

## Assoc. Prof. NESLİHAN SARIGÜL

### Personal Information

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### International Researcher IDs

ScholarID: uDboQ3oAAAAJ

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ScopusID: 56658622300

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### Education Information

Doctorate, Cukurova University, Fen Edebiyat Fakültesi, Fizik, Turkey 2010 - 2014

Undergraduate, Gazi University, Gazi Eğitim Fakültesi, Matematik Ve Fen Bilimleri Eğitimi, Turkey 2001 - 2006

### Foreign Languages

English, C1 Advanced

### Dissertations

Doctorate, Examination of general cavity theory for magnesium and titanium doped lithium fluoride (TLD-100) in bone and lung heterogeneities, Çukurova Üniversitesi, Fen Bilimleri Enstitüsü, Fizik (Dr), 2014

### Research Areas

Biological Spectroscopy, Radiation Biophysics, Physics, Biophysics and Medical Physics, Nuclear physics

### Academic Titles / Tasks

Assistant Professor, Hacettepe University, Nükleer Bilimler Enstitüsü, Radyasyon Fiziği ve Uyg. A.B.D., 2022 - Continues

Lecturer PhD, Hacettepe University, Nükleer Bilimler Enstitüsü, Radyasyon Fiziği ve Uyg. A.B.D., 2013 - 2022

### Academic and Administrative Experience

Enstitü Yönetim Kurulu Üyesi, Hacettepe University, Nükleer Bilimler Enstitüsü, Radyasyon Fiziği ve Uyg. A.B.D., 2022 - Continues

Assistant Director of the Institute, Hacettepe University, Nükleer Bilimler Enstitüsü, Radyasyon Fiziği ve Uyg. A.B.D., 2022 - Continues

## Courses

Radyasyon Biyofiziği, Undergraduate, 2021 - 2022

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Author Correction: Using urine FTIR spectra to screen autism spectrum disorder**  
SARIGÜL N., Bozatlı L., KURULTAK İ., KORKMAZ ÖZKAN F.  
SCIENTIFIC REPORTS, no.1, 2024 (SCI-Expanded)
- II. **Using urine FTIR spectra to screen autism spectrum disorder**  
SARIGÜL N., Bozatlı L., KURULTAK İ., Korkmaz F.  
Scientific Reports, vol.13, no.1, 2023 (SCI-Expanded)
- III. **Urinalysis of individuals with renal hyperfiltration using ATR-FTIR spectroscopy**  
KURULTAK İ., SARIGÜL N., Kodal N. S., Korkmaz F.  
Scientific Reports, vol.12, no.1, 2022 (SCI-Expanded)
- IV. **Thermoluminescence characteristics of GaSe and Ga(2)Se(3 )single crystals**  
Isik M., SARIGÜL N., HASANLI N.  
JOURNAL OF LUMINESCENCE, vol.246, 2022 (SCI-Expanded)
- V. **Evaluation of the effect of field sizes on radiation dose in the presence of metal materials using Monte Carlo simulation**  
SARIGÜL N.  
APPLIED RADIATION AND ISOTOPES, vol.182, 2022 (SCI-Expanded)
- VI. **NanoDot(TM) OSLDs in verifying radiotherapy dose calculations in the presence of metal implants: A Monte Carlo assisted research**  
Ispir E. B., SARIGÜL N., YEĞİNGİL Z.  
RADIATION PHYSICS AND CHEMISTRY, vol.187, 2021 (SCI-Expanded)
- VII. **Urine analysis using FTIR spectroscopy: A study on healthy adults and children**  
SARIGÜL N., Kurultak İ., Uslu Gökçeoğlu A., Korkmaz F.  
Journal of Biophotonics, vol.14, no.7, 2021 (SCI-Expanded)
- VIII. **Defect characterization in Bi12GeO20 single crystals by thermoluminescence**  
Delice S., Isik M., SARIGÜL N., HASANLI N.  
JOURNAL OF LUMINESCENCE, vol.233, 2021 (SCI-Expanded)
- IX. **Thermoluminescence characteristics of Bi12SiO20 single crystals**  
Isik M., SARIGÜL N., HASANLI N.  
Journal of Luminescence, vol.224, 2020 (SCI-Expanded)
- X. **A practical method for quantifying dose in bone and lung using TLDs when using 6 and 15 MV photon beams.**  
Sarigül N., Surucu M., Reft C., Malin M., Yeğingil Z., Ayadogan B.  
Physics in medicine and biology, vol.65, 2020 (SCI-Expanded)
- XI. **ENERGY RESPONSE FACTOR of BeO DOSEMETER CHIPS: A MONTE CARLO SIMULATION AND GENERAL CAVITY THEORY STUDY.**  
Sarigul N., Surucu M., Aydogan B.  
Radiation protection dosimetry, vol.185, pp.303-309, 2019 (SCI-Expanded)
- XII. **A New Artificial Urine Protocol to Better Imitate Human Urine**  
SARIGÜL N., Korkmaz F., Kurultak İ.  
SCIENTIFIC REPORTS, vol.9, 2019 (SCI-Expanded)
- XIII. **Examination of general cavity theory for magnesium and titanium doped lithium fluoride (TLD-100) of varying thicknesses in bone and lung**  
SARIGÜL N., Surucu M., Reft C., YEĞİNGİL Z., Aydogan B.  
Radiation Measurements, vol.94, pp.1-7, 2016 (SCI-Expanded)

