

Nov. 17 (TUE)

10:30 Opening
Kazumasa Miyake (Toyota RIKEN, Japan)

Oral Session 1. Chair: Kazumasa Miyake

10:35 **Piers Coleman** (Rutgers University, USA)
"Strange metal behavior in YbAlB_4 and the Kondo quasi-crystal YbAlAu "

11:25 **Marc de Boissieu** (Grenoble-INP, France)
"Introduction to quasicrystals : atomic structure and physical properties"

12:15 Lunch

13:30 Poster

Oral Session 2. Chair: Joe D. Thompson

14:30 **Jacques Flouquet** (CEA-Grenoble, France)
"Similarity and difference between Ce and Yb heavy fermion compounds"

15:10 **Koichi Izawa** (Tokyo Institute of Technology, Japan)
"Eccentric quantum critical behaviors in heavy fermion superconductor URu_2Si_2 "

15:35 **Shinsaku Kambe** (JAEA, Japan)
"NMR study of novel quantum critical behavior in YbRh_2Si_2 "

16:00 Coffee break

Oral Session 3. Chair: An-Pang Tsai

16:20 **Hiroyuki Takakura** (Hokkaido University, Japan)
"Atomic structures of rare-earth containing icosahedral quasicrystals"

16:45 **Hem Raj Sharma** (The University of Liverpool, UK)
"Surface structure and epitaxy on Cd-Yb type quasicrystals and related periodic approximants"

17:25 **Tetsu Watanuki** (JAEA, Japan)
"Intermediate-valence Yb-based quasicrystals and approximants"

18:30 Banquet

Nov. 18 (WED)

Oral Session 4. Chair: Jacques Flouquet

- 9:00 **Joe D. Thompson** (Los Alamos National Laboratory, USA)
"Quantum critical behavior in Ce115 compounds"
- 9:40 **Yosuke Matsumoto** (The University of Tokyo, Japan)
"Novel quantum criticality under strong valence fluctuations in YbAlB₄"
- 10:05 **Kazuhiko Deguchi** (Nagoya University, Japan)
"Quantum criticality and superconductivity in icosahedral Yb quasicrystals and approximants"
- 10:30 Coffee break

Oral Session 5. Chair: Piers Coleman

- 10:45 **Shinji Watanabe** (Kyushu Institute of Technology, Japan)
"Universal quantum criticality in Yb-based heavy fermions on quasicrystal and periodic-crystal systems"
- 11:10 **Anuradha Jagannathan** (Universite Paris Saclay, France)
"Non-Fermi liquid behavior in metallic quasicrystals with local magnetic moments"
- 11:50 **Akihisa Koga** (Tokyo Institute of Technology, Japan)
"Local electron correlations in the quasiperiodic systems"
- 12:15 Lunch
- 13:30 Poster

Oral Session 6. Chair: Noriaki. K. Sato

- 14:30 **Alan I. Goldman** (Ames Laboratory & Iowa State University, USA)
"Magnetism in the i - R -Cd ($R = Y, Gd-Tm$) binary quasicrystals"
- 15:10 **Taku J. Sato** (Tohoku University, Japan)
"Static and dynamic spin correlations in magnetic quasicrystals and approximants"
- 15:35 **Ryuji Tamura** (Tokyo University of Science, Japan)
"Magnetic properties of Au-based Tsai-type approximants"
- 16:00 Coffee break

Oral Session 7. Chair: Shinsaku Kambe

- 16:20 **Hisatomo Harima** (Kobe University, Japan)
"The origin of band splitting due to the lack of space inversion symmetry"
- 17:00 **Kenji Ishida** (Kyoto University, Japan)
"Ferromagnetic spin fluctuations and superconductivity in ferromagnetic superconductors"
- 17:25 **Kazuyuki Matsubayashi** (The University of Electro-Communications, Japan)
"Heavy fermion superconductivity and non-Fermi liquid behavior in PrT₂Al₂₀ (T=Ti, V) under pressure"
- 18:30 Dinner

Nov. 19 (THU)

Oral Session 8. Chair: Marc de Boissieu

- 9:00 **Michael Engel** (University of Michigan, USA)
"Quasicrystals on the computer: The role of complexity for crystal growth"
- 9:40 **Tsunehiro Takeuchi** (Toyota Technological Institute, Japan)
"Unusual behaviors of thermal conductivity observed for icosahedral quasicrystals and approximants"
- 10:05 **Masaharu Matsunami** (Toyota Technological Institute, Japan)
"Photoemission spectroscopy of quasicrystals and approximants with Tsai-type cluster"
- 10:30 Coffee break

