

Obituary

Professor Emeritus Dr. Prasart Suebka: An Eminent Physicist and Visionary Administrator (1950–2025)



In Memoriam

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on behalf of the Thai Physics Society

The Thai Physics Society expresses its deepest condolences and profound respect on the passing of Prasart Suebka, an eminent physicist and influential figure in Thai higher education.

Professor Prasart Suebka served as Rector of Suranaree University of Technology for three consecutive terms from 2005 to 2017. Throughout his twelve years of leadership, he played a pivotal role in transforming the university into an internationally recognized institution distinguished for excellence in research, innovation, academic services, and science and technology education. Under his guidance, the university was elevated to the status of one of Thailand's nine National Research Universities. From 2018 to 2020, Professor Prasart served as an Acting Rector of Sukhothai Thammathirat Open University. He was widely admired for his far-reaching vision, intellectual leadership, and enduring spirit of mentorship.

Educated in physics, Professor Prasart earned his bachelor's degree with honors from Srinakharinwirot University, master's degrees from Chulalongkorn University and Indiana University, and a Doctor of Philosophy degree from Arizona State University [1]. During his time as a lecturer at Ramkhamhaeng University and then Suranaree University of Technology, he devoted himself to teaching and research at undergraduate and graduate levels, while fostering strong national and international academic networks. As the founding Head of the School of Physics at Suranaree University of Technology, he established its academic direction, recruited and mentored faculty members, and helped build one of Thailand's most productive physics research environments. Under his leadership, the School of Physics gained national recognition for research excellence and became an important destination for graduate education in physics.

Professor Prasart possessed strong expertise in theoretical physics, particularly in nuclear physics, particle physics, hadronic interactions, and quark models. His research contributions focused extensively on exotic atomic systems such as pionium, kaonium, kaonic hydrogen, and antiprotonic atoms, employing advanced numerical approaches based on Sturmian functions to investigate strong-interaction effects and wave functions in realistic potentials [2-8]. He also contributed to studies of baryon structure and decay, meson dynamics, electron-positron annihilation processes, and proton form factors within nonrelativistic and perturbative quark models [9-15]. In addition, his publications extended to condensed matter and materials physics through investigations of the electronic and structural properties of crystalline materials, as well as synchrotron radiation theory [16,17]. Collectively, his work demonstrates broad scholarly contributions spanning theoretical particle physics, computational modeling, and quantum systems, with sustained international collaboration and publication in leading peer-reviewed physics journals.

Beyond his research accomplishments, Professor Prasart was an exceptional educator and mentor. He authored influential textbooks, including Atomic Physics and Fundamental University Physics, led the development of the Physics I and Physics II textbooks for Suranaree University of Technology, and wrote a widely recognized graduate-level textbook on electrodynamics that was later selected for publication under the commemorative project celebrating the 84th Birthday Anniversary of His Majesty King Bhumibol Adulyadej. He also supervised numerous doctoral students who later became faculty members and researchers throughout Thailand.

The contributions of Professor Prasart extended far beyond the university, encompassing numerous leadership roles at both national and international levels in academic administration, science policy, educational reform, and research development. He also played a major role in advancing national and international scientific infrastructure and collaboration. He supported Thailand Physics Olympiad activities, the International Young Physicists' Tournament, and chaired several international conferences in particle, nuclear, and hadron physics. At the national level, he played a pivotal role in the establishment of the National Astronomical Research Institute of Thailand (NARIT) and contributed to the development of major scientific institutions and initiatives, including the Synchrotron Light Research Institute (SLRI) and the Thailand Center of Excellence in Physics (ThCEP). He also served on the boards or advisory bodies of several key organizations, including SLRI, the Thailand Institute of Nuclear Technology (TINT), NARIT, and the National Science and Technology Development Agency (NSTDA). His vision extended to large-scale international collaborations. He strongly supported Suranaree University of Technology's participation in the ALICE experiment at CERN, making it the first university in Thailand and ASEAN to join the collaboration. He also promoted involvement in international research initiatives such as GSI-FAIR and the Jiangmen Underground Neutrino Observatory (JUNO), creating valuable opportunities for Thai researchers and students to contribute to world-class scientific projects.

In science and education policy, Professor Prasart served in numerous leadership positions, including Chairman of the Board of the Institute for the Promotion of Teaching Science and Technology (IPST), President of the Council of Science Deans of Thailand, and member of several national committees related to academic Olympiads, coding education, science talent development, and strategic research infrastructure. Through these contributions, he helped shape Thailand's scientific and educational landscape for decades. He dedicated his life to strengthening science, technology, and higher education in Thailand while nurturing generations of students and scholars with wisdom, integrity, and compassion. In recognition of his lifelong dedication and exceptional service, the University Council of Suranaree University of Technology unanimously appointed him Professor Emeritus in Physics, honoring his enduring legacy to the institution and the scientific community.

Professor Prasart Suebka leaves behind invaluable contributions to Thai physics, Thai higher education, and the development of research and innovation for society. His vision, leadership, and commitment to the public interest will continue to inspire future generations of scientists and educators. The Thai Journal of Physics respectfully records its deepest gratitude and remembrance of Professor Dr. Prasart Suebka. His legacy shall remain an enduring source of inspiration to the academic communities of Thailand.

