

International Workshop on Advanced Co-based Superalloys: 3.0
June 23 & 24, 2015
NIST, Heritage Room

Agenda as of June 10, 2015

Tuesday, June 23

- 8:30-8:50: Arrival, introductions, and welcome (Coffee, juice, bagels, etc., will be available)
- 8:50-9:00: Introductory comments, Eric Lin, NIST
- 9:00-9:40: "Progress in studies on phase diagram in Co-Al-W-base systems and development of wrought superalloy," Toshihiro Omori, Tohoku University
- 9:40-10:20: "W-free Co-based γ - γ' superalloys," Kamanio Chattopadhyay, Indian Institute of Science
- 10:20-10:40: Break
- 10:40-11:20: "Vibrationally-induced stability of the $L1_2$ phase along the Co_3Al-Co_3W pseudobinary calculated using first-principles methods," Rob Rhein, UC, Santa Barbara
- 11:20-12:00: "Topologically close-packed phases in Co-based superalloys," Thomas Hammerschmidt, Ruhr-Universität Bochum
- 12:00-1:20: Lunch
- 1:20-2:00: "Mechanical properties of Co-based superalloys with $L1_2$ cuboidal precipitates-with special emphasis on mechanical properties of the $L1_2$ compound $Co_3(Al,W)$," Haruyuki Inui, Kyoto University
- 2:00-2:40: "Novel wrought γ/γ' cobalt base superalloys with high strength and improved oxidation resistance," Steffen Neumeier, FAU Erlangen
- 2:40-3:00: Break
- 3:00-3:40: " γ' -phase-properties, stability and morphology development," Florian Pyczak, Helmholtz-Zentrum Geesthacht
- 3:40-4:20: "High-temperature oxidation behavior of γ' -strengthened Co-base superalloys: alloying, microstructure effects and mechanisms of early stage scale formation," Sannakaisa Virtanen, FAU Erlangen
- 4:20-6:00: Poster Session
- 6:30: Dinner, TBA

Wednesday, June 24

- 8:30-9:00: Arrival, coffee, juice, bagels, etc.
- 9:00-9:40: “Atomic scale observation of the structure and composition of γ/γ' interfaces and solute partitioning across these interfaces in cobalt-base alloys,” Subhashish Meher, Idaho National Laboratory
- 9:40-10:20: “Neutron and x-ray scattering studies of Co-base superalloys,” James Coakley, Northwestern University
- 10:20-10:40: Break
- 10:40-11:20: “Toward ICME development of Co-based γ/γ' alloys: NIST's MGI efforts in advanced structural materials,” Carelyn Campbell, NIST
- 11:20-12:00: “Northwestern experimental results on high-temperature Co-based alloys,” David Seidman, Northwestern University
- 12:00-1:20: Lunch
- 1:20-2:00: “The recent progress of Co-Al-W-Ta-Ti single crystal superalloys,” Charles Feng, University of Science and Technology Beijing
- 2:00-2:40: “Manufacturability of Co-Al-W via an ingot metallurgy route” Erin McDevitt, ATI Metals
- 2:40-3:00: Break
- 3:00-3:40: “A DTF-based consistent thermodynamic database for Co/Ni systems,” Mauro Palumbo, Ruhr-Universität Bochum
- 3:40-4:20: “Computational Design of Precipitate Strengthened Co-Base Alloy for CuBe Replacement,” James Saal, Questek
- 4:20-5:00: Concluding remarks and departure