Oral Session 9. Chair: Hiroyuki Takakura

- 10:45 **Marek Mihalkovic** (Slovak Academy of Sciences, Slovak Republic)
"Atomic structure and chemical ordering of quasicrystal and approximants in Al-Au-Yb system from ab-initio and fitted oscillating potential total energies"
- 11:25 **Tomonari Dotera** (Kinki University, Japan)
"Hard-core/square-shoulder quasicrystals"
- 11:50 **Tsutomu Ishimasa** (Hokkaido University, Japan)
"How to find out hidden quasiperiodicity: Case of dodecagonal quasicrystal"
- 12:15 Closing
An-Pang Tsai (Tohoku University, Japan)
Lunch

Poster Presentations

- P1 **Shinichi Bekku** (Kinki University, Japan)
"Novel periodic and aperiodic tilings formed by hard-core/square-shoulder particles"
- P2 **Hiroyasu Matsuura** (The University of Tokyo, Japan)
"Effect of spin-orbit interaction on metallization of quasicrystal system"
- P3 **Kazuki Nakazawa** (Nagoya University, Japan)
"Anomalous Hall effect in magnetic skyrmion lattice"
- P4 **Yu Yoshioka** (Osaka University, Japan)
"Possibility of magnetic field induced magnetic dotriacontapole order in CeRu_2Si_2 "
- P5 **Atsushi Tsuruta** (Osaka University, Japan)
"Theoretical study of non-Fermi liquid behavior in Pr 1-2-20 systems"
- P6 **Shuya Matsukawa** (Nagoya University, Japan)
"High-pressure effect on low-temperature properties of the Au-Al-Yb quasicrystal and approximant crystal"
- P7 **Keisuke Namba** (Nagoya University, Japan)
"DC magnetic susceptibility measurement of quasicrystals and approximant crystals in the Au-Sn-R (R: Pr, Nd, Sm, Gd, Tb, Yb) system"
- P8 **Tsunetomo Yamada** (Tohoku University, Japan)
"Icosahedral quasicrystal and approximant phases in Au-Sn-R (R =rare-earth) alloy system"
- P9 **Keisuke Kamiya** (Nagoya University, Japan)
"Possibility of superconductivity in Mg-Zn-Al quasicrystal and approximant crystals"
- P10 **Toma Yamashita** (Nagoya University, Japan)
"Specific heat of the icosahedral quasicrystal $\text{Zn}_{88}\text{Sc}_{12}$ and its periodic 1/1 approximant Zn_6Sc "
- P11 **Masayuki Toyoda** (Nagoya University, Japan)
"NMR studies on in-plane anisotropy in iron pnictides"
- P12 **Hiroataka Maekawa** (Nagoya University, Japan)
"High-pressure Hall effect measurements in ZrZn_2 "
- P13 **Yusuke Kato** (Nagoya University, Japan)
"Magnetic and structural properties of the orbital degenerated system $\alpha\text{-Sr}_2\text{VO}_4$ with the K_2NiF_4 -type structure"
- P14 **Hironori Nakaoka** (Nagoya University, Japan)
"Orbital order due to vertex correction in $\text{BaTi}_2\text{As}_2\text{O}$ "

- P15 **Kohei Nobe** (Nagoya University, Japan)
"Quantum critical behavior of $\text{CeCu}_{6-x}\text{Au}_x$ and Ce-based approximant crystal"
- P16 **Ilya Sheikin** (CNRS, France)
"Fermi surface dimensionality and superconducting critical temperature in heavy fermion compounds: comparative study of CeCoIn_5 and Ce_2PdIn_8 "
- P17 **Takayoshi Yamanaka** (Kyoto University, Japan)
"NMR measurements on $\text{CeCoIn}_5/\text{YbCoIn}_5$ superlattices: The interface state between heavy-fermion compound and normal metal"
- P18 **Naoya Kawade** (Nagoya University, Japan)
"The pressure effect on the non-linear conduction phenomena of valence fluctuation system SmS "
- P19 **Atsushi Magata** (The University of Tokyo, Japan)
"Low-temperature thermal expansion measurements in non-magnetic compounds $\text{PrTr}_2\text{Al}_{20}$ ($\text{Tr} : \text{Ti, V}$)"
- P20 **Shintaro Suzuki** (The University of Tokyo, Japan)
"The magnetism and transport property changes with carrier doping in $\alpha\text{-YbAl}_{1-x}\text{Mn}_x\text{B}_4$ "
- P21 **Shun Takano** (The University of Tokyo, Japan)
" ^{11}B and ^{27}Al NMR studies on $\beta\text{-YbAlB}_4$ "
- P22 **Shouta Kunikata** (Nagoya University, Japan)
"Temperature-pressure phase diagram of the antiferromagnetic superconductor UNi_2Al_3 "
- P23 **Takeshi Yamaguchi** (Nagoya University, Japan)
"Magnetic and superconducting properties under high pressure in UNi_2Al_3 "
- P24 **Yusuke Hatakeyama** (Tohoku University, Japan)
"Crystal structure of the 2/1 approximant in the Al-Pd-Ru system"
- P25 **Nobuhisa Fujita** (Tohoku University, Japan)
"Quasiperiodic canonical-cell packing"