

Monday May 11, 2015

	Hebel-Saal	Mombert-Saal	Clubraum	Forum 1	Forum 2	Konferenzraum 2.05	Konferenzraum 2.08
8:45	Welcome in Weinbrenner Saal						
9:00	Plenary 1: W.A. Curtin, EPFL, Switzerland, X-Mechanics for Metal Plasticity						
9:45	Plenary 2: Haruyuki Inui, Kyoto University, Japan, Materials for Ultra High-Temperature Applications						
10:30	COFFEE BREAK						
	C 1 D. EIFLER	E 1 R. SCHWAIGER	A 1 S. SANDFELD	B 1 B. SCHOLTES	G 1 V. SILBERSCHMIDT	F 1 W. BLECK	K 1 T. BÖHLKE
11:00	MAN, JIŘÍ: Effect of chemical heterogeneity on the low-cycle-fatigue behavior of austenitic Cr-Ni stainless steels	BUSHBY, ANDY : Size dependent strength and its exploitation for length-scale engineered material systems	BITZEK, ERIK : Atomistic Simulations as Bridge between Experiments and Mesoscale Models: a Case-Study on Dislocation-Precipitate Interactions in Ni-base Superalloys	VOORWALD, HERMAN JACOBUS CORNELIS: Fatigue Strength of Anodized Al 7050-T7451	BRATOV, VLADIMIR: Numerical Simulation of ZrO ₂ (Y ₂ O ₃) Ceramic Plate Penetration by Cylindrical Plunger	SUGIMOTO, KOHICHI : MECHANICAL PROPERTIES OF A 0.2%C-1.5%Si-5%Mn TRIP-AIDED ANNEALED MARTENSITIC STEELS	ROBERT, GILLES: Integrative simulation of short glass fibers reinforced polyamides: methodology followed to identify polymer matrix constitutive models on a wide range of solicitations, temperature, moisture and strain rate
11:15				LIU, DONG : The Influence of Residual Stress on the Failure Modes in a Thermal Barrier Coating System	VOLKOV, GRIGORY: Temporal Peculiarities of Fracture Caused by Threshold Pulses in Spallation	TASAN, C. C. : Nano-laminate TRIP-TWIP steel with dynamic strain partitioning and enhanced damage resistance	LI, PEIFENG: X-ray microtomography and finite element modelling of the failure mechanism in epoxy syntactic foams under compressive loads
11:30	GIERTLER, ALEXANDER: The distribution of local plastic deformation during VHCF loading of duplex stainless steel and martensitic steel	HUSSER, EDGAR : Three-dimensional modeling of size effects in micromechanical testing	OGATA, SHIGENOBU: Accelerated molecular dynamics study of grain boundary motion and dislocation nucleation from grain boundary	THIELEN, MATTHIAS : Overloads on cracks: using Barkhausen microscope and SEM-based digital image correlation to evaluate mechanisms and effects on local (residual) stress fields	Mayer, Uwe : Dynamic fracture of concrete: experimental and numerical studies on compact tension and L- specimen	WEIDNER, ANJA : Characterization of strain localizations during plastic deformation of TRIP/ TWIP steels	YUJI, TAKUBO: Mechanical Properties of CF/PA Composite Yarn Sutured with PA Fiber

11:45	DÖNGES, B.: Fatigue mechanisms of an austenitic-ferritic duplex stainless steel at loading conditions close to conventional fatigue limit	MALYAR, NATALIYA : Dislocation grain boundary interaction in bi-crystalline micro pillars studied by in situ SEM and in situ μ Laue diffraction	UMENO, YOSHITAKA: Ab initio-based atomistic model simulation of deformation and fracture in SiC power device	TOUALBI, LOUISE : Assessment of shot-peening on fatigue life prediction: microstructural effects	MAYER, A.:Multiscale model of the dynamic tensile fracture of solid and molten metals: molecular dynamics and continuum mechanics	KANG, JEEHYUN : Temperature evolution during tensile straining of high Mn twinning induced plasticity (TWIP) steels	ZHUPANSKA, OLESYA I.: Overall mehanical properties of composites with complex orientationally distributed microstructures
12:00	MÜCHER, MARIO: Material Development for Precision Steel Tubes for Stabilizer Bars	WEYGAND, DANIEL : Size effects and dislocation structure under torsion loading of single crystalline wires: a discrete dislocation dynamics study	KONG, XIANGWEI: Research on constitutive model of nickel-based superalloy and the numerical simulation during superalloy blade cold rolling process	STANOJEVIC, ALEKSANDAR : Thermal Stability of Residual Stresses in Ti-6Al-4V components	SCHÄFER, FLORIAN: Stage I fatigue crack studies in order to validate the dislocation-free zone model of fracture for bulk materials	SMAGA, MAREK : Microstructure as well as mechanical and magnetic properties of Fe-based alloys with different contents of metastable austenite	MATSUMOTO,KOKI: Estimation of Dispersion Condition for PP/CNT Nano Composite by Using the New Segments with Extensional Flow for Co-Rotating Twin Scw Extruder
12:15	XI, ZHOU-JI: Effect of Cementite Morphology on Fatigue Crack Propagation in Smooth Steel Specimen	KOIWA, KOZO: Investigation of crystal plasticity of single crystal copper by using micro scale torsion test	Wang, Y. : Development of Mechanism-Based and Microstructure-Sensitive Modeling Approach to Plastic Deformation in Multi-Phase Alloys	FU, HONGWANG : Development of residual stresses during cyclic loading in the very high cycle fatigue regime		LEE, YONGMOON : Microstructural Evolution of TRIP-aided Medium Mn Steel During Warm Deformation	BAYRAK, OSMAN: Characterisation of graphene-reinforced nanocomposites: optical-microscopy analysis of spatial non-uniformity
12:30	POSTER EXHIBITION LUNCH						

