

# RESUME — KISHOR JAISWAL

## DETAILS

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E-mail: [kjaiswal@usgs.gov](mailto:kjaiswal@usgs.gov)

Male, 31 years old, born in Aurangabad (MS), India on December 20, 1975  
Indian nationality, married

## EDUCATION

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- 2006 **Indian Institute of Technology Bombay, INDIA.**
- Doctor of Philosophy in structural engineering division of civil engineering department.
  - Affiliated with research project: *Probabilistic seismic hazard estimation methodology for stable continental regions incorporating spatial and temporal uncertainties.*
- 2003-2004 **Geophysical Institute, University of Karlsruhe, Germany**
- Seismic hazard assessment methodologies under prestigious DAAD sandwich PhD program
  - Development of ground motion attenuation relations using fourier amplitude spectra models
- 1997-1999 **Visveswaraya National Institute of Technology Nagpur, India**
- Master of Technology (Structural Engineering)
  - Extensive courses on structural dynamics, analysis and design for earthquake resistant technologies, finite element analysis etc.
  - Selected courses in structural system modeling and designs.
- 1993-1997 **College of Engineering Dhule, India**
- Bachelor of engineering (Civil Engineering)
  - Extensive courses on basic structural analysis and design, estimating and costing, hydraulics and water and sanitation engineering etc.
  - Selected courses in engineering economics, project management and construction engineering.

## WORK EXPERIENCE

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Full Time **U.S. Geological Survey, Golden, CO**  
Since (through Synergetics Inc., Fort Collins, CO as Contractor)  
Oct-2006 Research Structural Engineer  
Loss modeling expert on PAGER (Promt Assessment of Global Earthquake Response)

- PAGER empirical casualty model development with Dr. Keith Porter at Caltech, USA
- Development of global semi-empirical casualty model at US Geological Survey Golden Colorado.
- Development of global building inventory to be used for PAGER loss estimation (Under Review).
- Development of web report on vulnerability of global building stock (in process)
- Development of PAGER Loss modeling architecture with Dr. David Wald, Dr. Paul Earle and Dr. Keith Porter (in process).

June 2005- **Risk Management Solutions, Inc at New Delhi office**

Sept 2006

(Full Time)

*Project Lead (Modeling and Analytics Group) of RMSI ([www.rmsi.com](http://www.rmsi.com))*

- Development of new catastrophic earthquake risk model for India. Responsible for development of core seismic hazard, vulnerability models for India on RiskLink platform. Project completed on Dec 15, 2005.

The specific contributions are-

- Development of new *a*-value tool for seismicity estimation using maximum likelihood procedures.
- Seismotectonic studies and source zone delineation for India EQ Model.
- Development of new tool for estimation of fault specific Rate Table.
- Modeling historical earthquake losses with new seismic hazard model using RiskLink.

Tools used: Windows 2003, ArcIMS, MS SQL Server 2000, VB, ASP, MAP INFO

March 1999-

Dec 1999

(Full Time)

**Sanjay Education Society's College Of Engineering, Navalnagar-434318, (Maharashtra)**

*Faculty at Civil Engineering Department-*

- Courses taught-

Applied Mechanics (First Year Course), Environmental Engineering (Fourth Year Course), Theory of Structures-I (Third Year Civil Engineering Course)

- Practical and Training-

Environmental Engineering (Third Year) and Structural Design and Drawing (Fourth Year of Engineering)

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## RESEARCH EXPERIENCE

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- Jan-May 2005 **Indian Institute of Technology Bombay, Mumbai, INDIA**  
*Research Associate*
- Development of tools for national earthquake engineering program for vulnerability and risk reduction in India.
- 2003-2004 **Geophysical Institute, University of Karlsruhe Karlsruhe, GERMANY**  
*Development of seismic hazard assessment methodology for Peninsular India*
- Visiting fellow in seismic hazard group (advisor: **Prof. Friedemann Wenzel**)
- 2000 **Indian Institute of Technology Bombay, Mumbai, INDIA**  
*Earthquake Loss estimation methodologies for Urban areas (Seminar)*
- Study of earthquake loss estimation methodologies including applications of tools available with **HAZUS and RADIUS** software.
  - Seismic hazard assessment procedures for urban areas.
- 1999 **Master's thesis**  
*Seismic design of horizontal setback buildings with V-shaped building plan*
- Possible means of estimating variable performance of setback buildings with plan irregularities and its implications on seismic design

