

Prof. Dr. Andreas Knopp
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Prof. Song Guo
IEEE Comsoc SSCTC Chair

-to be submitted to the TC members-

May 9, 2022

My Candidature as TC Vice Chair

Dear Prof. Song Guo, dear SSC members and colleagues,

following the announcement of our current SSC chair, today it is my great pleasure to declare my candidature for the upcoming TC officers term. Having been an active member of our TC for more than a decade, I believe that I am ready and able to serve the TC as its Vice Chair. Hence, please accept my candidature today.

Being a Full Professor at the University of the Bundeswehr in Munich (Germany) as well as the director of the Munich Center of Space Communications, the SSC has been the most important scientific community within IEEE / ComSoc for my group. Consequently, it has always been the objective of my team to support the SSC to the best of our ability, as I have highlighted in my tabular CV attached to this letter.

In the last years, following the trend of increased interest in space technology, our TC has been very successful in growing the community of space communications enthusiasts and, consequentially, strengthen our position in the IEEE community. Also, with respect to the next generation of mobile communication systems, we have set out the pillars to incorporate satellites and space technology right from the very beginning of the system design activities. The continuing success of mega-constellations as well as the recent activities within 3GPP to include non-terrestrial networks into 6G, are important evidence of our success, encouraging us to continue alike. For our TC, these developments offer great chances to increase our visibility and our impact within ComSoc, but we must be proactive and present. This includes not only new journal initiatives and high submission rates to the flagship conferences but also the attraction of researchers from industry. Previously, we have seen a high interest of academia to participate in our conferences and activities. Now it is time to focus more than ever on the satellite industry and, in particular, the great multitude of space start-ups that has been emerging over the last years. As we can envision already today, the start-ups will be dominating essential activities, especially in the LEO. Having participated myself as a jury member in various start-up challenges, I am fully aware of the variety of disruptive ideas supported by an unprecedented volume of venture capital. Hence, for our TC to keep the pace with the pioneering entrepreneurs, and to secure our position as a leading and trendsetting research-focused platform, we need to develop new concepts and offerings to become even more attractive for the “new space economy” as well as the well-established industrial leaders.

At this point I would be very honoured to receive your support for my candidature in the voting process to come. Please feel free to approach me via e-mail if you have further questions or other great ideas to shape the future of our society.

Very respectfully,
Prof. Dr. Andreas Knopp

Prof. Dr. Andreas Knopp, MBA
University of the Bundeswehr Munich, Germany

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Full Professor
IEEE Senior Member (2017)

Professional Career

May 2021	Member of the Supervisory Board in the German Aerospace Center (DLR), Germany.
Feb 2020	Appointment as a Visiting Professor, Naval Postgraduate School, Monterey (CA), USA
Feb 2020	Chairman of the Interdisciplinary Research Center on SPACE Technologies, University of the Bundeswehr Munich (Germany)
Jan 2017	Founding Director of the Munich Center for Space Communications Research Facility, University of the Bundeswehr Munich (Germany)
Oct 2014	Full professor and Chair Holder (Signal Processing), University of the Bundeswehr Munich (Germany), Department of Electrical Engineering & Information Technology
April 2012	Assistant Professor of Information Transmission Systems, Bundeswehr University Munich (Germany), Department of Electrical Engineering and Computer Science
July 2010	Head of R&D and Program Manager (military payload) of the "Heinrich Hertz" Scientific Satellite Mission, Central IT and Communications Equipment Procurement Agency of the German MoD (Koblenz, Germany)
Oct 2008	Ph.D. in Electrical Engineering and Information Technology, University of the Bundeswehr Munich

Professional Service to the Satellite & Space Community (selection)

- since 2018: IEEE Satellite 5G Working Group Member
- since 2017: IEEE Senior Member
- since 2010: IEEE Satellite and Space Communications Technical Committee
- since 2010: Armed Forces Communications and Electronics Association (AFCEA),
- 2019, 2020, 2021: IEEE 5G World Forum workshop co-chair, Satellite and Non-Terrestrial Networks for 5G
- 2019, 2020: NetWorld 2020 and SRIA Initiatives / Contributions
- 2019 IEEE ICC symposium co-chair, wireless communications symposium
- 2019 General Conference co-chair "Latest Developments in Satellite and Space", German Engineer's Association (VDE)
- since 2010 multiple services as Session Chair in Globecom and ICC conferences; 2022 Symposium Chair Satellite & Space
- since 2007 TPC member of satellite related IEEE flagship conferences including Globecom, ICC, VTC
- Various reviewer commitments for satellite related IEEE journals including ToB, TWC, TAES, TVT, AWPL
- Various reviewer commitments for satellite related IEEE conferences ICC, Globecom, MILCOM, ICC, VTC, PIMRC, ICSSC, WF, ICASSP, GlobalSIP

Publications:

Since 2006, I have authored and co-authored nearly 130 scientific publications. These publications include about 30 journal papers and 2 book chapters, as well as annual contributions to the COMSOC flagship conferences ICC and Globecom. For your convenience, I have updated my profile in google scholar (link available: [Andreas Knopp - Google Scholar](#)).

Research Projects:

Since my appointment as a Full Professor in 2014, my team in Munich has setup funded projects in volume of close to 70 million Euros, and spun-out multiple startup companies. As per today, 12 companies are sponsoring our research on a continuous project basis. In 2020, we have been awarded a major grant to build and launch Germany's first scientific small satellite to demonstrate key technology on the roadmap of 6G.