	C 2 J. MAN	E 2 A. BUSHBY	A 2 E. BITZEK	B 2 P.J. WITHERS	G 2 T. SEELIG	H1 A. MÖSLANG	F 2 C.C. TASAN
14:00	EBARA, RYUICHIRO: The role of corrosion pit in corrosion fatigue crack initiation process of 12Cr stainless steel	KIRCHLECHNER, C. : Study of fatigue damage evolution in micron sized bending beams by in situ μ Laue diffraction	MORDEHAI, DAN: Size-Dependent Mechanical Properties of Crystalline Nanoparticles	BERVEILLER, SOPHIE : 3DXRD microscopy applied to study stress-induced martensitic transformation over one hundred individual grains in a shape-memory alloy polycrystal	KRUZIC, JAMIE J: The Mechanics of Bridged Fatigue Cracks	Kurtz, R.: Effects of helium and irradiation damage on microstructure and mechanical properties of Fe base alloys for fusion applications	BIERMANN, HORST : Influence of temperature on fatigue-induced martensitic phase transformation in a metastable CrMnNi-steel
14:15	SORICH, ANDREAS: Characterization of the fatigue behavior of the metastable austenitic steel X6CrNiNb1810 from LCF to VHCF at 300 °C						KOYAMA, MOTOMICHI : Importance of ϵ -martensite on embrittlement and fatigue crack growth in Fe-Mn-based austenitic steels
14:30	SKORUPSKI, ROBERT: Influence of the surface morphology on the cyclic deformation behaviour of cryogenic turned metastable austenitic steel X6CrNiNb1810	ZHANG, BIN: A comparative study of fatigue properties of nanoscale Cu films on a flexible substrate	LOUNIS, KAHINA: Molecular dynamics study of the response of a nanowire containing defects to a uni-axial strain: case of nickel	CLAUSEN, BJØRN : Measuring Residual Stresses in Monolithic Fuel Foils using Neutron Diffraction	BENZ, CHRISTOPHER: On the need to reconsider fatigue crack growth at negative stress ratios	COENEN, J.W.: New Material Developments for Applications in Fusion Reactors	YAMAMURA, YUUSUKE : Importance of strain aging on fatigue limit in austenitic TWIP steels
14:45	Omori, Toshihiro: Hybrid surface treatment on austenitic stainless steel JIS SUS316 to improve fretting fatigue strength	LUO, XUE-MEI: Strain-dependent fatigue damage of nanocrystalline 930-nm-thick Au films	TSURU, TOMOHITO: Tension/compression anisotropy in yield stress and Bauschinger effect in ultrafine-grained metals	SUZUKI, SHIGERU : Characterization of microscopic stress and strain evolved in polycrystalline Fe-Ga alloys using synchrotron radiation	ÅMAN, MARI: Effect of adjacent small defects on fatigue limit of steels	Qu, D. D.: Functional graded tungsten/ EUROFER coating systems for First Wall application	KWON, SOON IL : Influence of Si addition on deformation and fracture behaviors of aging treated cast Fe-Mn-Al-C lightweight steel
15:00	JANG, CHANGHEUI: Low cycle fatigue behaviors of hot-bent 347 Stainless Steels in a simulated PWR water	PAN, BO : Influence of surface energy and dislocation pile-up on the size dependent strength of single-crystalline micro-pillars	SCHUMACHER, PHILIPP: Particle and solid solution strengthening. Part 1: experiments to control microstructure	LIEHR, ALEXANDER : Analysis and Assessment of Residual Stresses in Ground Steels and Ceramics	BOUSFIA, MOHAMMED: Comparison between three fatigue damage models and experimental results for composite materials submitted to spectrum loading	HOFFMANN, JAN: CuCrZr alloys reinforced by Tungsten as structural Divertor applications for DEMO	GUIHEUX, ROMAIN : Effect of shot peening on microstructure of steels exhibiting a TRIP effect - Experimental and modeling approaches

