

# Curriculum Vita

## Personal Information

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### **Keyhandokht Karimi-Shahri**

#### **Assistant Professor of Nuclear Physics**

Department of Physics, Faculty of Science, University of Birjand,  
97175/615, Iran



Research Interests: Computational Dosimetry, Radiation Protection  
Dosimetry, Microdosimetry and Nanodosimetry, Radiation Dosimetry and  
Anatomical Modeling for Various Applications in Health Physics

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Homepage:

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## Education

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**PhD** Nuclear Physics, Ferdowsi University of Mashhad, Iran

Thesis: **Optimal Algorithm to Estimate the Effective Dose in External Exposure**

Supervisors:

Dr.Laleh Rafat- Motavalli

Prof.Hashem Miri-Hakimabad

**MSc** Nuclear physics, Ferdowsi University of Mashhad, Iran

Thesis: **Calculation of Fluence to Absorbed Dose Conversion Coefficients for Mono Energetic Neutron below 20 MeV on Modification ORNL Phantom**

Supervisors:

Prof.Hashem Miri-Hakimabad

**BSc** Physics, Hakim Sabzevari University, Sabzevar, Iran

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## Academic and Research Activities

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1. **2017-2018** University of Birjand, Department of Physics, Birjan, Iran  
Research Advisor, MSc thesis  
**“Design and study of Cherenkov camera (CVD) construction by Monte Carlo simulations”**
2. **2016-2017** University of Birjand, Department of Physics, Birjan, Iran  
Research Advisor  
**“The Calculation of Different Weight Percentile Groups Influence on the Effective Dose in Occupational Exposure”**
3. **2015 -2016** University of Birjand, Department of Physics, Birjand, Iran  
Research Advisor  
**“Study and calculation of Walking Phantom Effects on received doses in Occupational Exposure”**
4. **2012 -2015** Ferdowsi University, Department of Physics, Mashhad, Iran  
PhD student  
Research Supervisor: Dr.H.Miri and Dr. L.Rafat  
**"Optimal Algorithm to Estimate the Effective Dose in occupational Exposures"**
5. **2011-2012** Ferdowsi University, Department of Physics, Mashhad, Iran  
PhD student  
Research Supervisor: Dr.H.Miri and Dr. L.Rafat  
**"The Investigation of Torso Extra Layers Effect (Muscle and Fat Layers) on Effective Dose Values"**
6. **2010-2011** Ferdowsi University, Department of Physics, Mashhad, Iran  
PhD student  
Research Supervisor: Dr.H.Miri and Dr. L.Rafat  
**"Neutrons Applications in Cancer Treatment and in Specific Diagnostics".**
7. **2010** Ferdowsi University, Department of Physics, Mashhad, Iran  
PhD student  
Research Supervisor: Dr.H.Miri and Dr. L.Rafat  
**"Study on Construction Process of HYBRID Phantoms"**
8. **2009-2010** Ferdowsi University, Department of Physics, Mashhad, Iran  
Researcher  
Research Supervisor: Dr.H.Miri and Dr. L.Rafat  
**"Shielding Design Studies for Am-Be Source"**

9. **2008-2009** Ferdowsi University, Department of Physics, Mashhad, Iran  
Researcher  
Research Supervisor: Dr.H.Miri and Dr. L.Rafat  
**"Assessment of Effective Dose on ORNL Phantom and Investigation of Effective parameters (Body Models, Weighting Factors and Monte Carlo Codes) on Effective Dose Values"**
10. **2007-2008** Ferdowsi University, Department of Physics, Mashhad, Iran  
MSc student  
Research Supervisor: Dr.H.Miri  
**"Calculation of Fluence to Absorbed Dose Conversion Coefficients for Mono Energetic Neutron below 20 MeV on Modification ORNL Phantom"**
11. **2006-2007** Ferdowsi University, Department of Physics, Mashhad, Iran  
MSc student  
Research Supervisor: Dr.H.Miri  
**"Biological Effectiveness of Low Dose and Radiation Hormesis"**
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## **Professional Experience**

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Teach the General Physics, Thermodynamics and Statistical Mechanics, Radioisotops and their Application courses, Radiation Detection  
Teaching in general Physics and Nuclear Physics Lab

