The fourth "Hodan-kai" for the future of exotic nuclear physics

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The fourth "Hodan-kai" (meaning "free discussion workshop") for the future of exotic nuclear physics[1] was held on March 15–17, 2023 at the Integrated Innovation Building in the Kobe campus of RIKEN. It was jointly organized by the RIBF Theory Forum and the RIKEN Nishina Center, and supported by the RIKEN iTHEMS. This meeting marked the fourth edition of the Hodan-kai series following the previous meetings in 2017, 2019, and 2020. This is also the first meeting after a two year break owing to COVID-19. The fourth edition had almost the same format as the third meeting, except for moving the meeting dates from mid February to mid March to address schedules that conflicted with other workshops or events of the community and institutes.

The Hodan-kai series are aimed at coordinating meetings for young researchers to discuss new ideas, including dreams of physics that may not immediately be feasible. It is also intended to create opportunities to interact with researchers from nuclear theory and experiments and even form different fields beyond the community of nuclear physics. With this spirit in mind, Hodan-kai follows a very different style from that of ordinary workshops of research activities. The presentations are presented by researchers from different fields as well as from nuclear physics on an invitation basis. Furthermore, we began organizing topical panel discussion since the third meeting. The venue was the RIKEN Kobe Campus.

The fourth Hodan-kai[1] comprised nine sessions for a total of 18 oral presentations by invited speakers, each allotted 20 + 10 min. Among 18 speakers, 8 speakers were nuclear theorists, 6 nuclear experimentalists, and the remaining primarily from solid state physics. The program is listed in Table 1. In addition to the oral presentations, two panel discussions, entitled "Open problems in atomic nuclei" and "Flowing spins" were organized. These two topics were selected by the organizing committee because of potential of future collaborations with nuclear physics. Each panel discussion had a convener and approximately five panel members. The panel discussion 'Open problems in atomic nuclei' was meant to discuss the structure and dynamics of atomic nuclei from the perspective of open quantum systems, which are studied widely in condensed matter physics, statistical physics, quantum information, or cold atoms. The other panel discussion 'Flowing spins' focused on new reflections on the spin degree of freedom in atomic nuclei based on inspirations from recent developments of spintronics. The discussion proceeded in a lively manner with active audience participation.

Fig. 1. Group photograph of the participants of the fourth Hodan-Kai.

Table 1. Program of the fourth Hodan-kai.

	March 15	March 16	March 17
1	Opening	T. Furuno (Osaka U.)	K. Sekizawa (Tokyo Tech.)
2	Introduction	T. Yamamoto (JAEA)	C. Ishizuka (Tokyo Tech.)
3	T. Oishi (YITP)	S. Kawase (Kyushu U.)	Y. Yamaguchi (Nagoya U.)
4	H. Nishibata (Kyushu U.)	Y. Funaki (KGU)	Y. Kobayashi (Oita U.)
5	H. Tajima (U. Tokyo)	R. Yokoyama (CNS)	Closing
6	K. Yoshida (JAEA)	K. Tateishi (RIKEN)	
7	H. Tajima (UEC)	J. Ieda (JAEA)	
8	Y. Masuyama (QST)	T. Kikkawa (U. Tokyo)	
9	Panel discussion "Open System"	Panel discussion "Flowing spins"	

A total of 59 participants were registered for the fourth Hodan-kai. It should be emphasized that this marks the highest number of participants throughout the Hodan-kai series. Despite the long break under COVID-19, the participants developed active and intense discussions. As a new initiative, a spin-off topical meeting is under discussion to be organized in 2024.

Reference

1) https://indico2.riken.jp/event/3968.

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