018 TUBITAK 1000 Project Title: *Bilkent Universitesi Ar-Ge Strateji Belgesi (Sinir Bilimleri)* **Principal Investigator** 0TL
+ 2017-2020 TUBITAK 1001 (116E270) Project Title: *Manyetik Rezonans Goruntuleme Cihazi IÃ§in Ozellestirilmis E-Sinifi Sayisal Radyo Frekans Yukselteci Dizisi* **Principal Investigator** 360,000TL
+ 2015-2016 ASELSAN Project Title: *36 Kanalli RF Bobin Dizisi Tasarimi, Gelistirilmesi ve Prototip Uretimi* **Principal Investigator** 500,000TL
+ 2014-2016 SANTEZ Project Title: *Implant Uyumlu MR Cihazi (Implant Compatible MR Scanner)* **Principal Investigator** 621,000TL
+ 2014-2017 TUBITAK 1001 (114E186) Project Title: *Etkin Ayristirma Yontemi Kullanarak Sifir Eko Zamanli Manyetik Rezonans Goruntulemesi (Zero Echo Time Magnetic Resonance Imaging Using Active Decoupling Technique)* **Principal Investigator** 390,000TL

+ 2013-2015 TR Ministry of Development Project Title: *Ulusal Manyetik Rezonans Arastirma Merkezi Faz II (National Magnetic Resonance Research Center (UMRAM) Phase II)* **Principal Investigator** 5,100,000TL

+ 2013-2016 TUBITAK 1001 (103S959) Project Title: *Ailesel El Titremesi (Essential Tremor-ETM)'nin Genetik, Yapisal ve Islevsel Temellerinin Arastirilmasi* **Consultant** Principal Investigator: Tayfun Ozcelik, 360,000TL

+ 2013-2016 TUBITAK 1001 (102K069) Project Title: *Insan Beyninin Yapisal Ve Islevsel Mimarisinin Genetik Kokenli Merkezi Sinir Sistemi Bozukluklari Incelenerek Arastirilmasi* **Consultant** Principal Investigator: Tolga Cukur, 360,000TL

+ 2013-2016 TUBITAK 3501 (113E187) Project Title: *Manyetik Rezonans Goruntuleme Altinda Hizli Ve Guvenilir Ozgul Sogurma Orani Ve Isi lerinin Gelistirimesi* **Consultant** Principal Investigator: Tahir Malas, 360,000TL

+ 2013-2016 TUBITAK 3501 (114E167) Project Title: *Kanser Goruntuleme Icin Manyetik Parcacik Goruntuleme: Bolgesel Difuzyon Algilama* **Consultant** Principal Investigator: Emine Ulku Saritas, 360,000TL

+ 2013-2016 TUBITAK 3501 (114E546) Project Title: *Kategori Hedefli Dogal GÃ¶rsel Taramanin Insan Beyninde GÃ¶rsel Temsillere ve Islevsel Baglantilara Etkisi* **Consultant** Principal Investigator: Tolga Cukur, 360,000TL

+ 2013-2016 TUBITAK 3501 (113S001) Project Title: *Dejeneratif Resesif Ataksilerin Nozolojisi ve Molekoler Tanisi* **Co-Investigator** Principal Investigator: Haluk Topaloglu, 360,000TL

+ 2012-2016 TUBITAK 1001 (112E555) Project Title: *Dogrusal Olmayan Graydanlar Manyetik Alanin Manyetik Rezonans Goruntulemesindeki Uygulamalari (Applications of Nonlinear Gradient Fields in Magnetic Resonance Imaging)* **Principal Investigator** 385,000TL

+ 2010-2013 TUBITAK 1001 (109E226) Project Title: *Verici Sargi Dizilimi Ile Manyetik Rezonans Goruntulemesi Sirasinda Olusan Ozgul Sogurma Hizinin Azaltilmasi* **Principal Investigator** 385,000TL

+ 2010-2013 TUBITAK TEYDEB Project Title: *Endoservikal Manyetik Rezonans Goruntuleme* **Principal Investigator** 300,000TL

+ 2010-2013 TUBITAK 1001 Project Title: *Femtosaniye Nanobiyofotonik icin Ileri Fiber Cozumleri* **Consultant** Principal Investigator: Omer Ilday, 262,794TL

+ 2009-2010 University of Minnesota, A Collaborative Project Project Title: *Producing Miniaturized RF Signal Fiber Optic Transmission System for 7 Tesla MRI Scanners* **Principal Investigator** 30,000USD

+ 2009-2012 TUBITAK 1001 Project Title: *Baglamin Gorsel Algiya Etkileriyle Ilgili Olarak Insan Korteksindeki Sinirsel Etkinliklerin ve Islevsel Baglantilarin Incelenmesi* **Consultant** Principal Investigator: Huseyin Boyaci, 385,000TL

+ 2009-2012 TUBITAK 1001 Project Title: *Insanlarda Gelisimsel Sinir Sistemi Hastaliklarina Neden Olan Mutasyonlarin Gorsel ve Motor Sisteminin Yapisal ve Islevsel Organizasyonuna Etkilerinin Arastirilmasi* **Consultant** Principal Investigator: Emre Ozgen, 395,700TL

