



Mr. Babu Ram Dawadi

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Brief: Babu Ram Dawadi has completed his bachelor's degree in Computer Engineering in 2003 and M.Sc. in Information & Communication Engineering in 2008 from Institute of Engineering (IOE), Tribhuvan University Nepal. Additionally he completed his Masters in Publication Administration Degree in 2013 from Tribhuvan University. Mr. Dawadi had worked as an Asst. Director at Nepal Telecommunications Authority, an autonomous ICT regulatory body of Nepal from Dec. 2009 to Nov. 2012. Since Nov. 2012, he is the full time faculty and Research Scholar at Department of electronics and computer engineering, IOE, Pulchowk Campus. He has deserved himself in teaching different subjects under Computer Science and Engineering for bachelor and master's degree. Mr. Dawadi has ample experiences of handling networking and internet server system with IPv6 research network at Center for Information Technology (CIT), IOE Pulchowk Campus being worked as System/Network Engineer and System In-charge of CIT. He worked as consultant IT specialist at organizations like 'World Bank' and 'OMCN' Offices Nepal. He also involved in different ICT policy formulation for the Nepal government. As being the research operator of AI3/SOI-ASIA IPv6-only Network research project, Mr. Dawadi completed his three months research on IPv6 network from Keio University, Japan and attended the several researches meeting abroad as research/training visit and conference presenter. He visited Norwegian University of Science and Technology (NTNU), Norway and Technical University of Valencia, Spain as a research scholar for about 10 months in the year 2019/2020. He served the institute with different posts starting as Network and System Engineer at CIT, Deputy Head at Department of Electronics and Computer Engineering, Chief Technical Officer at computer based entrance exam of IOE, Board Member of Entrance and Admission Board, Deputy Chief of Examination Control Division. He is currently leading the research project 'TraFNet-Transformations to Future Networking with Broadband Implementations' under UGC-Nepal faculty research grant. He is also serving as a post of vice-chairman at Laboratory for ICT Research and Development (LICT)-<http://licr.ioe.edu.np>, a virtual research lab at IOE.

Educational Background:

[2017- 2020] PhD Candidate at IOE Pulchowk Campus, Tribhuvan University. **Major Subject:** SDN/IPv6 Network Migration, Broadband and Energy efficiency in ICT Network.

[2011-2013]: **Masters in Public Administration (MPA) (2nd Division).** Public Administration Campus, Jamal Kathmandu. **Major Subjects:** Local Governance, Public Policy, Public Administration, ICT & e-Governance

[2006-2008]: **M. Sc. In Information and Communication Engineering (Distinction).** Department of Electronics and Computer Engineering, Institute of Engineering Pulchowk Campus, Tribhuvan University Nepal. **Major Subjects:** Information Theory and Coding, Information System Design, Telecommunication Network, Neural Network

[1999-2003]: **Bachelor of Computer Engineering (1st Division).** Department of Electronics and Computer Engineering, Institute of Engineering Pulchowk Campus, Tribhuvan University Nepal. **Major Subjects:** Operating System, Database Design, Artificial Intelligence, Computer Network, Object Oriented Programming, Software Engineering, System Analysis and Design, Geographic Information System, Data Warehousing and Mining etc...

Professional and Research Activities:

1. Jan 2021- Aug. 2021: [**Research Member**]. **Nepal Telecommunications Authority**. A study on spectrum interference in the context of 5G/IoT for Nepal.
2. Feb. 2020 to Aug. 2020: [**Research Member**]. Worked in the research project: Development of Smart Irrigation System for: Optimization of Water Use and Increasing Crop Yield (SISO-WAY), an agricultural automation project conducted of Nepal government ministry of water resources.
3. Jan. 2019 – Now: [**Principle Investigator**]. Leading the research project as principle supervisor under UGC Faculty Research Project ID: FRG-74/75-ENgg-01 (Transformations to Future Networking)
4. November 2012 – Now: [**Faculty and the Researcher**]. **Lecturer** at Department of Electronics and Computer Engineering, IOE Pulchowk Campus, Tribhuvan University, Nepal. **Deputy Head of Department** since August 2014 to February 2015.
5. January 2016 – Nov. 2017: [**Deputy Chief**]. **Deputy-Chief** of Examination Control Division, Institute of Engineering, Tribhuvan University.
6. 2015: [**Consultant Researcher**]. **Nepal Telecommunications Authority**, Regulatory framework for IPv6 network migration at Nepal.
7. Feb. 2013 – Nov. 2017: [**Chief Technical Officer/Board Member**]. Computer based examination operation and management for IOE entrance exam from 2013-2015. **Board Member** of IOE Entrance Examination Board since 2015

