

PROGRAMME

Sunday, June 11

Registration & Welcome party at the Mercure Hotel

From 17:00 *Registration* From 18:00 *Welcome Party*

Monday, June 12

Session 1 - Processing & Applications

Chairman: Volker Guether

8:30-8:40 *Welcome*

8:40-9:20 *Keynote* Bernard Bewlay *The Science and Technology of TiAl Alloys For Commercial Aircraft Engines*

9:20-9:50 *Invited* Pierre Sallot *γ -TiAl alloys for aeronautical applications: a status of their industrial implementation, development opportunities and*

9:50-10:10 *Oral* Masao Takeyama *Revolutionary Approach to Develop Novel TiAl Alloys for LPT Blades under SIP Program in Japan*

Break: 10:10-10:40

Session 2 - Additive Manufacturing

Chairman: Marc Thomas

10:40-11:10 *Invited* Christoph Leyens *Microstructure Design of Titanium Aluminides by Additive Manufacturing*

11:10-11:30 *Oral* Florian Pyczak *Insight into Additive Manufacturing by combining in situ diffraction and modelling*

11:30-11:50 *Oral* Marcus Rackel *TiAl powder based Composite Extrusion Modeling*

11:50-12:10 *Oral* Yoshihiko Nagata *Investigation of alloy composition and identification of process challenges for additively manufactured gamma-*

Lunch: 12:30-14:00

Session 3 - Processing & Applications

Chairman: Wilfried Smarsly

14:00-14:30 *Invited* Masafumi Kurashige *Superior Productivity and Properties of Newly Designed Wrought and Cast TiAl Alloys for Jet Engine Blade*

14:30-15:00 *Invited* Serjejs Spitans *FastCast - levitation melting & high-quality TiAl casting up to 600 g*

15:00-15:20 *Oral* Seong-Woong Kim *Development of TiAl alloys for gas turbine engines*

15:20-15:40 *Oral* Hideki Wakabayashi *Microstructure and Mechanical Properties of Reactively Sintered TiAl based Alloys*

Break: 15:40-16:10

Session 4 - Fundamental

Chairman: John Lewandowski

16:10-16:40 *Invited* David Holec *Modelling of phase transformations in TiAl-based alloys*

16:40-17:10 *Invited* Hirotoyo Nakashima *Computational Alloy Design of TiAl alloys applicable to Powder Processes*

17:10-17:30 *Oral* Yoshihiro Gohda *First-principles study of transition-metal β stabilizers in Ti-Al-O*

17:30-17:50 *Oral* Frank Stein *Stability, Composition Range, and Phase Equilibria of the Nb-stabilized, TiAl-based phases ω and O*

Tuesday, June 13

Session 5 - Fundamental				Chairwoman: Heike Gabrish
8:30-9:00	<i>Invited</i>	Rui	Yang	<i>Formation and evolution of defects that interrupt lamellar microstructure in cast TiAl alloys</i>
9:00-9:30	<i>Invited</i>	Maria	Nó	<i>High-Temperature Microstructure Evolution of an Advanced Intermetallic Nano-Lamellar γ-TiAl Alloy</i>
9:30-9:50	<i>Oral</i>	Michael	Musi	<i>The effect of zirconium on phase stabilities and microstructure in the Ti-(42-46 at.%)Al alloy system</i>
Break: 9:50-10:20				
Session 6 - Additive Manufacturing				Chairman: Kui Liu
10:20-10:50	<i>Invited</i>	Marc	Thomas	<i>Additive Manufacturing of Gamma Titanium Aluminides: A Review of Methods, Properties and Challenges</i>
10:50-11:20	<i>Invited</i>	Karin	Ratschbacher	<i>Production of intermetallic, spherical powders</i>
Session 7 - Posters				Chairmen: H.Nakashima & J.-P. Monchoux
11:20-12:30	Posters		Session 1	
Lunch: 12:30-14:00				
Session 8 - Processing & Applications				Chairman: Pierre Sallot
14:00-14:30	<i>Invited</i>	Alain	Couret	<i>Development of the TiAl IRIS alloy by Spark Plasma Sintering</i>
14:30-15:00	<i>Invited</i>	Akira	Fukushima	<i>Development of TiAl turbine blade with metal injection molding process</i>
15:00-15:20	<i>Oral</i>	Arnaud	Fregeac	<i>FAST/SPS: NEW industrial post-process for full densification of 3D TiAl complex shape from additive manufacturing</i>
15:20-15:40	<i>Oral</i>	Tadayuki	Hanada	<i>Application of MIM process to TiAl Turbine Blade</i>
Break: 15:40-16:10				
Session 9 - Alloy properties				Chairman: Mauro Filippini
16:10-16:40	<i>Invited</i>	John	Lewandowski	<i>Microstructural Heterogeneity and Post Processing Effects on Mechanical Properties of Ti-48Al-2Cr-2Nb Additively</i>
16:40-17:00	<i>Oral</i>	Muriel	Hantcherli	<i>Influence of some promising alloying elements on the mechanical properties and deformation mechanisms of TiAl</i>
17:00-17:20	<i>Oral</i>	Alexander	Donchev	<i>High Temperature Oxidation of γ-TiAl Alloys: Effect of Zr</i>
17:20-17:40	<i>Oral</i>	Toshimitsu	Tetsui	<i>Effects of Various Factors on the Impact Resistance of TiAl Alloys</i>
17:40-18:00	<i>Oral</i>	Lin	Song	<i>Deformation twins in α2-Ti3Al phase</i>