+ 2008-2011 TUBITAK 1001 Project Title: *Girisimsel MRG de Kateterlerin Yerinin Otomatik Olarak Belirlenebilmesi Icin Yeni Bir Tumlesik Mikro Optoelektronik Sistem* **Consultant** Principal Investigator: Arda Deniz Yalcinkaya, 422,580TL **+** 2007-2009 DPT Project Title: *Girisimsel ve Tanisal Manyetiz Rezonans Arastirma Merkezi* **Principal Investigator** 6,490,000TL

+ 2007-2011 SANTEZ Project Title: *Manyetik Rezonans Uyumlu Elektrofizyoloji Araclari* **Principal Investigator** 800,000TL

+ 2007-2011 TUBITAK 1001 Project Title: *Manyetik Rezonans Goruntulemesi Yonteminin Hastalara Takilan Uyarici Elektronik Cihazlar Uzerindeki Etkilerinin Incelenmesi* **Principal Investigator** 360,000TL

+ 2007-2009 TUBITAK TEYDEB Project Title: *Manyetik Rezonans Goruntuleme Uyumlu Elektrofizyoloji Araclari* **Principal Investigator** 400,000TL

+ 2004-2006 FP6 MRIG-CT-2004-506262 Project Title: *Magnetic Resonance Imaging Compatible Cardiac Pacemakers and Implantable Cardioverter-Defibrilators* **Principal Investigator** 80,000EUR

+ 2003-2008 NIH R01 Project Title: *Imaging Cardiac Regeneration with Mesenchyma Stem Cell* **Co-Investigator** Principal Investigator: Dara Kraichman, 1,300,000USD

+ 2002-2005 NIH R21 Project Title: *Mesenchymal Stem Cell and Ventricular Remodeling* **Co-Investigator** Principal Investigator: Joshua M. Hare, 60,000USD

+ 2001-2004 NIH R01 Project Title: *Digital optical imaging of vascular gene expression* **Co-Investigator** Principal Investigator: Xiaoming Yang, 1,000,000USD

+ 2001-2004 US Army Project Title: *Endo-urethral MRI guided Prostate Ablation* **Principal Investigator** 225,000USD

+ 2001-2005 NIH R01 Project Title: *Intravascular MRI-Enhanced Vascular Gene Transfer* **Co-Investigator** Principal Investigator: Xiaoming Yang, 1,300,000USD

+ 2001-2006 NIH R01 Project Title: *Innovative MRI Research Technology* **Co-Investigator** Principal Investigator: Paul A. Bottomley, 2,000,000USD

+ 2001-2004 NSF PER Project Title: *Supplement to Center for Medical Robotics and Computer-Assisted Interventional Systems and Technology* **Principal Investigator** 309,678USD

+ 1999-2000 Gatewood Fellowship Project Title: *High Resolution Endouretral MRI of the Female Urethra and Urethral support tissues with patological correlation* **Co-Investigator** Principal Investigator: Harpreet Pannu, 10,000USD **+** 1999-2001 CIRREF Project Title: *IVMRI guided vascular interventions* **Co-Investigator** Principal Investigator: Xiaoming Yang, 25,000USD

+ 1999-2004 NIH R01 Project Title: *Harmonic Phase MRI for Ultrafast Cardiac Strain Imaging* **Co-Investigator** Principal Investigator: Jerry Prince, 1,500,000USD

+ 1998-1999 Whitaker Foundation, Biomedical Engineering Transitional Grant Project Title: *High Resolution Imaging and Spectroscopy of Atherosclerotic Plaques using Intravascular MRI* **Principal Investigator** 65,000USD

+ 1998-2000 SurgiVision Inc., Research Grant Project Title: *Development of MR Probes* **Principal Investigator** 392,528USD

+ 1998-2003 NIH R01 Project Title: *Intravascular Magnetic Resonance: Towards Clinical Interventions* **Principal Investigator** 813,354USD

+ 1998-2008 NSF Engineering Research Center Project Title: *Center for Medical Robotics and Computer-Assisted Interventional Systems and Technology* **Co-Investigator** Principal Investigator: Russel Taylor, 6,000,000USD

+ 1997-2005 NIH R01 Project Title: *MR-guided Coronary Balloon Angioplasty* **Principal Investigator** 1,900,000USD

+ 1995-1998 Whitaker Foundation, Biomedical Engineering Research Grant Project Title: *High Resolution Imaging and Spectroscopy of Atherosclerotic Plaques using Intravascular MRI* **Principal Investigator** 179,941USD

+ 1995-1999 NIH, SCOR is ischemic heart disease Project Title: *Project 6: Metabolic Characterization of Reperfused Dysfunction Myocardium by NMR* **Co-Investigator** Principal Investigator: Lewis Becker, 5,969,014USD

+ 1995-2000 NIH R01 Project Title: *Dynamic 3D tagged MRI of the Cardiac Cycle in Ischemia* **Co-Investigator** Principal Investigator: Elliot R. McVeigh, 1,595,464USD

+ 1994-1996 US Army, Innovative developmental and exploratory award Project Title: *In-vivo microscopic MR imaging of breast lesions* **Co-Principal Investigator** Principal Investigator: Elias A. Zerhouni, 149,948USD

US Patents

54. Atalar, E., Kazemivalipour, Eigenmode transmit array coil for magnetic resonance imaging, US patent no: 11740301, 29 Aug 2023 Assigned to Bilkent University

53. Atalar, E., Ertan, K.N. and Taraghinia, S., A Gradient Array System for MRI and Application on Diffusion Weighted Imaging, US patent no: 11287498, 29 Mar 2022 Assigned to Bilkent University

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