8. December 2009 – Nov. 2012: [**Asst. Director**]. **Nepal Telecommunications Authority, Government of Nepal. Responsible Fields:** VOIP, QoS, Network Security & NGN with ICT, Network Convergence. **Project Coordinator/Country Director, 2011:** ITU Mission Project on “*Stimulating Broadband for Nepal*”, NTA
9. 2008-2017: [**Consultant Network Specialist**]. World bank office renovation project and millennium challenge corporation, Kathmandu, Nepal
10. June 2008 – December 2009: [**Lecturer**]/[**System In-charge of CIT**]. Department of Electronics and Computer Engineering, IOE Pulchowk Campus, Tribhuvan University, Nepal. **In-charge (Deputy-Director)**, Center for Information Technology (CIT), IOE Pulchowk Campus & **Full time Lecturer** of BE and ME after June 2009.
11. June 2005 – December 2009: [**System Administrator**]. Tribhuvan University, **Center for Information Technology (CIT)**, Institute of Engineering Pulchowk Nepal, www.pcampus.edu.np.
12. Jul. 2005 – Now: [**Senior System Operator/Researcher**]. AI3/SOI-ASIA IPv6 only Project, WIDE University, Japan.
13. Oct. 2003-Jun. 2005: [**Asst. Professor**]. Acme engineering College, Sitapaila, Kathmandu Nepal. www.acme.edu.np.

Research & Publications

1. **Babu R Dawadi**, Danda B Rawat, Shashidhar R Joshi, Pietro Manzoni, & Martina M Keitsch (2020). “Migration cost optimization for service provider legacy network migration to Software-defined IPv6 network”. *Intl' Journal of Network Management*. 2020;e2145. <https://doi.org/10.1002/nem.2145>
2. **Babu R Dawadi**, Danda B Rawat, Shashidhar R Joshi, & Pietro Manzoni (2020). “Legacy network integration with SDN-IP implementation towards multi-domain SoDIP6 network environment”. *Electronics (MDPI)*. <https://doi.org/10.3390/electronics9091454>
3. Prabha Shastri, **Babu R Dawadi**, & Shashidhar R Joshi (2020). “Intelligent approach to switch replacement planning for Internet service provider networks”. *Sustainable Future (Elsevier)*, <https://doi.org/10.1016/j.sfr.2020.100036>
4. **Babu R Dawadi**, Danda B Rawat, Shashidhar R Joshi, & Pietro Manzoni (2020). “Evolutionary gaming approach for decision making of Tier-3 Internet service provider networks migration to SoDIP6 networks”. *Int J Commun Syst*. 2020;e4399. <https://doi.org/10.1002/dac.4399>
5. **Babu R Dawadi**, Danda B Rawat, Shashidhar R Joshi, & Daya S Baral (2020). Affordable Broadband with Software Defined IPv6 Network for Developing Rural Communities. *Appl. Syst. Innov.*, 3(1), 4; <https://doi.org/10.3390/asi3010004>
6. **Babu R Dawadi**, Danda B Rawat, Shashidhar R Joshi & Martina M Keitsch. “Towards energy efficiency and green network infrastructure deployment in Nepal using software defined IPv6 network paradigm”, *Electronic Journal of Information Systems in Developing Countries*, Wiley & Sons, USA
7. **Babu R Dawadi**, Daya S Baral, Danda B Rawat & Shashidhar R Joshi (2019), "Affordable Broadband with Software Defined IPv6 Network for Rural Communities," *ICQRIT 2019-10th*

International Conference on Quality, Reliability, Infocom Technology and Business Operations - Towards Smart, Reliable and Sustainable Future", Hotel Himalaya, Nepal, 18-19 June, 2019