## ACADEMIC ACHIEVEMENTS

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- Fellowship for attending International Training on Seismology and Seismic Hazard Mitigation at **GeoForschungsZentrum Potsdam, Germany** 2005 funded by **UNESCO**.
- **Provention Consortium's Grantee** under the applied research grant for disaster risk reduction program funded by **World Bank, USA** in 2003-2004.
- Visiting Fellow at Geophysical Institute, **University of Karlsruhe**, Germany under **DAAD fellowship** program in 2003.
- **Jawaharlal Nehru memorial fund award** for standing first in the order of merit in North Maharashtra University at final year of Civil Engineering in 1997.
- **Institute Medals** for achieving first rank in the Institute and **Prizes** for meritorious achievements in civil engineering discipline during 1993-1997.
- Dozens of leading international news agencies have published the research findings which were part of research study conducted at IIT Bombay -  
<http://www.sciencedaily.com/releases/2007/02/070207172002.htm>

## ACADEMIC SERVICES

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- **Web and system administrator** of Civil Engineering Department of IIT Bombay
- Teaching assistant for the following courses at IIT Bombay:

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1. Structural dynamics (Graduate-level course)
  2. Earthquake engineering (Graduate-level course)
  3. Prestressed concrete (Undergraduate course)
- Taught several courses for undergraduate and graduate students and assisted two graduate students for their thesis work on **urban risk reduction and disaster management**.

#### ADDITIONAL ABILITIES

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##### *Team Leader*

- Creator of <http://www.earthquakeinfo.org>

##### *Group Skills*

- Volunteered several workshops on earthquake disaster mitigation in Mumbai, India.
- PG Nominee for placement at IIT Bombay during 2001-2002.

##### *Technical skills*

- Structural engineering software such as SAP, STAAD-PRO, **ANSYS**
- Systems: **Unix**/DOS/Windows platforms
- Programming: C, C++, **Fortran**, HTML, Java Script
- Applications: MATLAB, MATHEMATICA, ARC-GIS (Desktop and Server GIS), GRAM++, GMT, **MAPINFO 5.5**
- Risk Modelling Software: **EqRisk**, Seisan, USGS Seisrisk
- Commercial Risk Modelling Software: **RiskLink 5.0 and later versions**

#### RESPONSIBILITIES

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- Member of the expert panel of joint Indo-Japan reconnaissance mission after Gujarat Earthquake in 2001. Co-authored three web-based reports published by EERI USA, EdM Japan and IIT Bombay. The joint research team has carried extensive field and research work for six months. It has also published technical report (150pp) on performance of different building types in urban areas after the 2001 great Gujarat earthquake.
  - Coordinated in arranging six workshops during 2000-2005 by joint collaboration of IIT Bombay, Government of Maharashtra and MCGM Mumbai on disaster management of Mumbai and shared expertise in risk reduction planning for urban infrastructure during training programs to stakeholders in governmental agencies.
  - Published several articles in reputed daily newspapers regarding earthquake awareness and urban seismic risk in India. e.g. The Gulf News, The Asian Age and The Times of India etc. Some of the recent articles are also published in regional languages in reputed newspapers
1. [www.iitbombay.org/info/whatsnew/whatsnew.html](http://www.iitbombay.org/info/whatsnew/whatsnew.html)

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2. <http://www.gulfnews.com/Articles/WorldNF.asp?ArticleID=156676>

- Member of delegation for **Indo-German collaborative research** on earthquakes and participated in two workshops conducted at University of Karlsruhe, Germany in Sept. 2001 and at IIT Madras in Feb. 2003.
- **Moderated a session** in “Cross Cutting Capacity Development Workshop at Mumbai” conducted by GoM, MCGM, IITBombay, EdM Japan and EMI, August. 2004.
- Responsible for leading a team of professional engineers during a) **Seismic Risk Model development** at RMSI during June 2005- March 2006 b) **RMS Data Solution** Project during March- August 2006 c) **Building attribute validation** survey at Miami and Oakland field investigation during August 03-25, 2006.
- **Participated** in Natural Hazards workshop at Boulder in July 10-14, 2007 and contributed an abstract related to urban seismic risk mitigation issues in developing countries.
- **Participated and moderated** a session in the Natural Hazards and Risk Mitigation Workshop at Rice University, Houston in July 28-29, 2007.
- **Invited** by members of **National Disaster Management Authority** (an apex body of Government of India similar to FEMA in USA) **at New Delhi** to participate in a meeting on strategies for future disaster risk reduction in India in July 18, 2007.