15:15	SONG, SEOK WEON: Effect of Cold-Drawing on High-Cycle Fatigue Properties of Austenitic TWIP and Fully Pearlitic Steels	SERNICOLA, GIORGIO : In situ fracture tests of brittle materials at the microscale	MOHLES, VOLKER: Particle and solid solution strengthening. Part 2: modelling plastic behaviour	BUSLAPS, T. : Assessing material properties with Neutron and Synchrotron radiation - Two complementary tools	SILBERSCHMIDT, VADIM: Experimental and numerical analysis of damage in random fibrous networks	CAO, X.: Lithium evaporation and redeposition experiments under high density linear plasma dumping	MAJ, MICHAL: Study of Lüders band propagation using IR thermography and DIC method in the wide range of strain rates
15:30	COFFEE BREAK						
	C 3 M. ENDO	E 3 D. KIENER	A 3 & G3 T. SEELIG	B 3 H.J.C. VOORWALD		H2 R. KURTZ	K 2 A. HRYMAK
16:00	TAMURA, EIICHI: Influence of characteristics of inclusion on rolling contact fatigue of bearing steel	KAMIYA, SHOJI: Smaller is not always stronger - inverse scale effect on metal-ceramics interface strength observed in LSI interconnect structures	HWU, CHYANBIN: A boundary finite element for anisotropic / piezoelectric materials containing multiple cracks	PODUŠKA, JAN : Estimation of residual stress distribution in polyethylene pipes		MICHAUT, BERTRAND: Analyzing the ions radiation-induced defects and cavity swelling evolution in representative PWR internal austenitic steels	HASSANIFARD, SORAN: Progressive damage evaluation of Glass-Epoxy laminated composites under fatigue loading
16:15	KLEIN, MARCUS: Evaluation of the fatigue behavior of damage tolerant TRIP-modified SAE 52100 steels using the short-time-procedures PHYBALCHT- and PHYBALLIT	SCHWARK, TABEA : Characterisation and Mechanical Properties of the Boundary Layers of Soft Magnetic Composites	WANG, MAYAO: Effect of micromorphology on crack growth in cortical bone tissue: X-FEM study	ACHINTHA, MITHILA : A combined experimental and numerical approach to the investigation of the influence of geometry on residual stresses in structural glass		GRAENING, TIM: Insights in microstructure of austenitic ODS steels	WIDANY, KAI-UWE: Experimental Investigation of Cold Forming of PC-Films and tensile bars using Optical Measurements
16:30	BASAN, ROBERT: The development of the indirect method for estimation of strain life fatigue parameters	SCHEIDER, INGO : Multiscale Modelling of Damage and Failure in a Biological Hierarchical Material	NONN, AIDA: Extended damage modelling for fracture control in modern line pipe steels	GUEREAULT, HUGUES : Benefits of Whole Powder Pattern Decomposition in the Determination of Residual Stress in Multiphase Materials		SALEH, MICHAEL: Studies of high dpa ion beam irradiation effects on fcc AA-6061 and fcc-bcc duplex steel 2205: micromechanical modelling and nano-indentation examination of hardness variations	MAROTZKE, CHRISTIAN: Failure processes of fiber reinforced composites under off-axis loading

16:45	UEYAMA, KENTA: Fatigue Properties of DLC Coated Steel AISI1045 with Cr Diffusion Layer on the Substrate Surface by AIH-FPP Process	BROGLY, MAURICE: Surface properties of biopolymer films - Morphology, adhesion and friction	SCHEUNEMANN, LISA: Comparison of statistical descriptors for the construction of Statistically Similar RVEs	SCHWEIZER, FRANK : Simulation-based optimization of the multiple incremental hole-drilling method for the simultaneous analysis of residual stresses and the measurement accuracy		FARROW, ADAM : Mechanical Behavior of Unalloyed Plutonium	KREIKEMEIER, JANKO: Analysis and Simulation of the Fatigue Behaviour of CFRP Laminates
17:00	NAGASHIMA, NOBUO: Low cycle fatigue properties of the Fe-28Mn-5Cr-6Si-0.5NbC alloy	LUO, ZHAO-PING : Microstructure evolution of Cu/Au and Cu/Cr multilayers under cyclic sliding	KAUPP, GERD : Phase transitions' energies and activation energies from nothing else than indentation loading curves	ULYANENKOV, ALEX : Analysis of residual stress gradients by X-ray diffraction with five-axis diffractometer		ANSPOKS, ANDRIS: Temperature dependent X-ray adsorption spectroscopy studies of Fe, Cr, and Ni local atomic structure for ferritic and austenitic ODS steels	BRABANDT, DANIEL: Inline metrology of carbon fiber preforms as an indicator of mechanical properties of consolidated CFRP parts
17:15		LI, XI: Toward the modulation of interface barrier strength of Cu/Au nanolayered composites	KACEM, MAHER EL HAJ: RATE effects in finite Element modeling of transformation induced visco-plasticity	SUN, TIANZHU: Comparison of the residual stress distributions in conventional and stationary shoulder friction stir welding			HANGS, BENJAMIN: Characterization of complexly warped components made from locally reinforced UD-tape laminates

Tuesday May 12, 2015

	Hebel-Saal	Mombert-Saal	Clubraum	Forum 1	Forum 2	Konferenzraum 2.05	Konferenzraum 2.08
9:00	Plenary 3: Hisao Matsunaga, Kyushu University, Japan, Tensile and Fatigue Behavior of Steels in High Pressure Hydrogen Gas Atmospheres						
9:45	Plenary 4 : Reinhard Pippan, Erich-Schmid-Institut, Leoben, Austria, Deformation, Fatigue, and Fracture of Ultrafine Grained and Nanocrystalline Materials						
10:30	COFFEE BREAK						
	C4 T. BECK	E4 C. KIRCHLECHNER	A4 S. OGATA	B4 S. BERVEILLER	G4 J. KRUZIC	I1 G. EGGELER	K3 F. HENNING