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## **Computer Skills**

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Programming in MCNP, Fortran 90 & 77, MATLAB, Monte Carlo methods  
Familiar with 3D-Doctor and Rhinoceros software

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## **List of Publications**

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1. Karimi Shahri K, Rafat Motavalli L, Miri Hakimabad H, Liye Liu, Junli Li,,**"Effects of computational phantoms on the effective dose and two-dosimeter algorithm for external photon beams"**, Applied Radiation and Isotopes 2017. ; 115:155-164
2. Firoozabadi M. M., Izadi Vasafi Gh., karimi-sh K., Ghorbani M. **"A Monte Carlo Study on the Effect of Various Neutron Capturers on Dose Distribution in**

- Brachytherapy with  $^{252}\text{Cf}$  Source"** Journal of Biomedical Physics Engineering 2016;7:13-20.
3. Nafise Araghian , Keyhandokht Karimi-Shahri,Atiyeh Ebrahimi-Khankook "A comparative study of anatomical models for estimating the radiation risk" Journal of Radiobiology 2015;2(1):3-10.
  4. K.Karimi Shahri, L.Rafat Motavali, H.Miri Hakimabad, " Study of size, type and the kerma approximation for thermoluminescent dosimetry-" Journal of Radioanalytical and Nuclear Chemistry 2013. ; 298(2):813-819
  5. .K.Karimi Shahri, L.Rafat Motavali, H.Miri Hakimabad, "Can the same dose data be estimated from phantoms with different anatomies" Radioprotection Journal 2013. ;48(4):527-544.
  6. K.Karimi Shahri, L.Rafat Motavali, H.Miri Hakimabad, "Finding a suitable shield for mixed neutron and photon fields based on an Am-Be source". Journal of Radioanalytical and Nuclear Chemistry2013. ;298(1):233-239.
  7. K.Karimi Shahri, H.Miri Hakimabad, L.Rafat Motavali" Different Effective Dose Conversion Coefficients for Monoenergetic Neutron Fluence from  $1^{0-9}$  MeV to 20 MeV - A Methodological Comparative Study-" Radioprotection Journal 2012. ;47(2):1-14
  8. Keyhandokht Karimi Shahri, Lalle Rafat Motavalli, Hashem Miri Hakimabad," Neutrons Applications in Cancer Treatment and in Specific Diagnostics", Hellenic Journal Of Nuclear Medicine 2011; 14(2):70-74
  9. H. Miri Hakimabad, L.Rafat Motavali, K.Karimi Shahri" Activation Rate Uniformity in a Bilateral IVNAA Facility for Two Anthropomorphic Phantoms" Nuclear Technology& Radiation Protection2010;25:69-77
  10. H. Miri Hakimabad, L.Rafat Motavali, K.Karimi Shahri " Assessment of Neutron Fluence to Absorbed Dose Conversion Coefficients in ORNL Analytical Adult Phantom" Journal of Radiological Protection2009; 29 : 51–60 (IOP science).
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## Ongoing Research Papers

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Karimi Shahri K, Rafat Motavalli L, Miri Hakimabad H, " Improving Efficiency of Two-Dosimeter Algorithm for Estimated Effective Dose Using New Dosimeters".

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## **Seminars or Conferences Attended**

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The First Science Research Festival of Radiation Students, Shiraz, Iran, 7-10 November 2010

14th international congress of nuclear medicine, Mashhad, Iran, 4-6 November 2010

1st MEFOMP International Conference of Medical physics, Shiraz, Iran, 26-28 November 2011.

5<sup>th</sup> International and 17<sup>th</sup> Iranian Congress of Nuclear Medicine, Shiraz, Iran, 1-3 May 2013

20-Iranian Annual Physics Conference, Mashhad, Iran, Aug 2015

21-Iranian Annual Physics Conference, Shiraz, Iran, Aug 2016

2<sup>nd</sup> International Conference on Physics, Brussels, Belgium, Aug 2017

24<sup>th</sup> Iranian Nuclear physics Conference, Esfahan, Iran, Feb 2018

12<sup>th</sup> Iranian congress of Medical Physics, Tehran, 19-20 July 2018

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