#### RESEARCH ARTICLES UNDER PREPARATION

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##### *Earthquake Spectra*

- **Creating a global building inventory for earthquake loss assessment and risk management (under preparation)**

##### *Earthquake Spectra*

- **A Probabilistic Seismic Hazard Assessment of Mumbai (Bombay) India (ready for submission)**

##### *Journal of Earth System Sciences*

- **Spatial-Temporal Variability of Seismic Hazard in Peninsular India (submitted for publication)**

##### USGS Open File Report

- **Creating a Global Residential Building Inventory for Earthquake Loss Assessment and Risk Management (under review)**

#### PUBLISHED RESEARCH ARTICLES

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- **Jaiswal, K.**, and R.Sinha, Probabilistic seismic hazard estimation for Peninsular India, published in **Bulletin of Seismological Society of America**, Vol. pp7-29.

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- **Jaiswal, K.**, and R.Sinha, Probabilistic ground motion scenario of Mumbai megacity using observed seismicity and local soil characteristics, published in **Current Science** Volume 2004, pp7-29.
- **Jaiswal, K.**, and R.Sinha, Probabilistic ground motion scenario of Mumbai megacity using observed seismicity and local soil characteristics, published in **ISET Journal of Earthquake Technology** Volume 2004, pp7-29.
- **Jaiswal, K.**, Seismic hazard assessment and information dissemination in Mumbai India. Published in compendium of project reports by **Provention Consortium of World Bank** 2004.
- **Jaiswal, K.**, V. Sokolov, R.Sinha, F. Wenzel and Y. Chernov, Probabilistic ground motion scenario of Mumbai megacity using observed seismicity and local soil characteristics, published in **International Union of Geodesy and Geophysics** Special Volume 2004, pp7-29.
- **Jaiswal, K.** and R. Sinha, Estimation of maximum magnitude earthquake in Peninsular India using extreme value statistics, published in 12<sup>th</sup> Symposium on Earthquake Engineering at IIT Roorkee Dec 2002, pp313-323.
- **Jaiswal, K.** and R. Sinha, Maximum likelihood estimation of seismic hazards using extremal mixture distribution, published in 12<sup>th</sup> Symposium on Earthquake Engineering at IIT Roorkee Dec 2002, pp324-332.
- **Jaiswal, K.** and R. Sinha, Statistical modelling of seismicity in stable continental regions, published in Proceeding of National Seminar on Seismic Design of Nuclear Power Plants organized at IIT Madras and SERC Chennai Feb 2003, pp327-341.
- **Jaiswal, K.**, V. Sokolov, R.Sinha, F. Wenzel and Y. Chernov, Probabilistic seismic hazard estimation of Peninsular India using observed seismicity and Fourier amplitude spectra models, published in Proc. of Indo-German Workshop on Earthquakes, at IIT Madras and University of Karlsruhe, pp3-26, 2004.
- Sinha R, Goyal A, Chaudhari M, and **Jaiswal K.** Performance of reinforced concrete buildings in Ahmedabad during Bhuj earthquake, January 26<sup>th</sup>, 2001. Proceeding of Workshop on Recent Earthquake of Chamoli and Bhuj by MHRD, New Delhi, May 24-26, 2001.

#### TECHNICAL REPORTS

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- **Jaiswal, K.**, Probabilistic seismic hazard estimation for Peninsular India, PhD Thesis in **Indian Institute of Technology Bombay**, pp260.
- Sinha R, Goyal A, Shaw R, Arai H, Saita J, Pribadi K, Chaudhari M, **Jaiswal K.** The Great Bhuj Earthquake of January 26<sup>th</sup> 2001, Consequences and Future Challenges. A joint technical report based on Reconnaissance studies prepared by IIT Bombay and EdM Japan 2001, pp150.
- Principal Investigator of EERI project USA on earthquake vulnerability studies in India and contributed two reports-

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1. [www.eeri.org/lfe/pdf/india\\_traditional\\_rural\\_house.pdf](http://www.eeri.org/lfe/pdf/india_traditional_rural_house.pdf)
2. [www.eeri.org/lfe/pdf/india\\_reinforced\\_concrete\\_frame.pdf](http://www.eeri.org/lfe/pdf/india_reinforced_concrete_frame.pdf)

#### INTERESTS – OTHER ACTIVITIES

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- Creating awareness, volunteering in different activities conducted by NGOs.
- Travelling, learning about different cultures, swimming, fitness and cooking.

#### LANGUAGE PROFICIENCY

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- English - Fluent
- Hindi – Native

#### INVITED LECTURES/TALKS

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- **Earthquake Risk Evaluation Center (EREC)** in India Metereological Department on July 12, 2007.
- Department of Civil Engineering at Indian Institute of Technology Bombay.

#### MEMBERSHIP

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- Indian Society of Earthquake Technology
- Earthquake Engineering Research Institute
- American Society of Civil Engineers (Affiliate member)
- American Geophysical Union
- European Association of Earthquake Engineering
- Seismological Society of America

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