Supporting Document of Prof. Sudip Misra for election to IEEE TCCS Secretary, 2020

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[1] Short Biography:

Dr. Sudip Misra (https://cse.iitkgp.ac.in/~smisra/) is a full Professor in the Department of Computer Science and Engineering at the Indian Institute of Technology Kharagpur. He has several years of experience working in the academia, government, and private sectors in research, teaching, consulting, project management, software design, and product engineering roles and is internationally acclaimed in the said areas. He is the Fellow of the Indian National Academy of Engineering, British Computer Society, Royal Society of Public Health, UK, National Academy of Sciences India, IET UK, and IETE India. His research interests include wireless ad-hoc, opportunistic and sensor networks, internet of things, modern communication networks, software defined networks, network virtualization and learning systems. He has made significant contributions towards IoT based e-Health, smart telemedicine, underwater/UAV networks and various industrial applications such as smart grids and Industrial Internet of Things (IIoT). Prof. Misra is the author of over 350 scholarly papers with citation index of over 9900 and an h-index of 51, of which over 210 of them are in distinguished journals. He has published about 11 books and book chapters in multiple areas with reputed international publishers such as SAGE, Wiley, Cambridge University Press, World Scientific among others. He has received several prestigious awards and distinguished recognition spanning over his illustrious career. His various research on modern networking, communication strategies and software have gained international acclaim due to their feasibility, optimality, scalability and ease of implementation for real-life challenging problems. Prof. Misra has been serving as the Associate Editor of IEEE Transactions on Mobile Computing, IEEE Transactions on Vehicular Technology, IEEE Transactions on Sustainable Computing, IEEE Network, and IEEE Systems Journal. He has chaired/co-chaired several international conference/workshop programs in IEEE Globecom, ICC, ANTS and others. He has been an active member of several IEEE Technical Committees. Dr. Sudip Misra is serving as the current coordinator of the IEEE TCCS Special Interest Group (SIG) on SDN and NFV and is the founding Chair of IEEE TC-GCC SIG on Green Communications and Computing against Pandemics. Prof. Misra continues to be actively engaged in major research activities cutting across various fields with significant technical and social relevance

[2] Plans and motivations for forwarding TC-activities:

I have been actively engaged in the various activities of ComSoc's TCCS. I regularly participate in the meetings of TCCS in its discussions of different ideas. In the past I have attended the meetings and group discussions in different forums such as IEEE ICC and Globecom conferences where I have shared my insights and opinions on forwarding the various activities of TCCS. The various research activities of me and my team (http://cse.iitkgp.ac.in/~smisra/swan/) in modelling of new communication strategies for modern networking, their integration with different existing and legacy domains and development of algorithms for better monitoring, control and telemetry have gained international recognition. The different proposals not only provide cost-effective optimal solutions, but bring out newer application use-case scenarios as well. If elected as Secretary, I plan to promote the activities of TCCS by bringing in more relevant topics for research and development. With modern networking evolving so fast, I will closely monitor the continuous challenges arising out of developing new software and algorithms to identify new research domains as well as shortcomings of available work and literature. To this end, I plan to set up new Special Interest Groups (SIGs) on the different challenging areas. The SIGs will work collaboratively on each of their individual areas to propose optimal solutions. With the ongoing global uncertainty due to COVID-19 and a complete shift to virtual workspace, I plan to initiate more virtual activities such as web seminars, symposia, discussions, workshops and conferences on different research domains of TCCS. This will significantly widen the intended audience of our interest, reach out quickly to more researchers and collaborators worldwide, help to disseminate information faster as well as spread awareness of TCCS. Both challenging problems as well as proposed solutions can be quickly identified and implemented. Additionally, owing to the unique situation currently due to COVID-19, I propose to set up a special sub-committee/SIG to identify new challenges arising out of excessive use of network based software for different virtual activities. This will enable TCCS to be at the forefront of the networking paradigm shift we are currently going through. I believe that these will all help in greater advancement of TCCS and its various associations.