11:00	KIKUCHI, SHOICHI: Effects of nitriding temperature on the fatigue properties of Ti-6Al-4V alloy and in-situ observation of fatigue cracks in 4-points bending	KIENER, DANIEL: Probing thermally activated properties on a local scale	SEGURADO, JAVIER: Size effects in void growth from nano- to microscale	INOUE, TATSUO: Nitriding stress due to nitrogen diffusion and nitrides formation	QIAN, XUDONG: Cleavage Initiation Angle for High Strength Steels under Mixed-Mode Conditions	LEE, JI-WON: Development of a novel microstructure highly resistant to grain boundary damage during creep at 950 °C in Alloy 617	DAMMANN, CHRISTIAN: RVE modeling of fibre-reinforced-polymer curing coupled to visco-elasticity
11:15	ZHENHUA, ZHAO: The influences of foreign object damage on the high cycle fatigue behavior of titanium alloy TC11			SERIZAWA, HISASHI : Influence of rotational speed in friction stir welding on heat generating behavior of MPS analysis	RETTENMEIER, PHILIPP: Experimental and numerical investigations on the crack growth stage of crane runway girders subjected to cyclic loading	RETTIG, RALF: Numerical multi-criterion optimization method for developing Ni-based superalloys: Development of a software tool and experimental validation	ROESNER, ANDREAS: Characterization and simulation of the time-dependent anisotropic deformation behaviour of continuously reinforced PA6 material
11:30	BRIK, MOUAAD: Strain hardening memory effect and its interaction with the cyclic elastoplastic behavior of anisotropic aluminium alloy 2017A	JIANG, JUNNAN: Micro- and Macro-mechanical Testing of Grain Boundary Sliding (GBS)	Weyand, Daniel: Dislocation interaction across grain boundaries and grain boundary yielding in a discrete dislocation dynamics framework	LEE, HAN-SANG : Failure analysis and optimization of welding process for 347H boiler tube of thermal power plant	MELIANI, M. HADJ: Crack Path in connection with the Two-Parameter Fracture Mechanics Approach on X52 steel pipe repairing	VÖLKL, R.: On the importance of the matrix for the creep properties of single crystal nickel based superalloys	ESTRIN, Y: Topological Interlocking Materials - Towards New Polymeric Hybrid Materials
11:45	UEMATSU, YOSHIHIKO: Effect of forging condition on fatigue behavior in AZ61 bulk nanostructured metal fabricated by multi-directional forging	KREUTER, THOMAS: Nanoindentation at Room and Elevated Temperatures of Au/Cu-Multilayers	HOCHRAINER, THOMAS : Dislocation alignment tensors : their conservation laws and how to determine them from discrete dislocation configurations	LIU, YANG : Evaluation of the interfacial shear stress between FeCrAl coating and Zircaloy-4 fuel cladding	GAVARDINAS, IOANNIS D.: A modified Sih criterion for crack deflection in dipolar gradient elasticity	GAO, SIWEN: Influence of misfit stresses on dislocation glide in single crystal superalloys: A three-dimensional discrete dislocation dynamics study	
12:00	STANZL-TSCHEGG, S.E.: Variable-Amplitude of Aluminum Alloy 7075 in the VHCF Regime under Superimposed Loading Conditions	Schrenker, Nadine : Mechanical behavior of the MAX-phase Nb ₂ AlC at the nanometer and micrometer scale by means of in situ indentation	SCHMITT, SEVERIN: Representation of Dislocation Interactions in a Dislocation Density Field Theory for Crystal Plasticity	ARAI, MASAYUKI : Mechanical property and Residual Stress in Type304 stainless steel repaired partially by HVOF sprayed technique	STIGH, ULF: Cohesive laws for adhesive layers loaded in a state close to pure shear	EGGELER, YOLITA M.: TEM analysis of localized, planar deformation events which govern creep of single crystalline CoNi - superalloys with γ/γ' -microstructures	KEHRER, L.: Homogenisation of thermoelastic properties of short-fibre reinforced polymers and validation based on experimental characterisation

12:15		SCHACHTSIEK, ANKE: Deformation behavior of copper thin films indented with patterned nanoindenter tips	MONAVARI, MEHRAN: Microstructural comparison of continuum models for dislocation plasticity	RICKERT, THEO : Comparative residual stress measurements on shot-peened spring steel by XRD and PRISM hole-drilling method	MARTÍNEZ-PAÑEDA, EMILIO: The role of Geometrically Necessary Dislocations in the fracture process of metallic materials		MRKONJIĆ, MARINA: Phenomenological characterization and macromechanical modeling of anisotropic, non-linear behavior of sheet molding compounds (SMC)
12:30	POSTER EXHIBITON LUNCH						

