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| **EDUCATION** | |
| **Graduate: Master of Science in Civil & Environmental Engineering**  **Program: Societal Risk Management**  University of Illinois at Urbana-Champaign (UIUC), Illinois, USA | *Expected Graduation: 06/2017* |
| **Undergraduate: Bachelor of Technology in Civil Engineering**  National Institute of Technology Karnataka (NITK), Surathkal, Karnataka, India | *05/2015* |
| * **Undergraduate GPA:** 8.81 / 10.0 * **Programming Skills:** **MATLAB** (Very High: 5/5); **C** (High: 4/5); **C++**(High: 3.5/5); **Python**(High: 3/5); | |
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| **TEACHING EXPERIENCE** | |
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| **Voluntarily Teaching, Basic Computer Education and Programming**, Karnataka Regional Engineering College School, NITK Surathkal, Karnataka India | *08/2011 – 04/2015* |
| * Tutored 60+ deprived school children a basic computer education as a member of **Computer Society of India,** NITK Student Chapter * Educated them to use and practice Notepad, WordPad, Paint, MS Office (Word, Excel, PowerPoint) * Introduced to them basic C program using simple algorithms like addition, rearranging numbers in order | |
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| **Voluntarily Teaching,**  ASCE NITK Student Chapter,  NITK Surathkal, Karnataka India | *08/2011 – 04/2015* |
| * Conducted workshops **on MATLAB, AutoCAD, STAAD.Pro and SAP** software tools for 100+ student members of NITK ASCE Student Chapter * Engaged and trained them these software tools with a hands on experience in various engineering applications * Mentored a team of 7 for a project titled “Damage Assessment using Probabilistic Approach” * Initiated ‘SchoolEngg’, a forum under the aegis of NITK Student Chapter aimed at giving a beforehand knowledge, especially to give high school students an idea of what they will experience as an Engineer | |
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| **RESEARCH AND INDUSTRIAL EXPERIENCE** | |
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| **Graduate Independent Research Project**, Uncertainty Quantification Group,  UIUC, Illinois, USA | *08/2015 – present* |
| * **Uncertainty Quantification in the design and analysis of engineering systems**, mentored by ***Dr Hadi Meidani*** * Developing computational models using generalized polynomial chaos expansions for propagating the parametric uncertainties using **MATLAB, Python and C++** * Optimizing computational models using compressive sampling techniques - convex optimization (L1 & L2-norm) * Performing sensitivity analysis to determine the importance parameters which drive the system | |
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| **Graduate Course Project**, Reliability Analysis (CEE 598RA),  UIUC, Illinois, USA | *10/2015 – present* |
| * **Influence of shape of tied arch bridges on the failure load**, mentored by ***Prof. Paolo Gardoni*** * Determining better statistical prediction of an optimized shape for a given load distribution using reliability analysis techniques * Analyzing the limit state function, to determine the probability of failure and its reliability index using FORM, SORM and **Markov Chain Monte-Carlo Simulations** using OpenSees & FERUM software tools * Performing sensitivity analysis to determine the importance parameters which drive the system | |
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| **Bachelor Thesis,** Design of High Rise Buildings,  NITK Surathkal, Karnataka, India | *07/2014 – 05/2015* |
| * Studied the **behavior of tall buildings prone to moderate seismic risk as well as high wind velocity**, mentored by ***Prof. K. S. Babu Narayan*** * Learned about various structural systems and the process involved in design of tall buildings * Performed rigorous analysis of the 40 storied structure using E-TABS software program; and design and detailing for envelope of the structural elements was provided as per the guidelines of Indian Standard codes. * Shearwall mechanized structural system was adopted and checked for its adequacy | |
| **Undergraduate Research Assistant**, Computational Sensor Laboratory,  **Michigan State University**, East Lansing, Michigan, USA | *05/2014 - 07/2014* |