- XIV. **Study of thermoluminescence response of purple to violet amethyst quartz from Balıkesir, Turkey**  
Nur N., YEĞİNGİL Z., TOPAKSU M., Kurt K., DOĞAN T., SARIGÜL N., YÜKSEL M., ALTUNAL V., ÖZDEMİR A. C., Guckan V., et al.  
NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION B-BEAM INTERACTIONS WITH MATERIALS AND ATOMS, vol.358, pp.6-15, 2015 (SCI-Expanded)

### Articles Published in Other Journals

- I. **The effect of voxelization in Monte Carlo simulation to validate Bragg peak characteristics for a pencil proton beam**  
Gungor Price G. M., SARIGÜL N.  
REPORTS OF PRACTICAL ONCOLOGY AND RADIOTHERAPY, vol.28, pp.102-113, 2023 (ESCI)
- II. **Does Electron Spectrum Affect TLD-100 Dose Response in 6 MV Photon Beam Irradiation?**  
SARIGÜL N.  
CUMHURİYET SCIENCE JOURNAL, vol.43, no.3, pp.504-509, 2022 (Peer-Reviewed Journal)
- III. **Determination of inflection points of CyberKnife dose profiles within acceptability criteria of deviations in measurements**  
SARIGÜL N., YEDEKÇİ F. Y., YEĞİNER M., Akyol F., UTKU H.  
Reports of Practical Oncology and Radiotherapy, vol.25, no.1, pp.6-12, 2020 (ESCI)
- IV. **Evaluation of NanoDot Optically Stimulated Luminescence Dosimeter for Cone-shaped Small-field Dosimetry of Cyberknife Stereotactic Radiosurgery Unit: A Monte Carlo Simulation and Dosimetric Verification Study.**  
AKYOL F. Y., SARIGUL N., YEGINER M., Yedekci Y., UTKU H.  
Journal of medical physics, vol.44, pp.27-34, 2019 (ESCI)

