

Prof. CEMİL KOCAR

Personal Information

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Education Information

Doctorate, Hacettepe Üniversitesi, Fen Bilimleri Enstitüsü, Nükleer Enerji Mühendisliği, Turkey 1996 - 2003

Post Graduate, Hacettepe Üniversitesi, Fen Bilimleri Enstitüsü, Nükleer Enerji Mühendisliği, Turkey 1990 - 1994

Under Graduate, Hacettepe Üniversitesi, Mühendislik Fakültesi, Nükleer Enerji Mühendisliği, Turkey 1986 - 1990

Foreign Languages

English, C1 Advanced

Research Areas

Mechanical Engineering, Energy, Nuclear Energy, Nuclear Engineering and Nuclear Energy Studies, Engineering and Technology

Academic Titles / Tasks

Professor, Hacettepe Üniversitesi, Mühendislik Fakültesi, Nükleer Enerji Mühendisliği Bölümü, 2016 - Continues

Associate Professor, Hacettepe Üniversitesi, Mühendislik Fakültesi, Nükleer Enerji Mühendisliği Bölümü, 2013 - 2016

Assistant Professor, Hacettepe Üniversitesi, Mühendislik Fakültesi, Nükleer Enerji Mühendisliği Bölümü, 2010 - 2013

Lecturer, Hacettepe Üniversitesi, Mühendislik Fakültesi, Nükleer Enerji Mühendisliği Bölümü, 2007 - 2010

Research Assistant, Hacettepe Üniversitesi, Mühendislik Fakültesi, Nükleer Enerji Mühendisliği Bölümü, 1990 - 1992

Academic and Administrative Experience

Hacettepe Üniversitesi, Mühendislik Fakültesi, Nükleer Enerji Mühendisliği Bölümü, 2017 - Continues

Hacettepe Üniversitesi, Nükleer Bilimler Enstitüsü, 2016 - Continues

Hacettepe Üniversitesi, Mühendislik Fakültesi, Nükleer Enerji Mühendisliği Bölümü, 2015 - 2017

Hacettepe Üniversitesi, Mühendislik Fakültesi, Nükleer Enerji Mühendisliği Bölümü, 2012 - 2015

Advising Theses

KOCAR C., VVER reaktöründe toryum-uranyum yakıtların ısı-hidrolik performans analizi, Post Graduate, A.KAĞAN(Student), 2017

KOCAR C., Nükleer reaktör soğutucu kanallarında akışın Lattice-Boltzmann yöntemi ile benzeşimi, Doctorate, A.TİFTİKÇİ(Student), 2016

KOCAR C., VVER-1200 reaktöründe uzun süreli santral kararması nedeniyle kullanılmış yakıt havuzu kazasının radyolojik sonuçları, Post Graduate, K.DOĞAN(Student), 2015

KOCAR C., Development of a radioecological model for accidental release of radionuclides: Akkuyu and Sinop nuclear power plants, Doctorate, L.ÖZGE(Student), 2014

KOCAR C., Bir gaz soğutmalı yüksek sıcaklık reaktörünün sayısal termal-hidrolik analizi, Doctorate, Ö.AKBAYIR(Student), 2012

TOMBAKOĞLU M., KOCAR C., Modeling and simulation of X-rays radiotherapy, Doctorate, G.GÖKERİ(Student), 2012

Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- I. **Sensitivity and uncertainty analysis for a radioecological model**
Unver O., KOCAR C., Tuncel G.
KERNTECHNIK, vol.85, no.5, pp.369-379, 2020 (Journal Indexed in SCI)
- II. **Development of a radioecological model for accidental release of radionuclides**
Unver O., KOCAR C., Tuncel G.
KERNTECHNIK, vol.85, no.5, pp.359-368, 2020 (Journal Indexed in SCI)
- III. **Numerical investigation of flow characteristics through simple support grids in a 1 x 3 rod bundle**
Karaman U., KOCAR C., Rau A., Kim S.
NUCLEAR ENGINEERING AND TECHNOLOGY, vol.51, no.8, pp.1905-1915, 2019 (Journal Indexed in SCI)
- IV. **Investigation of turbulence models for a fully-periodic LWR unit-cell in lattice-Boltzmann framework**
Tiftikci A., KOCAR C.
PROGRESS IN NUCLEAR ENERGY, vol.104, pp.160-171, 2018 (Journal Indexed in SCI)
- V. **HEAT CONDUCTION IN CONVECTIVELY COOLED ECCENTRIC SPHERICAL ANNULI A Boundary Integral Moment Method**
YILMAZER A., KOCAR C.
THERMAL SCIENCE, vol.21, no.5, pp.2255-2266, 2017 (Journal Indexed in SCI)
- VI. **Lattice Boltzmann simulation of flow across a staggered tube bundle array**
Tiftikci A., KOCAR C.
NUCLEAR ENGINEERING AND DESIGN, vol.300, pp.135-148, 2016 (Journal Indexed in SCI)
- VII. **A novel analytical method for heat conduction in convectively cooled eccentric cylindrical annuli**
YILMAZER A., KOCAR C.
INTERNATIONAL JOURNAL OF THERMAL SCIENCES, vol.83, pp.1-15, 2014 (Journal Indexed in SCI)
- VIII. **Virtual radiation detection and measurement laboratory**
Tiftikci A., KOCAR C.
COMPUTER APPLICATIONS IN ENGINEERING EDUCATION, vol.21, no.3, pp.550-560, 2013 (Journal Indexed in SCI)
- IX. **Monte Carlo simulation of stereotactic microbeam radiation therapy: evaluation of the usage of a linear accelerator as the x-ray source**
GÖKERİ G., KOCAR C., TOMBAKOĞLU M., Cecen Y.
PHYSICS IN MEDICINE AND BIOLOGY, vol.58, no.13, pp.4621-4642, 2013 (Journal Indexed in SCI)
- X. **Exact solution of the heat conduction equation in eccentric spherical annuli**
YILMAZER A., KOCAR C.
INTERNATIONAL JOURNAL OF THERMAL SCIENCES, vol.68, pp.158-172, 2013 (Journal Indexed in SCI)
- XI. **Effect of thermal parameters on performance of modular helium reactors**
Sahin H. M. , Akbayir O., KOCAR C.
INTERNATIONAL JOURNAL OF ENERGY RESEARCH, vol.36, no.15, pp.1395-1402, 2012 (Journal Indexed in SCI)
- XII. **Monte Carlo simulation of microbeam radiation therapy with an interlaced irradiation geometry and an Au contrast agent in a realistic head phantom**
GÖKERİ G., KOCAR C., TOMBAKOĞLU M.
PHYSICS IN MEDICINE AND BIOLOGY, vol.55, no.24, pp.7469-7487, 2010 (Journal Indexed in SCI)
- XIII. **An Analytical Solution to a Simplified EDXRF Model for Monte Carlo Code Verification**
KOCAR C.
JOURNAL OF THE KOREAN PHYSICAL SOCIETY, vol.56, no.1, pp.1-9, 2010 (Journal Indexed in SCI)

- XIV. **Assessment of radiological consequences due to routine atmospheric discharges from nuclear power plants**
KOCAR C., SÖKMEN C. N.
KERNTECHNIK, vol.74, pp.298-306, 2009 (Journal Indexed in SCI)
- XV. **A CFD model of two-phase flow in BWRs with results of sensitivity and uncertainty analysis**
KOCAR C. N. , Soekmen C. N.
NUCLEAR ENGINEERING AND DESIGN, vol.239, no.10, pp.1839-1846, 2009 (Journal Indexed in SCI)
- XVI. **Modeling of isothermal bubbly flow with interfacial area transport equation and bubble number density approach**
SARI S., ERGÜN Ş., BARIK M., KOCAR C., Sokmen C. N.
ANNALS OF NUCLEAR ENERGY, vol.36, no.2, pp.222-232, 2009 (Journal Indexed in SCI)
- XVII. **SOME BENCHMARK RESULTS IN SPHERICAL MEDIA RADIATIVE TRANSFER PROBLEMS**
YILMAZER A., KOCAR C.
TRANSPORT THEORY AND STATISTICAL PHYSICS, vol.38, no.5, pp.273-292, 2009 (Journal Indexed in SCI)
- XVIII. **A model for radiological consequences of nuclear power plant operational atmospheric releases**
KOCAR C., SÖKMEN C. N.
JOURNAL OF ENVIRONMENTAL RADIOACTIVITY, vol.100, no.1, pp.89-93, 2009 (Journal Indexed in SCI)
- XIX. **A comparative study of classical polynomial approximations to solve the transport equation in spherical albedo problems**
YILMAZER A., KOCAR C.
KERNTECHNIK, vol.73, pp.270-276, 2008 (Journal Indexed in SCI)
- XX. **Ultraspherical-polynomials approximation to the radiative heat transfer in a slab with reflective boundaries**
YILMAZER A., Kocar C.
INTERNATIONAL JOURNAL OF THERMAL SCIENCES, vol.47, no.2, pp.112-125, 2008 (Journal Indexed in SCI)

Books & Book Chapters

- I. **Nükleer Mühendisliğe Giriş**
ZABUNOĞLU H. O. , SÖKMEN C. N. , TOMBAKOĞLU M., YILMAZER A., KOCAR C., ERGÜN Ş., ÇOLAK Ü., Süleyman Sırrı Ö.
Palme, Ankara, 2015
- II. **NÜKLEER MÜHENDİSLİĞE GİRİŞ**
ZABUNOĞLU H. O. , SÖKMEN C. N. , TOMBAKOĞLU M., YILMAZER A., KOCAR C., ERGÜN Ş., ÇOLAK Ü., ÖZTEK S. S.
PALME, 2015
- III. **NÜKLEER MÜKENDİSLİĞE GİRİŞ**
ZABUNOĞLU H. O. , SÖKMEN C. N. , TOMBAKOĞLU M., YILMAZER A., KOCAR C., ERGÜN Ş., ÇOLAK Ü., ÖZTEK S. S.
palme, 2015