| * Engineering Summer Undergraduate Research Experience (**EnSURE)** scholar, mentored by ***Dr Nizar Lajnef*** * Developed a long term piezoelectric based **structural monitoring system using self-powered wireless sensors** * Learned the techniques involved in conversion of ambient energy to electric power to activate wireless sensors * Analyzed experimental data obtained from strain gages and piezoelectric discs installed on steel plates with different damage scenarios using MATLAB, and compared results with that obtained by ABAQUS * Applied signal processing techniques to remove noise generated in experiments (low pass filter) | |
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| **Undergraduate Research Project**, Structural Engineering Laboratory,  NITK Surathkal, Karnataka, India | *07/2013 - 12/2013* |
| * Piloted a study on **Durability of Concrete in Coastal Areas (Severe Zone)**, mentored by ***Prof. Katta Venkatarmana*** * Delinked Durability of Concrete, from Strength as specified in Indian Code (IS 456: 2000), which mandates use of M30 as minimum grade of concrete in RCC works to achieve desired durability in coastal areas * Cast and tested PCC slabs of two different concrete mixes having compressive strength of 30MPa and 25MPa (blended with 70% GGBS) for chloride ion permeability using PERMIT ion permeability test apparatus. * Analyzed experimental data using Excel and PLX-DAQ tool | |
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| **Undergraduate Research Intern,** Earthquake Engineering Research Center (**EERC**),  Indian Institute of Information Technology, Hyderabad, Telangana, India | *06/2013 -07/2013* |
| * Independent Project on **Static and Dynamic Analysis of Multi Storied Residential Building**, mentored by   ***Prof. Ramancharla Pradeep Kumar***   * Analyzed and designed a Ground plus 3 storied building and compared results using different software tools (STAAD.Pro and SAP 2000) to that obtained by theoretical methods (Portal Frame & Cantilever Method) * Performed Time History Analysis by using ground motions of El Centro Earthquake, Northridge Earthquake, Park field Earthquake and Bhuj Earthquake and validated structural behaviour | |
| **Industrial Internship, Student Trainee,** 12/2012  Bhate & Raje Construction Co. Pvt. Ltd., Pune, Maharashtra, India   * Learned to read and understand the designs, drawings, bar bending schedules and detailing involved in a project * Exposed to the onsite application of RC Design, Mix Design, Quality Control and Safety Measures * Learned the thermal behaviour of radiant cooling slabs | |
| **PUBLICATIONS & PROFESSIONAL PRESENTATIONS** | |
| * Girish Kumar, Abhishek Salkar, Abhishek Master, ***Anand Bhattad***, Katta Venkatramana, K Rajendra Prabhu, “Durability of Concrete in Coastal Areas (Severe Zone)”, 4th International Engineering Symposium-IES 2015, Kumamoto University, Japan. March 4-6, 2015. * Presented a research poster titled **‘Damage Assessment Using Self-Powered Wireless Sensors’** at **Mid-Michigan Symposium for Undergraduate Research Experiences (Mid - SURE) - 2014**, Michigan State University, East Lansing, Michigan, USA | |
| **LEADERSHIP AND OUTREACH** | |
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| **American Society of Civil Engineers, NITK Student Chapter** | *04/2013 – 05/2015* |
| **Co-Founder, Treasurer** | *04/2013 - 05/2014* |
| * **Cofounded NITK ASCE Student Chapter** & structured it to be beneficial to NITK Civil Engineering Students * Motivated peers and raised membership from 11 to 96 in a span of 6 months * Drafted budgets, cost reports and mobilized resources for 2013-14 academic year * Coordinated with board members, faculty, speakers and outside organizations to facilitate 10+ events * Organized talks by eminent academicians like Prof. Ravindra K Dhir, Prof. Venkatesh Kodur & Prof. Pradeep Mazumdar, and on-site experts like Anil K. Pillai, Dr Sarath Chandra Kar & Dr Chandan Gosh. | |
| **Joint Convener,** Civil Events, ENGINEER, Annual Technical Symposium, NITK Surathkal | *10/2015* |
| * Co-led a team of 55 members and successfully organized the **2nd largest technical symposium** of South-India * Coordinated with various universities across India, various administrative departments of the host university and increased participation by 75% as compared to the previous year * Publicized and collaborated with Industries to sponsor all these events | |