### Refereed Congress / Symposium Publications in Proceedings

- I. **Can Prediabetes be Scanned With Fourier Transform Infrared Spectroscopy?**  
SARIGÜL N.  
7th International Changing World Congress on Life, Social, Health, and Sports Sciences, İzmir, Turkey, 24 - 26 September 2022
- II. **ATR-FTIR potential in Autism Spectrum Disorder screening using urine samples**  
SARIGÜL N.  
Turkish Physical Society 38th International Physics Congress, Muğla, Turkey, 31 August - 04 September 2022
- III. **Spectral effect of changes in the amount of some natural urine components**  
SARIGÜL N.  
Turkish Physical Society 38th International Physics Congress, Muğla, Turkey, 31 August - 04 September 2022
- IV. **A Monte Carlo Evaluation of Flattening-Filter-Free MV Photon Dose Distributions in the Presence of High-Z Metals**  
Ispir B., SARIGÜL N., Yenice K., Schlattl H., YEĞİNGİL Z.  
59th Annual Meeting and Exhibition of the American-Association-of-Physicists-in-Medicine (AAPM), Colorado, United States Of America, 30 July - 03 August 2017, vol.44, pp.2910
- V. **OSL DOZİMETRELERİN KÜÇÜK ALAN DOZİMETRESİ OLARAK KULLANIMININ TEST EDİLMESİ**  
SARIGÜL N., YEDEKÇİ F. Y., YEĞİNER M., AKYOL H. F., UTKU H.  
XI.Ulusal Nükleer Bilimler ve Teknolojileri Kongresi, KUŞADASI, Turkey, 12 - 14 October 2016
- VI. **ELECTRON SPECTRUM EFFECT ON LIF RESPONSE TO 6 MV PHOTON BEAM USING MONTE CARLO AND BURLIN CAVITY THEORY**  
Sarıgül N., Sürücü M., Aydoğan B.  
RAD 2015, Budva, Montenegro, 8 - 12 June 2015

- VII. **Prediction of the accuracy of Burlin Cavity Theory for LiF Mg Ti TLD 100 dosimeter in inhomogeneous medium**  
SARIGÜL N.  
International Conference On Luminescence And Esr Dosimetry, 27 - 29 August 2014
- VIII. **Comparison of the energy response factor of LiF MgTi Al<sub>2</sub>O<sub>3</sub> C and BeO detectors in kilovoltage and megavoltage photon beams using cavity theory**  
Sarigül N., Portakal Z. G., Sürücü M., Aydoğan B.  
International Conference On Luminescence And Esr Dosimetry, Ankara, Turkey, 27 - 29 August 2014
- IX. **Examination of General Cavity Theory for Lithium Fluoride TLDs in Bone and Lung Heterogeneities**  
Sarigül N., Surucu M., Reft C., Aydogan B.  
54th Annual Meeting and Exhibition of the American-Association-of-Physicists-in-Medicine (AAPM), Charlottetown, Canada, 29 July - 02 August 2012, vol.39, pp.4011
- X. **LiF:Mg,Ti (TLD-100) Dozimetrelerinin Kalibrasyonu ve Doz-Enerji Cevabı**  
GÜLMEN M., YEĞİNGİL Z., YÜKSEL M., SARIGÜL N., PORTAKAL UÇAR Z. G., Gürlek A. K., Gürlek A. K.  
LUMİDOZ V - Ulusal Lüminesans ve Dozimetri Kongresi, Mersin, Turkey, 8 - 09 September 2011
- XI. **Radyasyonun Kanser Oluşumu ve Kanser Tedavisi Üzerindeki Etkileri**  
PORTAKAL UÇAR Z. G., YEĞİNGİL Z., GÜLMEN M., SARIGÜL N., YÜKSEL M.  
LUMİDOZ V - Ulusal Lüminesans ve Dozimetri Kongresi, Mersin, Turkey, 8 - 09 September 2011
- XII. **Tüm Vücut Işınlaması ve Dozimetrik Hesaplamalara Genel Bakış**  
SARIGÜL N., YEĞİNGİL Z., GÜLMEN M., YÜKSEL M., PORTAKAL UÇAR Z. G., Gürlek A. K.  
LUMİDOZ V - Ulusal Lüminesans ve Dozimetri Kongresi, Mersin, Turkey, 8 - 09 September 2011

## Supported Projects

SARIGÜL N., Project Supported by Higher Education Institutions, CBCT cihazının kalite güvencesi çalışmalarında uygulanacak düzeltme faktörlerinin MC ve BeO OSLD ile belirlenmesi, 2016 - 2018

AKYOL H. F., SARIGÜL N., TUBITAK Project, Cyberknife SRS/SBRT Sisteminin OSL Tabanlı Küçük Alan Dozimetrisi, 2014 - 2016

## Metrics

Publication: 32

Citation (WoS): 208

Citation (Scopus): 208

H-Index (WoS): 5

H-Index (Scopus): 5

## Non Academic Experience

University of Illinois at Chicago

Loyola University

University of Chicago