Refereed Congress / Symposium Publications in Proceedings

- I. **A pencil beam kernel model for flattening filter-free X-ray beams**
Ertürk M. E. , KOCAR C., Gürdalı S., TOMBAKOĞLU M.
5th International Conference on Radiation and Applications in Various Fields of Research, RAD 2017, Budva, mne, 12 - 16 June 2017, vol.2, pp.186-190
- II. **Investigation of Thermal Turbulent Flow Characteristics of Wire wrapped Fuel Pin Bundle of Sodium Cooled Fast Reactor in Lattice-Boltzmann Framework**
Tiftikci A., KOCAR C.
25th International Conference Nuclear Energy for New Europe (NENE), Portoroz, Slovenia, 5 - 08 September 2016

- III. **The Effect of Tube Arrangement and Turbulence Models for Steady Flow Past Tube Bundles**
Tiftikci A., KOCAR C.
25th International Conference Nuclear Energy for New Europe (NENE), Portoroz, Slovenia, 5 - 08 September 2016
- IV. **Simplified Pencil Beam Kernel For Unfiltered Energies**
Erturk M., KOCAR C., TOMBAKOĞLU M., Gurdalli S.
57th Annual Meeting and Exhibition of the American-Association-of-Physicists-in-Medicine (AAPM), California, United States Of America, 12 - 16 July 2015, vol.42, pp.3497
- V. **Turbulent Flow Simulations Of Wire-wrapped Fuel Pin Bundle Of Sodium Cooled Fast Reactor In Lattice-Boltzmann Framework**
Tiftikci A., KOCAR C.
24th International Conference on Nuclear Energy for New Europe (NENE), Portoroz, Slovenia, 14 - 17 September 2015
- VI. **Analysis of LOFA in BWR Spent Fuel Storage Pool**
KOCAR C., Dagli C. P.
24th International Conference on Nuclear Energy for New Europe (NENE), Portoroz, Slovenia, 14 - 17 September 2015
- VII. **PET ve PET/CT Uygulamalarında Hasta Vücutunda Soğurulan Fotonların (Self-Absorption) Zırlama Hesaplarına Olan Etkisinin İncelenmesi**
ÇELİKTEKİN O. Ş. , ATAK H., KOCAR C., GÜRDAL Ş. O.
5. Ulusal Lüminesans Dozimetri Kongresi, Mersin, Turkey, 08 September 2011, pp.65
- VIII. **A CFD model of two-phase flow in BWRS: Results of application to BFBT benchmark exercise 2**
Kocar C., SÖKMEN C. N.
12th International Topical Meeting on Nuclear Reactor Thermal Hydraulics, NURETH-12, Pittsburgh, PA, United States Of America, 30 September - 04 October 2007

Supported Projects

- YILMAZER A., GÜRDAL Ş. O. , KOCAR C., Project Supported by Higher Education Institutions, Radyasyon Algılama ve Ölçme Laboratuvarındaki Kaynakların Fiziksel Korunması ve Doz İzleme, 2017 - 2018
- KOCAR C., TİFTİKÇİ A., Project Supported by Higher Education Institutions, Yeni Avrupa İçin 26'ncı Uluslararası Nükleer Enerji Konferansı, 2017 - 2017
- KOCAR C., GÜRDALLI S., TOMBAKOĞLU M., ERTÜRK M. E. , Project Supported by Higher Education Institutions, Düzleştirici Filtresiz Xışınları Demetleri için Kalem Huzme Çekirdek Modeli, 2017 - 2017
- KOCAR C., TİFTİKÇİ A., Project Supported by Higher Education Institutions, Lattice-Boltzmann Sistemiyle Sodyum Soğutmalı Hızlı Reaktörün Tel Sarılı Yakıt Demetinde Isıl Türbülanslı Akışın Özelliklerinin İncelenmesi, 2016 - 2016
- KOCAR C., Project Supported by Higher Education Institutions, Yeni Avrupa İçin 24'üncü Uluslararası Nükleer Enerji Konferansı, 2015 - 2016
- SÖKMEN C. N. , KOCAR C., Project Supported by Higher Education Institutions, İki fazlı hava-su akışında fazlar arası kuvvetlerin ve ara yüzey alanı modellerinin etkilerinin incelenmesi, 2015 - 2016
- KOCAR C., AYHAN H., Project Supported by Higher Education Institutions, RELAP kodu kullanılarak Nükleer Reaktör güvenlik analizlerinin yapılması, 2015 - 2016
- YILMAZER A., KOCAR C., Project Supported by Higher Education Institutions, Uluslararası Nükleer Güç Reaktörleri Kullanılmış Yakıtlarının Yönetimi Konferansı Yakıt Çevriminin Arka-Ucuna Entegre Bir Yaklaşım, 15-19 Haziran 2015, UAEA Genel Merkezi, Viyana, Avusturya., 2015 - 2015

Citations

Total Citations (WOS):94

h-index (WOS):5