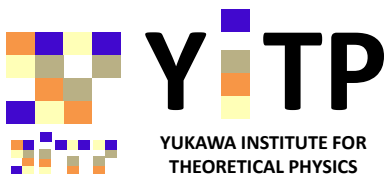


YIPQS long-term workshop
**“Mean-field and Cluster Dynamics
in Nuclear Systems 2022 (MCD2022)”**

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/

Morning session

Chair: N. Hinohara (Tsukuba)

09:00 – 10:30
(90 min.) **R. Akashi**
(Tokyo)

Keynote presentation

“Machine-learning exchange-correlation potentials”

Break

Online 11:00 – 11:45
(45 min.) **Y. F. Niu**
(Lanzhou)

Invited presentation

“Beyond mean field description of beta-decay half-lives for r-process calculations”

Afternoon session

Chair: T. Oishi (YITP)

15:30 – 17:00
(90 min.) **T. Yokota**
(RIKEN)

Keynote presentation

“Towards an ab-initio DFT via functional formalism”

Break

Online 17:30 – 18:00
(30 min.) **A. Ravlic**
(Zagreb)

“Constraining the stellar weak-interaction rates within the relativistic energy density functional theory”

Afternoon session

Discussion leader: K. Sekizawa (Tokyo Tech)

13:00 – 14:30 “Discussion on energy density functionals”
(90 min.)

Break

Chair: H. Nakada (Chiba)

15:00 – 15:30 **T. Otsuka** “Structure evolutions towards neutron driplines”
(30 min.) (RIKEN/Tokyo)

Break

15:45 – 16:15 **N. Hizawa** “Description of collective motions based on the
(30 min.) (Kyoto) dynamical GCM with the Gogny force”

Break

Online 16:30 – 18:00 **J. Dobaczewski** *Keynote presentation*
(90 min.) (York) “DFT description of nuclear electromagnetic moments”

Morning session

Chair and discussion leader: H. Sagawa (RIKEN/Aizu)

- | | | |
|----------------------------|----------------------------|--|
| 10:00 – 10:30
(30 min.) | P. Moller
(Lund) | “Calculating beta-decay half-lives” |
| 10:30 – 12:00
(90 min.) | | “Discussion on Gamow–Teller excitations” |

Afternoon session

Chair: T. Fukui (RIKEN)

- | | | |
|----------------------------|------------------------------------|---|
| 14:15 – 14:45
(30 min.) | K. Sekizawa
(Tokyo Tech) | “Time-Dependent Band Theory for the Inner Crust of Neutron Stars” |
|----------------------------|------------------------------------|---|

Break

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| 15:00 – 15:30
(30 min.) | A. Ohnishi
(YITP) | “Directed flow of Λ from heavy-ion collisions and hyperon puzzle of neutron stars” |
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Break

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|----------------------------|----------------------------------|--|
| 15:45 – 16:15
(30 min.) | H. Sagawa
(RIKEN/Aizu) | “Recent topics of IS pairing correlations” |
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Break

Chair: N. Hinohara (Tsukuba)

- | | | |
|----------------------------|---------------------------|---|
| 16:30 – 18:00
(90 min.) | G. Colò
(Milan) | <i>Keynote presentation</i>
“Traditional and novel ways to determine the nuclear energy functionals” |
|----------------------------|---------------------------|---|

June 9 (Thursday)

Time: JST = UTC+9

Morning session

Chair: K. Hagino (Kyoto)

Online 09:00—10:30 (90 min.) **W. Nazarewicz** (FRIB/MSU) *Keynote presentation*
“Nuclear Electroweak Densities and Moments in nuclear DFT”

Break

11:00—11:45 (45 min.) **S. Nishimura** (RIKEN) *Invited presentation*
“Experiments related to r-process nucleosynthesis”

June 10 (Friday)

Time: JST = UTC+9

Morning session

Chair: G. Colò (Milan)

Online 09:00—10:30 (90 min.) **J. Engel** (North Carolina) *Keynote presentation*
“Beta Decay and the r Process”

Break

11:00—11:45 (45 min.) **T. Sato** (RCNP) *Invited presentation*
“Beta-decay formula for the allowed and first forbidden transitions revisited”