	C 5 S. STANZL-TSCHEGG	E5 G. SCHNEIDER	A5 J. SEGURADO	D1 J. WAGNER		I2 H. INUI	F3 A. WEIDNER
14:00	FISCHER, CARL: Assessment of fatigue crack closure under in-phase, out-of-phase and phase-shift thermomechanical fatigue loading using a temperature dependent strip yield model	MOLINA-ALDAREGUIA, J.: Using high temperature micromechanical testing to inform microstructure based models: application to IN718	MILLER RONALD E.: The "Cauchystat": accurate control of the true stress in molecular dynamics simulations of martensitic phase transformations.	MINOR, ANDREW M.: In-situ TEM deformation of lightweight alloys and local strain measurements with diffraction imaging		PARSA, A.B.: On the Formation of Ledges and Grooves at γ/γ' Interfaces of Ni-base Single Crystal Superalloys	HATAMI, M.K. : Homogenization of TRIP steel behaviour using a strain gradient plasticity model
14:15	GUTH STEFAN: Dwell time effects on the Thermo-Mechanical Fatigue Behaviour of a Wrought Ni-base Alloy					MATUSZEWSKI, KAMIL: The influence of Re and Ru on the high-temperature creep strength and phase stability of Ni-based superalloys	WONG, SU LEEN : A crystal plasticity model for advanced high strength steels including both TRIP and TWIP effect
14:30	ACKERMANN, STEPHANIE: Biaxial fatigue behavior of a hot-pressed metastable austenitic steel	LI, BO-SHIUAN : Multi-scale Fracture Behaviour of Tungsten Alloys for Nuclear Fusion	WAKEDA, MASATO: Multiscale modeling of solute atom effect on critical resolved shear stress of Fe	KÜBEL CHRISTIAN: CSL $\Sigma 3$ and $\Sigma 9$ activity as a deformation pathway in nanocrystalline Pd and AuPd		RONCERY, LAIS MUJICA: Super-Solvus Heat Treatments of Ni-Based Superalloys in a Hot Isostatic Press/ Quench Unit	MADIVALA, MANJUNATHA : Multiscale Modelling of Damage and Fracture in High Mn TWIP Steels
14:45	OBRTLIIK, KAREL: High temperature low cycle fatigue behavior of cast superalloy Inconel 713LC coated with ZrO ₂ -SiO ₂ -Al ₂ O ₃ nanocrystalline thermal barrier coating	SOLOGUBENKO, ALLA. S. : Effect of composition and morphology on the mechanical and electrical behavior of Cu-Cr thin films	LEHTINEN , ARTTU: Multi-scale modeling of dislocation-precipitate interactions in Fe: from molecular dynamics to discrete dislocations	TASAN, C. C.: In-situ characterization of martensite plasticity by high resolution microstructure and strain mapping		Anxin Ma: Crystal plasticity modeling of porosity reduction in an as-cast Ni-base single crystal superalloy during hot isostatic pressing	VAJRAGUPTA, NAPAT : Artificial microstructure model and its applications on plasticity and damage of the dual phase steels

15:00	WANG, EDWARD: Optimal Design of Skirt Supporting Structure of Coke Drum for Thermal-Mechanical Cyclic Loading	WEISS, BENJAMIN: Thermomechanical influence grinding of electrodeposited chrome coated on a 300M substrate	MONNET, GHIATH: Detailed description of the screw dislocation motion in iron revealed by atomistic simulations	WYSS, ANDREAS: Complex analyses of mechanical and electrical performance of metallic thin films on flexible substrates combined with in-situ Reflectance Anisotropy Spectroscopy		SPIECKER, ERDMANN: Characterization of <100> superdislocations and the γ/γ' interface by an advanced FIB lamella lift out technique	WELSCH, E. : Dislocation plasticity in precipitate hardened advanced austenitic lightweight high-Mn steels by coupled TEM and DDD simulations: Strengthening and dislocation-based mechanisms
15:15	DEL BIANCHI DA SILVA LIMA, LUIZ GUSTAVO: Numerical and experimental analysis of the influence of process parameters on the damage of hot rolling rolls	DE SAEVER, ALBAN: Orthogonal machining of a Cu-1.8wt %Be-0.1wt%Co alloy : influence of the microstructure	KOSITSKI, ROMAN : Depinning-Controlled Plastic Deformation during Nanoindentation of BCC Iron Thin Films and Nanoparticles	ZAEFFERER, S., ARCHIE, FADY: Crystallographic and mechanical characterization of micro-bicrystal cantilevers		EGGELER, GUNTHER: New Experimental Results on Atomistic and Microstructural Aspects of Creep of Ni-Base Single Crystal Superalloys (SXs)	SCHNEIDER, DANIEL : Phase-field modeling of solid-solid phase transformations
15:30	COFFEE BREAK						
	C 6 H. MATSUNAGA		L1 T. Böhlke	B5 A. MORANÇAS	G5 S. Weygand	H3 A. Kimura	X 1 M. Heilmaier
16:00	TANABE, HIROTAKA: Rolling Contact Fatigue Strength of Ceramic Coated Steel Laser-Quenched after Coating Process		KONECNA, RADOMILA: Mechanical properties and microstructure of Ti6Al4V fabricated by selective laser melting	RAMI, ANIS : Combined machining/burnishing process optimization for alloy steel 42CrMo4 using Taguchi technique	JAMIE KRUZIC: On the fracture toughness of bulk-metallic glasses	HANGEN, UDE D.: Mechanical Properties of a PM2000 ODS alloy tested at temperatures up to 700 °C	NEKOUIE, V.: Wedge indentation studies of Zr-Cu-based bulk metallic glass
16:15	HOSHIDE, TOSHIHIKO: Crack propagation behavior in titanium alloy under combined axial-torsional cyclic loading modes		ANTEN, K.: Formation of Twin Bands and Inhomogeneous Deformation in Mg-wrought Alloy AZ31 During Tension-Compression or Bending Loading	REGO, RONNIE : The residual stress homogeneity state induced by gear manufacturing processes	ISMAIL, KARIM: Damage & Fracture Toughness of Fibrous Dual-Phase Steels for Automotive Applications	Bredl, J.: High temperature investigation of the fusion relevant material EUROFER by instrumented indentation	Baek, Inchl: Mechanics Behavior of Protein Material

