

# Space Weather Activities in Nepal



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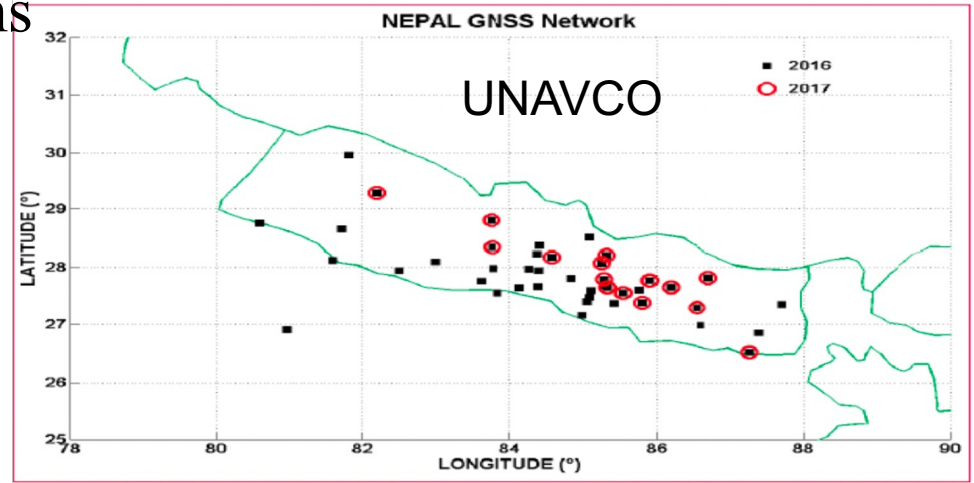
Dr. Krishna P. Bhandari  
Asso. Professor Pashchimanchal Campus  
IoE, Tribhuvan University  
Pokhara, Nepal

# Space Weather Activities in Nepal

- GPS TEC data from 53 stations

- GNSS is installed in Western Regional Campus, Pokhara, Nepal with Collaboration of UTOKYO

## GPS Network in Nepal

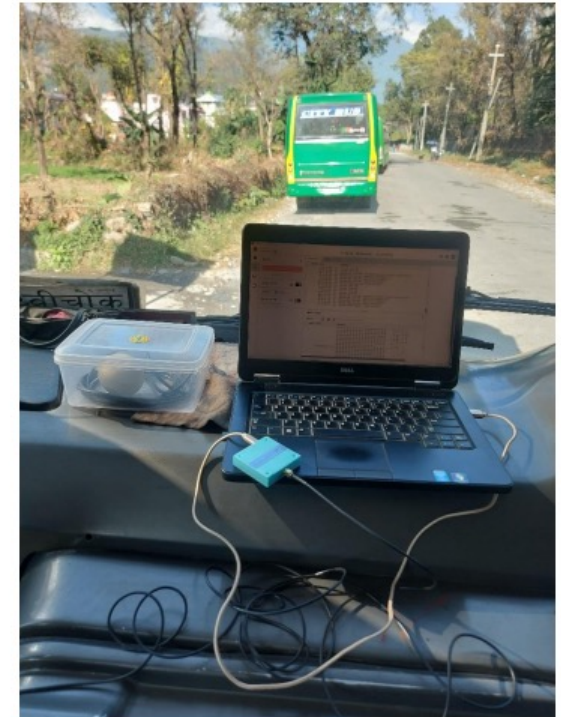


- Recently, GNSS is Deployed in Tribhuvan University, Kathmandu, Nepal in Collaboration with China Academy of Science, Beijing.



# Project conducted by using CORS station in CSSGS, Pokhara, Nepal

- Mero Bus navigator using GNSS tracking
- To develop a real time App based public bus tracking system using Smart Bus Tracking System (SBTS) in Pokhara valley



Smart Bus Tracking System (SBTS)

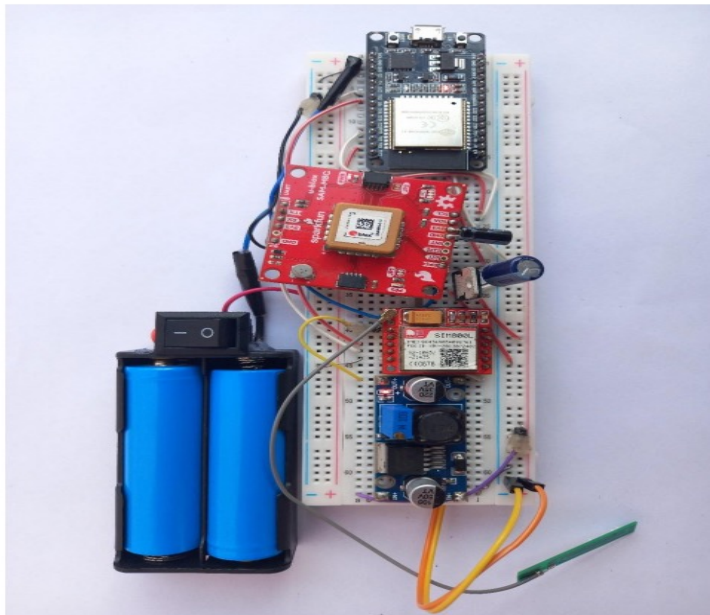


Figure 5 3: Smart Bus Tracking System (SBTS)



