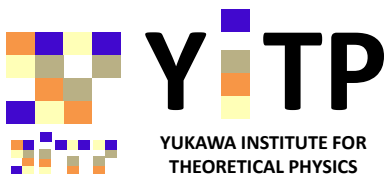


YIPQS long-term workshop
**“Mean-field and Cluster Dynamics
in Nuclear Systems 2022 (MCD2022)”**

9 May – 17 June, 2022

Onsite venue	Panasonic Hall at Yukawa Institute for Theoretical Physics, Kyoto University Access: https://www.yukawa.kyoto-u.ac.jp/en-GB/contents/guide/map (indicated as “Yukawa Hall”)
Online venue	Zoom See another PDF file or ask LOCs for Zoom URL



Yukawa Institute for Theoretical Physics, Kyoto University
Kitashirakawa Oiwakecho, Sakyo-ku, Kyoto 606-8502 Japan
TEL: +81-75-753-7000 | mcd2022@yukawa.kyoto-u.ac.jp |
www2.yukawa.kyoto-u.ac.jp/~mcd2022/

May 16 (Monday)

Time: JST = UTC+9

Morning session

Chair: K. Hagino (Kyoto)

- | | | | |
|--------|--------------------------|------------------------------------|---|
| | 09:00—09:10
(10 min.) | K. Hagino
(Kyoto) | <i>Opening of 2nd week</i> |
| Online | 09:10—10:10
(60 min.) | E. Hiyama
(Tohoku/RIKEN) | <i>Invited presentation</i>
“Structure of ${}^7\text{H}$ with t+4n cluster” |
| Online | 10:10—11:10
(60 min.) | X. X. Sun
(CAS) | <i>Invited presentation</i>
“The study of deformed halos with mean-field and beyond-mean-field approaches” |
| | 11:10—12:10
(60 min.) | M. Yamagami
(Aizu) | <i>Discussion</i> |

May 17 (Tuesday)

Time: JST = UTC+9

Afternoon session

Chair: T. Oishi (YITP)

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|--------|--------------------------|-----------------------------------|--|
| | 16:00—17:00
(60 min.) | M. Dozono
(Kyoto) | <i>Invited presentation</i>
“Searching for highly-excited pair vibration modes in tin isotopes using alpha-induced pair-transfer reactions” |
| Online | 17:00—18:00
(60 min.) | S. Typel
(TU Darmstadt) | <i>Invited presentation</i>
“Cluster correlations in nuclear matter and heavy nuclei” |
| | 18:00—19:00
(60 min.) | S. Watanabe
(Gifu) | “Deformed halo nuclei from the perspective of nuclear reactions” |

May 18 (Wednesday)

Time: JST = UTC+9

Afternoon session

Chair: M. Kimura (Hokkaido/RIKEN)

	16:00–16:40 (40 min.)	S. Ohkubo (RCNP)	“Superfluidity of alpha cluster structure in nuclei”
	16:40–17:20 (40 min.)	E. Uegaki (Akita)	“High-spin molecular resonances in $^{12}\text{C} + ^{12}\text{C}$ ”
Online	17:20–18:20 (60 min.)	A. Vitturi (Padova)	<i>Invited presentation</i> “The algebraic molecular model in ^{12}C and its application to the alpha + ^{12}C scattering: from densities and transition densities to optical potentials, nuclear form factors and cross sections”

May 19 (Thursday)

Time: JST = UTC+9

Morning session

Chair and discussion leader: Y. Taniguchi (Kagawa College)

Online	09:00–10:00 (60 min.)	X. D. Tang (IMP)	<i>Invited presentation</i> “Nuclear clusters in stars”
	10:00–10:40 (40 min.)	P. Descouvemont (ULB)	“Alpha clustering in ^{12}C and ^{16}O : successes and failures of alpha models”
	10:40–11:20 (40 min.)	Y. Suzuki (Niigata)	“Applications of correlated Gaussians to structure and dynamics”
	11:20–12:20 (60 min.)		<i>Discussion</i>

Morning session

Chair: M. Kimura (Hokkaido/RIKEN), Discussion leader: P. Descouvemont (ULB)

Online	09:00—10:00 (60 min.)	S. Umar (Vanderbilt)	<i>Invited presentation</i> “Microscopic studies of $^{12}\text{C}+^{12}\text{C}$ fusion reaction”
	10:00—11:00 (60 min.)	T. Nakatsukasa (Tsukuba)	<i>Invited presentation</i> “Mass parameters for nuclear reaction models and nucleonic effective mass”
	11:00—11:40 (40 min.)	Y. Taniguchi (Kagawa College)	<i>Invited presentation</i> “Microscopic Estimation of $^{12}\text{C}+^{12}\text{C}$ Fusion Reaction Rate at Astrophysical Energies”
	11:40—12:40 (60 min.)		<i>Discussion</i>