16:30	RUTECKA, AGNIESZKA: The AA2124/SiC metal matrix composites under fatigue, creep and monotonic loading conditions		KLEIN, MARTIN: Electrochemical-based characterization of the corrosion fatigue behavior of creep-resistant magnesium alloy DieMag422	SCHEMEL, M. : Influence of specimen size on the residual stress formation after heat treatment of hot-work tool steel components	OCHENSBERGER, WALTER: New insights on the physically correct application of the J-integral for characterizing fatigue crack growth in elastic-plastic materials	LAPOUGE, PIERRE: Study of irradiation creep based on nanomechanical lab-on-chip testing	ZHAO, Lv: Rigidity characterization and fracture analysis of the solar-grade multi-crystalline silicon plates at low temperature
16:45	CHEN, CHUANYONG: Fatigue crack growth behavior of Ti-6Al-4V ELI alloy under constant amplitude loading with different single overloads		MAJZOABI, GHOLAM-HOSSEIN: Evaluation of tensile behavior of dynamically compacted Al7075-SiC nanocomposite by spherical indentation using neural networks	MA, CHUANPING : Effect of different surface treatments on A7N01S-T5 aluminum alloy butt joints fatigue properties	SOMMER, HANNAH: Grain Boundary Precipitation and Creep Crack Growth in polycrystalline Ni-base superalloys	ROGOZHKIN, S.: Atom probe tomography of nanoscale precipitates in 13% Cr ODS steels with Ti variation	SHAVSHUKOV, VYACHESLAV: QUANTUM FIELD THEORY APPROACH IN MECHANICS OF POLYCRYSTALLINE MATERIALS
17:00	MARNIER, GAEL: Prestrain memory on subsequent cyclic behavior of fcc metallic materials presenting different dislocation slip tendencies		SIDDIQUE, SHAFIQAT: Very High Cycle Fatigue (VHCF) Assessment of Selective Laser Melted (SLMed) AlSi12 Alloy	RENAUD, JULIEN : Thermomechanical behaviour and microstructural evolution of high temperature forged Ti-6Al-4V during heat treatment quenching	HIGUCHI, YU-KI: Examination of Evaluation Method for Static Strength of Casting Materials by Regarding Shrinkage Porosity as Cracks: Example of AZX912 Mg Cast Alloy	HU, XUE: Identification of Cr-Y-O Nano-Cluster in a 14Cr Oxide Dispersion Strengthened Steel	EREN, ZANA: AXIAL CRACK AND CRUSH RESPONSE OF NOVEL NESTED TUBES
17:15			KWON, YONG-NAM: Formability Enhancement of 7075 Al Sheet with Two Step Forming	CONROY, BRIAN : Development of ProCast models to predict residual stress within femoral implant castings	VOLLERT, FLORIAN: Insight into MAG welding under constructive constraint conditions by means of high energy synchrotron X-ray diffraction	OGORODNIKOVA, O.V.: DEUTERIUM RETENTION IN REDUCED-ACTIVATION ODS STEELS IRRADIATED WITH 20 MEV W IONS	Paradowska, Anna: Neutron diffraction and imaging for industrial and engineering applications

Wednesday May 13, 2015

	Hebel-Saal	Mombert-Saal	Clubraum	Forum 1	Forum 2	Konferenzraum 2.05	Konferenzraum 2.08
9:00	PLENARY 5: A. HRYMAK, UNIVERSITY OF WESTERN ONTARIO, CANADA, MODELING LONG FIBER DISTRIBUTIONS IN COMPRESSION MOLDING						

9:45	PLENARY 6: B. AINSWORTH, THE UNIVERSITY OF MANCHESTER, UK, THE TREATMENT OF RESIDUAL STRESSES IN FRACTURE MECHANICS CALCULATIONS						
10.30	COFFEE BREAK						
	C7 Y. Hoshide	E6 G.-P. Zhang	A6 N.M. Ghoniem	B6 You Chao	G6 R.O. RITCHIE	H4 J.W. COENEN	
11:00	XU, HAIFENG: The effects of periodic overloads and high/ low loading blocks on fatigue crack growth of aluminum alloy	WU, XIAOLEI: Grain size gradient-induced work hardening and extraordinary ductilization	KLUSEMANN, BENJAMIN: Gradient enhanced modeling of fcc and bcc nanocrystalline materials	MORANÇAIS, AMÉLIE : Evolution of residual stresses and work hardening during cycling loading and their impact on fatigue behavior of a single crystal nickel based superalloy	ZAGAR, GORAN: Testing fracture toughness of brittle materials via chevron-notched bend bars of microscopic length-scale	DAI, YONG: Combined effect of radiation damage and helium on the hardening and embrittlement of ferritic / martensitic steels	
11:15	BRIGHENTI, ROBERTO: Multiaxial fatigue damage in fibrous composites: an approach based on micromechanical crack growth				WEYGAND, SABINE: Micro-fracture testing of tungsten single crystals	SALEH, TARIK A.: Mechanical Properties of Irradiated Ferritic/ Martensitic Steels	
11:30	NGOULA, DESIRE TCHOFFO: Predicting the fatigue life at crack initiation in cruciform welded joints by using the effective cyclic J-integral (ΔJ_{eff})	FRITSCH, SEBASTIAN: Mechanical properties and microstructural changes of high strength AA7075 alloy during low temperature ECAP	TUNG, PHAN VAN: A consistent homogenization theory for a higher order plasticity model from meso to macro scale	FARAJIAN, MAJID : Numerical and Experimental Description of the Surface and Subsurface Residual Stresses in Metallic Components after Mechanical Surface Treatment		DETHLOFF, CHRISTIAN: Influence of neutron irradiation on precipitate microstructure in EUROFER97	
11:45	ITO, REN: Fatigue behavior of Al/Steel dissimilar resistance spot welds fabricated using Al-Mg insert film	HÄRTEL, MARKUS: Effect of creep and aging on the precipitation kinetics of an Al-Cu-Alloy after ECAP	DIEHL, MARTIN: Spectral Method Simulations of High Phase-Contrast Materials: A Joint Numerical-Experimental Study	RICO, JOAQUIN RAMIREZ : Evaluation of stress determination methods for a 2D x-ray diffraction portable apparatus using in-situ measurements during tensile testing.	BRÜCKNER, JOHN: An Improved Micromechanical Method for Investigating the Statistical Strength of Poly-Silicon Membranes	KORCUGANOVA, O.: Atomic scale investigation of phase decomposition of Fe-22%Cr during thermal aging and subsequent heavy ion irradiation	

