Dr. Rambichar Singh Yadav

Dr. Yadav is presently working as an Assistant Professor in the Department of Geophysics, Kurukshetra University, Kurukshetra, Haryana since April 2012. Prior to joining Kurukshetra University, he worked as Scientist-B at Indian National Center for Ocean Information Services (INCOIS), Hyderabad during March 2010 – April 2012 and Institute of Seismological Research (ISR), Gandhinagar, Gujarat during August 2006 – March 2010. He completed his Bachelor degree in Physics and Mathematics at V.B.S. Purvanchal University, Jaunpur, U.P. (2001); Master degree in Exploration Geophysics from Banaras Hindu University (BHU), Varanasi, U.P. (2004) and Ph.D. degree in Engineering Seismology from Indian Institute of Technology (I.I.T.) Roorkee, Uttarakhand in 2009.

Dr. Yadav has actively involved in conducting active research in Probabilistic Seismic and Tsunami Hazard Assessment (PSHA/PTHA), Seismotectonic Modeling, Earthquake Recurrence Study, Time-Dependent Seismic Hazard, Study of Seismic Sequences and Coulomb Stress Modeling. His most important contribution in earthquake research is the development of a homogenous and complete seismicity catalogue for the NE India region. In this catalogue, he has given a new approach to make a homogenous seismic catalogue which is being accepted by many researchers in the world and being used for the preparation of probabilistic seismic hazard maps. In addition to this, he has also prepared several homogeneous and complete seismic catalogues for Gujarat, Peninsular India, NW Himalaya, Tamilnadu, Andhra Pradesh, Orisa and also for whole Indian region. He has estimated recurrence rates of larger magnitude earthquakes in different regions of India like NW Himalaya, NE India and Gujarat region using different statistical models like Poisson, Gumbel, Weibull, Gamma and Lognormal models. He has also developed a regional time and magnitude predictable model for certain seismogenic zones in the NW Himalaya and adjacent regions. He has performed Coulomb stress modeling for 14 larger earthquakes ($Mw \geq 6.5$) in the NW Himalaya and adjoining regions as well as for three seismic sequences (2007 Talala of Gujarat, 2008 Baluchistan of Pakistan and 2011 Van of Turkey) which shows that a significant seismicity (aftershocks) were triggered due to transfer of Coulomb stress by rupture of mainshock. A viscoelastic coulomb stress model for January 26, 2001 Bhuj earthquake has developed using different finite slip models, which is able to explain how this earthquake is triggering aftershocks/earthquakes remotely in the Gujarat region even after 13 years of occurrence of the 2001 mainshock.

Recently, he is engaged in developing a new 'Probabilistic Tsunami Hazard Map' for the Pacific and Indian Ocean using conditional probability method and Bayesian statistics. This is a first kind of study in India, in which he has estimated recurrence rates of particular tsunami threshold intensity in the Indian Ocean using statistical models like, Weibull, Gamma, Lognormal and Bayesian statistics. A brief atlas of tsunami hazard maps for the Pacific Ocean (including Indonesia) has already prepared, showing the conditional probabilities of different tsunami intensities during next 10, 20, 50 and 100 years.

He has published total 29 research publications in the international peered reviewed journals having high impact factors. He has also recognized as reviewer of scientific articles for international journals. He has executed 3 research projects (one UGC Start-Up Research Grant and two Indo-Taiwan bilateral research projects). He has been guiding one Ph.D. student and 5 M.Tech. students. He has participated in an international training program at G.F.Z. Potsdam, Germany in 2009.

In recognition of his outstanding contributions in the field of earthquake research, the Ministry of Earth Sciences honors Dr. Rambichar Singh Yadav with "Young Researcher Award for the year 2014".