

**MM 5 Symposium Complex Metallic Alloys,
Hauptvortrag Jean-Marie Dubois**

Zeit: Freitag 10:30–11:00

Raum: TU H1058

Hauptvortrag

MM 5.1 Fr 10:30 TU H1058

The world of complex metallic compounds and the CMA European Network of Excellence — ●JEAN-MARIE DUBOIS¹, LOUIS SCHLAPBACH², and KNUT URBAN³ — ¹Ecole des Mines, Parc de Saurupt, F-54042 Nancy — ²EMPA, CH-8600 Zürich — ³Forschungszentrum Jülich GmbH, D-52425 Jülich

Complex Metallic Alloys encompass a broad variety of compounds and phases that are characterized by i) large unit cells, comprising tens up to thousands of atoms, ii) the presence of well-defined atom clusters, most often of icosahedral point group symmetry, iii) the occurrence of disorder in the ideal structure. As a result, most physical properties show distinct differences with respect to the behaviour of normal metallic alloys and therefore these materials possess a high potential for application in technology. With the support of about sixty industrial companies, the CMA European Network of Excellence contributes to a strengthening of the competitiveness of metallic materials for the benefit of European industries by the formation of a European Network of Excellence CMA. The Network unites 19 high-reputation core-group members, representing a person-year critical mass of 253 p.y and 84 Ph.D. students in 12 countries. On this basis, the project is designed to strengthen the competitiveness of European industries wherever materials need to offer hybrid properties, being both structural and functional, or embody an extraordinary combination of properties that are mutually excluding in conventional materials.