# Research Group in Space Physics in Nepal



**Dr. Narayan Prasad Chapagain**  
Professor of Physics, TU,  
Kathmandu, Nepal



**Dr. Binod Adhikari**  
Lecturer and Head, St.  
Xaviers' College,  
Kathmandu, Nepal



**Dr. Drabindra Pandit**  
(Graduated, May 2022)



**Dr. Basudev Ghimire**  
(Graduated, March 2023)



**Dr. Usha Joshi**  
(Graduated, Nov. 2023)

## PhD Scholars



**Bhogendra Kadayat**



**Prakash M. Kadayat**



**Suresh Poudel**



**Madhusudan Poudel**

**29 MSc Students** did their Thesis in Space Physics under my supervision

# Workshops/Schools

- **Workshop on Remote Sensing in Climate Sciences**  
April 8-9, 2023 ( Supported by UGC and hosted at St. Xavier's College, Kathmandu)

- Around 90 Participants (Graduate students and faculties) were attended
- 28 papers were presented



## Upcoming Program

- UTOKYO/ICG GNSS Training that will be held at IOE, Pulchowk, Tribhuvan University, Kathmandu, 12–16 February 2024.
- ISWI international School on Space Science 2024 will be held in Kathmandu, Nepal, September 15-19, 2024, Sponsored by ISWI and hosted by Nepal Physical Society

# Publications in 2022-23

## VTEC observations of intense geomagnetic storms above Nepal: comparison with satellite data, CODE and IGSG models

Authors D Pandit, Christine Amory-Mazaudier, R Fleury, NP Chapagain, B Adhikari

Publication date 2022/8/23

Journal Indian Journal of Physics

## Ionospheric Anomalies Due to Nepal Earthquake-2015 as Observed from GPS-TEC Data

Authors Basu Dev Ghimire, Narayan P Chapagain

Publication date 2022/8

Journal Geomagnetism and Aeronomy

## A study of vTEC above Nepal exploring different calibration techniques, including a comparison with the NeQuick-2 model

Authors P Poudel, A Silwal, BD Ghimire, SP Gautam, M Karki, NP Chapagain, B Adhikari, D Pandit, Christine Amory-Mazaudier

Publication date 2022/4

Journal Astrophysics and Space Science

# Publications in 2022-23

## Annual and semi-annual variations of TEC over Nepal during the period of 2007–2017 and possible drivers

Authors Basu Dev Ghimire, Bibek Gautam, Narayan P Chapagain, Karan Bhatta

Publication date 2022/4

Journal Acta Geophysica

## GPS observations of ionospheric TEC variations over Nepal during 22 July 2009 solar eclipse

Authors Basu Dev Ghimire, Ashok Silwal, Narayan Prasad Chapagain, Sujan Prasad Gautam, Prakash Poudel, Balaram Khadka

Publication date 2022/3/31

Journal EUREKA: Physics and Engineering,(2)

## Tracking IMF Fluctuations Nearby Sun Using Wavelet Analysis: Parker Solar Probe First Encounter Data

Authors SP Gautam, A Silwal, A Bashyal, K Chaudhary, M Khanal, B Ale, B Adhikari, P Poudel, M Karki, NP Chapagain

Publication date 2022/2

Journal Geomagnetism and Aeronomy

# Publications in 2022-23

## VARIATION OF TOTAL ELECTRON CONTENT OVER NEPAL DURING GEOMAGNETIC STORMS: GPS OBSERVATIONS

Authors Ashok Silwal, Silwal Ashok, Sujan Prasad Gautam, Gautam Sujan Prasad, Prakash Poudel, Poudel Prakash, Monika Karki, Karki Monika, Narayan P Chapagain, Binod Adhikari, Adhikari Binod

Publication date 2023/11/15

Journal Russian Journal of Earth Sciences

## VTEC observations of intense geomagnetic storms above Nepal: comparison with satellite data, CODE and IGSG models

Authors D Pandit, Christine Amory-Mazaudier, R Fleury, NP Chapagain, B Adhikari

Publication date 2023/3

Journal Indian Journal of Physics

## Wavelet Analysis of Magnetic Disturbances during Supersubstorm of September 7 and 8, 2017

Authors D Pandit, NP Chapagain, B Adhikari, RK Mishra

Publication date 2023/9

Journal Geomagnetism and Aeronomy