12:00	ENDO, MASAHIRO: High cycle fatigue strength of pure lead	FRINT, PHILIPP: On shear localization in an SPD-processed Aluminum Alloy - Part 1: Microstructures and local mechanical properties	MEIER, FELIX: Influence of the microstructure of Al-components on the life time of integrated circuits	HASSE, BERND : Laboratory Micro-focus X-ray Sources for Stress Measurements Germany	SHERMAN, DOV: How Crystals Break - Crack speed dependent environmental effect and surface instabilities	PARK, SANGGYU: Comparison of mechanical properties between the HT9 and Gr.92 steel with various heat treatment conditions in a viewpoint of microstructure	
12:15		PFEIFFER, STEFFEN: On shear localization in an SPD-processed Aluminum Alloy - Part 2: A simple model concept and FE simulation of the formation of alternating bands	ESTRIN, YURI : Deformation behavior of gradient materials with nanostructured near surface regions	TSCHUKIN, OLEG : Phase-Field Model for Solid-Solid Phase Transformation Driven by Elasticity		HU, XUE: Creep rupture behavior of the China Low Activation Martensitic steel at 600°C	
12:30	POSTER EXHIBITON LUNCH						

	Hebel-Saal	Mombert-Saal	Clubraum	Forum 1	Forum 2	Konferenzraum 2.05	Konferenzraum 2.08
	C 8 H.-J. CHRIST	E7 I. CHOI	A7 B. KLUSEMANN	D2 C. KÜBEL	G7 D. SHERMAN	I3 A. KOSTKA	F4 H. BIERMANN
13:30	SHIOZAWA, DAIKI: Accuracy improvement of fatigue damage evaluation based on phase analysis of dissipated energy	Schneider, Gerold A. : Bio-inspired, self-assembled functionalized Fe ₃ O ₄ nanoparticles with tunable mechanical properties	LOEHNERT, STEFAN : Modelling the thermomechanical behaviour of the polycrystalline microstructure of dual phase steels during sheet bulk metal forming	VAN PETEGEM, STEVEN: In-situ micro-mechanical testing at the synchrotron	SASAKI, DAISUKE: Influences of hydrogen-affected yielding and work hardening on plastic zone evolution studied by Finite Element Method	NEUMEIER, STEFFEN: Mechanical properties and microstructures of new polycrystalline g/ g' Co-base superalloys	URBAN, DANIEL F.: Z phase strengthened steels for ultra-supercritical power plants
13:45					RITCHIE, ROB: On the fracture toughness of fcc medium- and high-entropy alloys at ambient to cryogenic temperatures	MIDLING, JAN: Investigation of the quaternary system Co-Al-W-Ta in the range of Co ₉ Al ₁₀ W ₂ Ta	ANNA HOJNA: Different mechanical behavior of MA957 ODS and Eurofer'97 steels exposed to flowing helium of 720 °C
14:00	NAKAI, YOSHIKAZU: Fatigue damage evaluation of polycrystalline alloy by diffraction contrast tomography using ultra-bright synchrotron radiation	SCHWEIZER, PETER: In situ SEM compression tests of layered crystals	METZGER, MARIO: Computational assessment of the microstructure-dependent plasticity of lamellar gray cast iron	REICHE, MATT: Optimizing Single Crystal Growth for Detector Applications using Energy-dispersive Neutron Imaging	FUJII, TOMOYUKI: Stress corrosion cracking in sensitized austenitic stainless steel type 304 under tetrathionate solution environment	KOLB, M.: Influence of rhenium on the local mechanical properties of the γ and γ' phase in cobalt-base superalloys	LUKÁCS, JÁNOS : Characterization of the weldability of different AHS steel and aluminium alloy grades using thermo-mechanical physical simulation
14:15	GRILLI, NICOLÒ: Dislocation-based modelling of low cycle fatigue in FCC single and polycrystals	SCHROER, ALMUT : Material development for high-strength nanocomposites	HERRMANN, CHRISTOPH : A Multiscale approach for thermo-mechanical simulations of loading courses in cast iron brake discs	FIFE, J.L.: Time-resolved (4D) in situ x-ray tomographic microscopy at TOMCAT: Understanding the dynamics of materials	JUNG, JINE-SUNG: Effect of post weld heat treatment on the long-term reliability of austenitic stainless steel 347H	UGLOV, VLADIMIR: Radiation stability of ZrSiN system under the Xe ions irradiation	QIU, CHUNLIN : The microstructure characterization of the HAZ and welding CCT diagram of API X100 steel
14:30	KORZECZEK, LAURENT: 3D dislocation dynamics simulation of crack shielding and blunting in FCC metals	VAN DER REST, A.: Mechanical behavior of ultrathin aluminum oxide films: Influence of open or closed porosity	GHONIEM, N.M.: Multi-physics, Multiscale Modeling of Plastic Deformation in Plasma-Facing Components	LIENERT, ULRICH: Grain and subgrain high resolution diffraction from polycrystalline bulk materials	JAMONEAU, AURÉLIE: Interaction between torsion damage and toughness anisotropy in a drawn pearlitic steel wire	ŠMÍD, MIROSLAV: Effect of casting defects on high cycle fatigue behavior of nickel-based superalloy MAR-M 247	LAN, LIANGYUN : Weldability of modern high strength bainitic steel

