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# My Vision for the APCTP

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APCTP

I became the seventh president of the Asia Pacific Center for Theoretical Physics (APCTP) in the last November in 2017. It is a great honor but also a heavy duty to take the steering wheel of this important international organization. Twenty-two years ago, in 1996, the APCTP was founded by the first president, C.N. Yang, and the executive director, Yongmin Cho, together with representative figures of 10 countries in the Asia Pacific region, including J.W. Kim, D.I. Choi, Akito Arima, Hirotaka Sugawara, M. L. Ge, G.Z. Zhou, Y. T. Lee, Nguyen Van Hieu, KK Phua, and S.P. Chia, among many others. They were the founding fathers and conceived with great foresight that the Asia Pacific region would soon grow to take a leading role, not only in politics and economy, but also in science and culture, in the new millennium. The primary idea of the APCTP is to act as a hub center for theoretical physics in the Asia Pacific region, in a manner similar to the ICTP (Abdus Salam International Centre for Theoretical Physics) in the European region. The main mission of the center is to promote the exchange and communication of physicists in the Asia-Pacific region and also to assist and educate young researchers in less advanced countries. By doing so, the center contributes to the common wealth and peace not only in the Asia Pacific region but also of the whole world.

During the last 22 years since its inauguration, our center has made steady growth with the leadership of the previous presidents. In particular, during the presidency of Prof. Peter Fulde, our center made a quantum jump of the overall status. Prof. Fulde greatly improved the financial stability of the center and constructed a stable foundation to make the APCTP a truly international center of theoretical physics. Among other improvements, the center was established a good scale of in-house re-

search groups (Junior Research Groups (JRGs)) for the first time since its foundation. After the end of Prof. Fulde's presidency in 2012, after serving the 3rd and 4th presidential terms, a consensus was made that it was time to have a Korean president so that the APCTP could have more efficient communication with the Korean government in order to take the center to the next level. Consequently, we have successfully elected two excellent Korean presidents in recent years, Prof. Seunghwan Kim and Prof. Bum-Hoon Lee. Unfortunately, however, these two excellent presidents could not serve for their full terms because of unexpected occurrences, such as a governmental request to serve in other capacities. Considering this recent history following Prof. Fulde's term, my duty as the new president of the APCTP is very clear. First, I will build a stronger relationship with the Korean government and the APCTP and improve the stability of the center. Secondly, I will make the APCTP more visible in the Asia-Pacific region as well as in the international community.

As to the first goal, my strategy is to emphasize the role of the APCTP more in line with "science diplomacy", as a broad concept. Incidentally, in November 2017, the Association of Asia Pacific Physical Societies (AAPPS) moved its headquarter into our center. Historically, the AAPPS (founded in 1989) and the APCTP have been intimately related since their foundations and both institutes largely share the common goal – i.e., *the promotion of the advancement of physics in the Asia-Pacific region*. The APCTP is already publishing the *AAPPS Bulletin* since 2011, which was started by Prof. Won Namkung. The APCTP will work together with AAPPS to develop more of the joint scientific programs and activities, which will greatly benefit both institutes. Eventually, we aim to make

AAPPS an equivalent to the EPS (European Physical Societies) in the European region. Also recently, in 2014, the APCTP reestablished our connection with APEC (Asia-Pacific Economic Cooperation) and our center is playing a central role in the APEC PPSTI (Policy Partnership on Science, Technology, and Innovation) meeting. In 2016, we have initiated the “Pohang Declaration” together with eight PPSTI endorsed institutions to promote sustainable science policies and mutual collaborations among APEC’s regional countries. We will develop more programs with APEC such as the APEC-YST program, with which we can support more young researchers in this region. I believe I can successfully convince the Korean government about the unique and important role of the APCTP for international cooperation in science and technology in the Asia Pacific region, under the concept of “science diplomacy”.

In such a way, for the second goal, we should improve the in-house research to be more coordinated and we also need to develop new programs through which member countries can more actively participate and feel more direct benefits. For these matters, I have had a long discussion with the new chairperson of the Board of Trustees (BOT), Prof. Noboru Kawamoto. First, I will secure a larger budget for the senior visiting scientist program and for the in-house researchers such as the JRG leaders and post-docs. Secondly, I would like to encourage more active engagement of the general council members who are representing each of the 16 member countries. I will launch new external school/conference programs held

in member countries (preferably in less advanced countries) with the voluntary participation of scholars from all member countries. The general council members should volunteer to hold this program in his/her country. Starting with an initial 10 member countries, the APCTP has currently 16 member countries. Most recently, Uzbekistan (2011), Kazakhstan (2013), and Canada (2016) became new members and more countries have shown their interest to join us. In the near future, I believe that most of countries in the Asia Pacific region will become members of the APCTP. I think, at present, the most urgent task and mission for us is to develop the programs and activities that will directly benefit the member countries.

In summary, I will emphasize the international role of the APCTP both in connection with government policy as well as with member countries. I believe that in this way we can clearly define the identity of the APCTP and convince the Korean government of the unique role and value of the APCTP as an international organization. Based on the acquired stability, I will pursue the original mission, set up 22 years ago by our founding fathers; namely, that the APCTP should play the hub center of theoretical physics in the Asia Pacific region and promote the exchange and communications of physicists and nurture the young researchers in this region. By doing so, the APCTP will contribute to the common wealth and peace of not only the Asia Pacific region but also the whole world.



**Yunkyu Bang** received his bachelor's and master's degrees in engineering and in physics, respectively, from Seoul National University and in 1991 he received a PhD from Rutgers University. After working as a postdoc fellow at the Max-Planck Institute, Stuttgart and ICTP, Trieste, in 1995 he became a professor of physics at Chonnam National University. He then moved to POSTECH in 2018. He served as an executive director at APCTP from 2012 to 2013 and was appointed as 7th President of APCTP in November 2017. His research field is strongly correlated electron systems and superconductivity.