Wednesday, June 14

Session 10 - Fundamental				Chairman: Helmut Clemens
8:30-9:10	Keynote	Masao	Takeyama	An Overview on "Materials Integration" for Revolutionary - Design System of Structural Materials in SIP in Japan
9:10-9:30	Oral	Mohamed	Keita	Lamella orientation control of β -Solidifying TNM Alloys via High-Temperature Compression
9:30-9:50	Oral	Kazuhiro	Mizuta	Effect of Microstructure on Creep Properties of TiAl4822 Built by Selective Laser Melting
Break: 9:50-10:20				
Session 11 - Alloy properties				Chairman: José María San Juan
10:20-10:50	Invited	Mauro	Filippini	Fatigue cracking in additively manufactured gamma-TiAl
10:50-11:10	Oral	Guy	Molénat	Plasticity and brittleness of the ordered Beta-o phase in a TNM-TiAl alloy
11:10-11:30	Oral	Jonathan	Paul	Embrittlement after high temperature exposure: overview of the literature in view of new findings
11:30-11:50	Oral	Pascale	Kanouté	Study of fatigue mechanisms at the microstructure level in TiAl alloys
Buffet: 12:00-13:30 and departure for the tour and banquet				

Thursday, June 15

Session 12 - Additive Manufacturing				Chairman: Florian Pyczak
8:30-9:00	Invited	Hiroyuki	Yasuda	Microstructure Control of TiAl Alloys by Additive Manufacturing
9:00-9:30	Invited	Isak	Elfström	A simulation-based approach for EBM additive manufacturing of γ -TiAl
9:30-9:50	Oral	Ken	Cho	Microstructure and Mechanical Properties of Additively Manufactured β -containing TiAl Alloys
Break: 9:50-10:20				
Session 13 - Processing & Applications				Chairwoman: Sara Biamino
10:20-10:50	Invited	Melissa	Allen	Solid solution Strengthening of TiAl alloys with Zirconium, mechanical properties
10:50-11:20	Invited	Tomohiro	Nishimura	Development of Rapid Determination Technique of Molten TiAl Alloys using X-ray Fluorescence
Session 14 - Posters				Chairmen: H. Nakashima & J.-P. Monchoux
11:20-12:30	Posters		Session 2	
Lunch: 12:30-14:00				
Session 15 - Processing & Applications				Chairwoman: Melissa Allen
14:00-14:30	Invited	S. Biamino	M. Galati	Progress on Titanium Aluminides within the NEWTEAM EU project
14:30-15:00	Invited	Anders	Engström	Data to aid materials design and process optimization of Titanium Aluminides
15:00-15:20	Oral	Kui	Lui	Cost-effective Vacuum induction melting of gamma TiAl and NiTi alloy

15:20-15:40	Oral	Kenji	Doi	<i>Control of lamellar colony size in sintering process for injection-molded TiAl alloys</i>
Break: 15:40-16:10				
Session 16 - Fundamental			Chairman: Rui Yang	
16:10-16:40	Invited	Petra	Spoerk-Erdely	<i>How elaborate in situ experiments guide modern alloy development</i>
16:40-17:00	Oral	José María	San Juan	<i>Relaxation Mechanisms and Diffusion Processes in γ-TiAl Intermetallics</i>
17:00-17:20	Oral	Heike	Gabrisch	<i>Microstructure and elastic properties in Ti-42Al-8.5Nb after long-term annealing at 550°C</i>
17:20-17:40	Oral	Yuzheng	Zhang	<i>The Role that Hot Deformation Plays in Determining the Static and Dynamic Mechanical Behavior of a High Niobium</i>
17:40-18:00	Oral	Xiaobing	Li	<i>Thermal stability in microstructure of Mn containing β-solidifying γ-TiAl alloy</i>

Friday, June 16

Session 17 - Alloy properties			Chairman: Bernard Bewlay	
8:30-9:00	Invited	Mathias	Galetz	<i>Oxidation Behavior of TiAl Alloys, its Influence on the Mechanical Properties and Mitigation Strategies via Deposition of Ti₂AlC MAX-phase based coating on Titaniumaluminides to improve the oxidation resistance</i>
9:00-9:20	Oral	Nadine	Laska	<i>Influence of oxidation protective coatings on the high temperature fatigue behaviour of Ti-48Al-2Cr-2Nb</i>
9:20-9:40	Oral	Christoph	Breuner	<i>Development of Microstructure Factor-based Mechanical-property Prediction Module for TiAl Alloys</i>
9:40-10:00	Oral	Ryosuke	Yamagata	
Break: 10:00-10:30				
Session 18 - Summary & discussion			Chairman: Masao Takeyama	
10:30-11:40	Extended summary			
11:40-12:00	Concluding remarks			
Buffet: 12:00-13:30 & Departure				