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References

- [1] https://th.wikipedia.org/wiki/ประสาธ_สืบคำ.
- [2] P. Suebka, " $\bar{N}N$ atoms in Paris potential", Modern Physics Letters A, 18, 402-405 (2003). <https://doi.org/10.1142/S0217732303010569>.
- [3] P. Suebka and Y. Yan, "Accurate evaluation of pionium wave functions", Physical Review C: Nuclear Physics, 70, 034006 (2004). <https://doi.org/10.1103/PhysRevC.70.034006>.
- [4] Y. Yan, P. Suebka, C. Kobdaj and K. Khosonthongkee, "Strong interactions in pionium", Nuclear Physics A, 790, 402c-405c (2007). <https://doi.org/10.1016/j.nuclphysa.2007.03.071>.
- [5] Y. Yan, K. Khosonthongkee, C. Kobdaj, P. Suebka, Th. Gutsche, A. Faessler and V. E. Lyubovitskij, " $\bar{p}D$ atoms in realistic potentials", Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 659, 555–558 (2008). <https://doi.org/10.1016/j.physletb.2007.11.085>.
- [6] Y. Yan, C. Nualchimplee, P. Suebka, C. Kobdaj and K. Khosonthongkee, "Accurate evaluation of wave functions of pionium and kaonium", Modern Physics Letters A, 24, 901-906 (2009). <https://doi.org/10.1142/s0217732309000267>.
- [7] C. Nualchimplee, P. Suebka, Y. Yan and A. Faessler, "Accurate evaluation of the 1s wave functions of kaonic hydrogen", Hyperfine Interactions, 193, 97-102 (2009). <https://doi.org/10.1007/s10751-009-0059-9>.

- [8] Y. Yan, W. Poonsawat, K. Khosonthongkee, C. Kobdaj and P. Suebka, “Kaonic hydrogen atoms with realistic potentials”, *Physical Review C: Nuclear Physics*, 81, 065208 (2010). <https://doi.org/10.1103/PhysRevC.81.065208>.
- [9] Y. Yan, C. Kobdaj, P. Suebka, Y. M. Zheng, A. Faessler, Th. Gutsche and V. E. Lyubovitskij, “Electron-positron annihilation into hadron-antihadron pairs”, *Physical Review C: Nuclear Physics*, 71, 025204 (2005). <https://doi.org/10.1103/PhysRevC.71.025204>.
- [10] P. Suebka, C. Kobdaj and Y. Yan, “ $\pi\pi$ reaction in non-relativistic quark model”, *International Journal of Modern Physics E*, 14, 987-994 (2005). <https://doi.org/10.1142/S0218301305003740>.
- [11] K. Kittimanapun, K. Khosonthongkee, C. Kobdaj, P. Suebka and Y. Yan, “ $e^+e^- \rightarrow \omega\pi$ reaction and $\rho(1450)$ and $\rho(1700)$ mesons in a quark model”, *Physical Review C: Nuclear Physics*, 79, 025201 (2009). <https://doi.org/10.1103/PhysRevC.79.025201>.
- [12] Y. Yan, K. Khosonthongkee, C. Kobdaj and P. Suebka, “ $e^-e^+ \rightarrow \bar{N}N$ at threshold and proton form factor”, *Journal of Physics G: Nuclear and Particle Physics*, 37, 075007 (2010). <https://doi.org/10.1088/0954-3899/37/7/075007>.
- [13] A. Faessler, K. Khosonthongkee, C. Kobdaj, A. Limphirat, P. Suebka and Y. Yan, “Low-lying baryon decays in the 3PO quark model”, *Journal of Physics G: Nuclear and Particle Physics*, 37, 115002 (2010). <https://doi.org/10.1088/0954-3899/37/11/115002>.
- [14] A. Limphirat, C. Kobdaj, P. Suebka and Y. Yan, “Decay widths of ground-state and excited Ξ_b baryons in a nonrelativistic quark model”, *Physical Review C: Nuclear Physics*, 82, 055201 (2010). <https://doi.org/10.1103/PhysRevC.82.055201>.
- [15] X. Y. Liu, K. Khosonthongkee, A. Limphirat, P. Suebka and Y. Yan, “Meson cloud contributions to baryon axial form factors”, *Physical Review D: Particles, Fields, Gravitation and Cosmology*, 91, 034022 (2015). <https://doi.org/10.1103/PhysRevD.91.034022>.
- [16] E. B. Manoukian, N. Jearnkulprasert and P. Suebka, “Photon number emission in synchrotron radiation: Systematics for high-energy particles”, *Nuovo Cimento della Societa Italiana di Fisica B*, 2004, 9-15 (2004). <https://doi.org/10.1393/ncb/i2002-10011-4>.
- [17] J. E. Lowther, P. Manyum and P. Suebka, “Electronic and structural properties of orthorhombic KTiOPO_4 and related isomorphic materials”, *Physica Status Solidi (B) Basic Research*, 242, 1392-1398 (2005). <https://doi.org/10.1002/pssb.200440014>.