**Final Workshop program 2020**

**(Alloy Design)**

**Tuesday (January 7)**

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| 8:30 | **Registration (Bldg #33, Room 228)** |
| 9:00 | **Welcome (Bldg #33, Room 228)** |
| 9:15 | **Overview of Thermodynamics (Bldg #33, Room 228): In-Ho Jung**Gibbs energy, Activity, .., Phase diagram. |
| 10:30 | (Coffee) |
| 10:45 | **FactSage Database overview (Bldg #33, Room 228): In-Ho Jung****Data search and simple reaction calculation** (**View Data, Compounds, Reaction**)- H, S, Cp of compounds- Preparing new private database- balanced chemical reactions - adiabatic reactions, heat cycles  |
| 12:15  | (LUNCH) |
| 13:30  | **Equilib-regular (Alloy design: Bldg #33, Room 226): TaeHyung Kim**- Transition calculations (solidus, liquidus, phase transformation)- Thermodynamic property- Scheil cooling calculations |
| 15:30  | (Coffee) |
| 15:45 | **Equilib-Advance I (Bldg #33, Room 226): In-Ho Jung**- Stream calculations- Paraequilibrium calculations- Interface reaction- Open calculation |
| 17:00 | **END OF DAY 1** |

**Wednesday (January 8)**

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| 9:00 | **Phase Diagram-regular (Bldg #33, Room 226): YoonGu Kang**- Classical binary phase diagrams- Isopleths- Ternary and multicomponent phase diagrams - Figure module |
| 10:30 | (Coffee) |
| 10:45 | **Equilib advance II: (Bldg #33, Room 228): TaeHyung Kim/YoonGu Kang**- metal/gas reaction - oxidation- metal refining: slag/metal/gas reaction - vaporization- oxidation |
| 12:15  | (LUNCH) |
| 13:30  | **Case study I: Alloy design & Pyrometallurgical processing: (Bldg #33, Room 228)** |
| 15:00  | (Coffee) |
| 15:15  | **Case study II: Alloy design & Pyrometallurgical processing: (Bldg #33, Room 228)** |
| 17:30 | **END OF DAY 2** |

**Final Workshop program 2020**

**(Pyrometallurgy)**

**Tuesday (January 7)**

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| 8:30 | **Registration (Bldg #33, Room 228)** |
| 9:00 | **Welcome (Bldg #33, Room 228)** |
| 9:15 | **Overview of Thermodynamics (Bldg #33, Room 228): In-Ho Jung**Gibbs energy, Activity, .., Phase diagram. |
| 10:30 | (Coffee) |
| 10:45 | **FactSage Database overview (Bldg #33, Room 228): In-Ho Jung****Data search and simple reaction calculation** (**View Data, Compounds, Reaction**)- H, S, Cp of compounds- Preparing new private database- balanced chemical reactions - adiabatic reactions, heat cycles  |
| 12:15  | (LUNCH) |
| 13:30  | **Equilib-regular (Pyrometallurgy: Bldg #33, Room 228): In-Ho Jung**- Transition calculations (solidus, liquidus, phase transformation)- Thermodynamic property- Scheil cooling calculations |
| 15:30  | (Coffee) |
| 15:45 | **Phase Diagram-regular (Pyrometallurgy: Bldg #33, Room 228): JeongMin Cheon**- Classical binary phase diagrams- Isopleths- Ternary and multicomponent phase diagrams - Figure module |
| 17:00 | **END OF DAY 1** |

**Wednesday (January 8)**

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| 9:00 | **Equilib-Advance I** **(Bldg #33, Room 228): In-Ho Jung**- Stream calculations- Interface reactions- Open calculations- Viscosity |
| 10:30 | (Coffee) |
| 10:45 | **Equilib-advance II (Bldg #33, Room 228): In-Ho Jung**- Metal/gas reaction - oxidation- Refining: slag/metal/gas reaction - Inclusions evolution |
| 12:15  | (LUNCH) |
| 13:30  | **Case study I: Alloy design & Pyrometallurgical processing: (Bldg #33, Room 228)** |
| 15:00  | (Coffee) |
| 15:15  | **Case study II: Alloy design & Pyrometallurgical processing: (Bldg #33, Room 228)** |
| 17:30 | **END OF DAY 2** |