8. **Babu R Dawadi**, Danda B Rawat, Shashidhar R Joshi & Martina M Keitsch. ***“Recommendations for Energy Efficient SoDIP6 Network Deployment at the Early Stage Rural ICT Expansion of Nepal”***, Proc. of the 2019 International Conference on Computing, Networking and Communications (ICNC): Green Computing, Networking, and Communications, February 18-21, 2019, Honolulu, Hawaii, USA
9. **Babu R Dawadi**, Danda B Rawat & Shashidhar R Joshi. ***“Evolutionary Dynamics of Service Provider Legacy Network Migration to Software Defined IPv6 Network”***, Proc. of the 15th International Conference on Computing and Information Technology (IC2IT), Arnoma Grand Hotel Bangkok, Thailand, Jul 4, 2019 - Jul 5, 2019
10. **Babu R Dawadi**, Danda B Rawat, Shashidhar R Joshi & Martina M Keitsch. ***“Joint Cost Estimation Approach for Service Provider Legacy Network Migration to Unified Software Defined IPv6 Network”***, Proc. of the 2018 IEEE International Conference on Collaboration and Internet Computing (IEEE CIC 2018) and International Workshop on Technology Convergence for Smart Cities (TeC4C 2018), Oct 18 - 20, 2018, Philadelphia, Pennsylvania, USA
11. **Babu R Dawadi**, Danda B Rawat & Shashidhar R Joshi. ***“Software Defined IPv6 (SoDIP6) Network: A new Paradigm for Future Networking”***. Journal of Institute of Engineering, Vol 15 issue 2, 2018
12. **Babu R Dawadi et al.** ***“RETIENAS: Real-time Intranet based Entrance Examination System at Institute of Engineering”***. Journal of Institute of Engineering, 13(1), 2017
13. Tri R Bajracharya, **Babu R Dawadi** & Ram C Sapkota. ***“Restructuring Examination System of IOE for Establishing Center of Excellency in Engineering Education”***. Journal of Institute of Engineering, 13(1), 2017
14. Ram C Panday, **Babu R Dawadi**, Suman Sharma & Abinash Basnet. ***“Dictionary Based Nepali Word Recognition using Neural Network”***. Under Publication -International Journal of Scientific & Engineering Research, Volume 8, Issue 5, May-2017 ISSN 2229-5518
15. Dipak KC, **Babu R Dawadi**. ***“Packet Loss Recovery and Control for VoIP”***. International Journal of Science and Research (IJSR), Volume 6 Issue 5, May 2017, PP: 1804–1808, India
16. **Babu R Dawadi** & Daya S Baral. ***“Towards Automation in the Admission Process as a Tool to Enhance Quality of Engineering Education at Tribhuvan University”***, at Journal of the Institute of Engineering, 2017, 13(1), Nepal
17. **Babu R Dawadi** & Subarna Shakya. ***“ICT Implementation and Infrastructure Deployment Approach for Rural Nepal”***. Recent Advances in Information and Communication Technology, Proceedings of the 12th International Conference on Computing and Information Technology", P 319-331, Vol. 463, ISSN 2194-5365, Springer International Publishing, Switzerland. (2016)
18. **Babu R Dawadi** & Rajendra Paudyal. ***“Tri-Angular Monitoring Approach for Real Time Container Migration”***, Published on International Journal of Science and Research Volume 5 Issue 6, June 2016, 774 - 781, India

19. **Babu R Dawadi**, Subarna Shakya & Rajendra Paudyal. “*CoMMoN: Container Migration and Monitoring as a Service in the Cloud*” published on Journal of the Institute of Engineering, 2015, 12(1), Nepal (2016)
20. **Babu R Dawadi**, Subarna Shakya & Ananda R Khanal. “*Government Roadmap for IPv4 to IPv6 Network Migration: A Case of Nepal*”, published on Journal of the Institute of Engineering, 2015, 11(1): 67-78, Nepal
21. **Babu R Dawadi**, Shashidhar R Joshi & Ananda R Khanal. “*Service Provider IPv4 to IPv6 Network Migration Strategies*”, published on Journal of Emerging Trends in Computing and Information Science, Vol 6 No 10, Canada (2015)
22. Shashidhar R Joshi & **Babu R Dawadi**. “*IPv6-only Network for Today’s Internet: Prospects and Problems*”, published in the proceedings of *International Conference on Electronic Commerce in the 21st Century* hosted by Tribhuvan University, Central Department of Computer Science and information technology, Kirtipur Nepal. (Jun 2 to 4 2008) , www.cdcsit.edu.np
23. **Babu R Dawadi** & Purushottam Sigdel. “*School on the Internet (SOI), an online Education Project in Asia and its IPv6-only Network Infrastructure*”, published on the 5th National Conference on Science and Technology organized by Nepal Academy of Science and Technology (NAST) 10-12, Nov. 2008. Nepal

Books/Manual:

1. **Babu R Dawadi** & Ram D Bhatta (2015), “*Capsules of C Programming*”, First Edition, ISBN: 978-99946-1-856-9, Vidyarthi Pustak Bhandar, Kathmandu, Nepal.
2. Ram D Bhatta, **Babu R Dawadi** (2015), “*A Text Book of C Programming*”, New Edition, ISBN: 978-99946-1-861-3, Vidyarthi Pustak Bhandar, Kathmandu, Nepal.
3. **Babu R Dawadi**. *Computer Network Lab Manual* for BEX/BCT & BScCSIT

Research and Training Visit

Sydney/Australia, UK, USA for Conference/Training. **Japan** for Research Internship, **Philippines, and Malaysia** for Research Presentation, **Thailand & Singapore, UK/Belgium** for ICT policy research meeting & presentation, **South Africa** for **Communication policy research** meeting, **Slovenia** for short term research on cloud computing, **Norway** for PhD research visit, Valencia/**Spain** for PhD research visit.