Suryanarayanan Balasubramanian

Curriculum Vitae

Work Experience

September
2019-Present
Artificial Ice Reservoirs, *PhD*.
Developing a weather based physical model to predict meltwater discharge and survival duration of Artificial Ice Reservoirs (AIRs, also called icestupas). This PhD project is funded via the Swiss Government Excellence Scholarship

[View Paper]

August
2015–March
2019
Project Manager, Ice Stupa Artificial Glaciers.
Project goal is to store wasting winter water in the form of ice mountains that melt and feed the farms when water is most needed by the farmers. I documented the projects activities through films for dissemination in the media. As a researcher, my contribution was to collect data of various environmental variables and analyse them. Also I designed pipeline systems to achieve the desired discharge for various ice stupa implementations. I also implemented the project in Switzerland and Peru as part of our outreach acivities.

[View Project News]

April 2017–
November
2017
Baby Glacier Experiment, Morteratsch Glacier, Switzerland.
Summer storage of snow has seen an increasing interest in the last years. This paper attempts to validate the findings using mass balance measurements of such an artificially sustained snow pile obtained by manual measurements during summer 2017.

[View Report]

April 2017–
November
2017
Lake Ice Model, St. Moritz, Switzerland.
Recreated an IDL model in python to predict the St. Moritz lake ice thickness for a period of one week. This is to ensure the strength of the lake ice to conduct events on it.

[Sample Lake Ice Simulation]

August
–September
2016
GLOF Prevention, Sikkim State Disaster Management Agency.
Part of the team of 4 selected to lead the expedition aimed to mitigate risk of a potential Glacial Lake Outburst Flood(GLOF) by draining the lake using siphon technique.

[View Blog]

Education

September 2017	**Karthaus School**, *Sudtirol, Italy*, Summerschool on Ice Sheets and Glaciers in the Climate System. [View Course]
April 2017–July 2017	**Machine Learning**, Coursera. This course provides a broad introduction to machine learning, datamining, and statistical pattern recognition. Passed it with a grade of 95.3
July 2015–August 2016	**India Fellow**, *Ladakh*, Placed as an apprentice to SECMOL founder Sonam Wangchuk.. [View Blog]
Aug 2010–May 2015	**Integrated M.Sc.(Maths)**, *National Institute of Science Education and Research*, Bhubaneswar, 6.27/10. [View Thesis]
2007–2009	**Central board of Secondary Education(Class 12)**, *Kendriya Vidyalaya Ashok Nagar*, Chennai, *81.8 %*.
2005–2007	**Central board of Secondary Education(Class 10)**, *Kendriya Vidyalaya Ashok Nagar*, Chennai, *90.2 %* .
2004–2005	**Central board of Secondary Education**, *Jawahar Vidyalaya*, Chennai.
1995–2004	**Indian Certificate of Secondary Education**, *Smt.Sulochanadevi Singhania School*, Thane.

Computer

Programming Languages	Python, C++, CSS, HTML, JAVA
Packages	Jupyter, AnyLogic,LATEX, Google Earth, FinalCutPro, Wordpress

Languages

Tamil, English, Hindi	*Conversationally fluent*

Recognitions and Awards

April 2019	**European Geosciences Union**, Vienna. Presented poster about project activities and research proposal [View Poster]
2018	Climate Action Challenge Winner–Project page
August 2017	**World Water Week**, Stockholm. Managed a showcase event and present poster about the MortAlive and Ice Stupa projects [View Poster]
2016	Rolex Awards for Enterprise–Project page
2014	Council of Scientific and Industrial Research–University Grants Commission(CSIR–UGC) Junior Research Fellow(Mathematics,AIR 67)

2010   INSPIRE(Innovation in Science Pursuit for Inspired Research) Fellow

Referees

Martin Hoelzle, *Professor*, University of Fribourg.
Email:martin.hoelzle@unifr.ch

Sonam Wangchuk, *Founder*, SECMOL Ice Stupa Project.
Email:sonamsolar@gmail.com

Johannes Oerlemans, *Professor*, UTRECHT UNIVERSITY .
Email:j.oerlemans@uu.nl