14:45	PETRAŠ, ROMAN: Analysis of the cyclic plastic response of materials based on the hysteresis loop shape	LIAO, MING-LIANG : Influences of vacancy defects on compressive behaviors of open-tip carbon nanocones		HOLZNER, CHRISTIAN: ADVANCED LABORATORY X-RAY MICROSCOPY: IN SITU MATERIALS CHARACTERIZATION AND DIFFRACTION CONTRAST TOMOGRAPHY		ALBIEZ, JÜRGEN: Finite Element Simulation of the creep behavior of directionally solidified NiAl-9Mo	
15:00	COFFEE BREAK						
15:30	PLENARY 7: R.O. RITCHIE, UNIVERSITY OF CALIFORNIA, BERKELEY, USA, DAMAGE TOLERANCE IN NATURAL AND BIOINSPIRED STRUCTURAL MATERIALS						
16:15	PLENARY 8: AKIHIKO KIMURA, KYOTO UNIVERSITY, JAPAN, MATERIALS INNOVATION FOR NUCLEAR ENERGY - SUPER ODS STEELS R&D						
17.15	DEPARTURE OF THE SHUTTLE BUSES TO IFFEZHEIM						
18.00	CONFERENCE DINNER IFFEZHEIM						
22.30	RETURN OF THE LAST BUSES TO KARLSRUHE						

Thursday May 14, 2015

	Hebel-Saal	Mombert-Saal	Clubraum	Forum 1	Forum 2	Konferenzraum 2.05	Konferenzraum 2.08
	C9 D. EIFLER	E8 R. PIPPAN	A8 S. LOHNERT	B7 C. NOYAN	L2 O. KRAFT	I4 S. NEUMEIER	H5 H.-C. SCHNEIDER
9:00	MATSUO, TAKASHI: The role of graphite in fatigue crack growth of ductile cast iron under the presence of internal and external hydrogen	CHOI, IN-SUK: Size Effect of Single Crystalline Noble FCC Metal Nanowires	YICHAO, ZHU : A Continuum Model for Dislocation Dynamics in Three Dimensions using the Dislocation Density Potential Functions	YOU, CHAO : Experimental and Numerical Investigation of Residual Stress Relaxation in Shot-Peened Notch Geometries under Low Cycle Fatigue	USHIJIMA, KUNIHARU: Effect of Missing Cells on the Initial Stiffness and Plastic Yielding Surface of Three-Dimensional Micro-Lattice Structures	KOSTKA, ALEKSANDER: On the nucleation of Mo-rich Laves phase particles in 12% Cr tempered martensite ferritic steels	YONG, DAI: Positron annihilation research on ferritic/martensitic steels irradiated under mixed spectrum of high energy protons and spallation neutrons

9:15	FUKUDOME, SHUTO: Shear mode crack propagation along with plastic flow of small area			Low-Cycle Fatigue	BAUER, JENS: High-strength microarchitected cellular materials: The interplay of design and size-dependent strengthening		CHAKIN, V.: Loss of strength and embrittlement of neutron irradiated beryllium
9:30	CHITTA, SHIVA KUMAR: Continuum Damage Mechanics Approach For Fatigue Crack Initiation Life Prediction	NIEKIEL, FLORIAN: Mechanical Behavior of Fivefold Twinned Nanowires understood from Anisotropic Elasticity	STEINBERGER, DOMINIK : A Minimalistic Continuum Approach to Formation of Dislocation Patterns Under Multislip Conditions	SALEH, MICHAEL: Analysis of compositionally ungraded FGM analogues: Neutron diffraction measurements of residual stress and mechanical testing of pressure sintered Mo-Y2O3 and Mo-Al2O3 systems.	SCHNEIDER, GEROLD A. : SELF-ASSEMBLED ULTRA HIGH STRENGTH, ULTRA STIFF MECHANICAL METAMATERIALS BASED ON INVERSE OPALS	REHMAN, HAMAD UR: Temperature dependent solid solution strengthening of Nickel by transition metal solutes.	STIHL, CHRISTOPHER: Modeling Hydrogen Ad- and Desorption on Beryllium-(0001)-Surface
9:45	HAMANO, YASUAKI: Generalized critical fatigue crack length for transition from microstructure-driven to mechanics-driven propagation	KOBLER, AARON: Mechanical properties of nano-twinned Ag wires	Verbeke, Vanessa: Orientation Dependence of the Forest Strengthening Studied with Dislocation Dynamics Simulations	GOU, GUOQING: The distribution laws of residual stress of high speed trains by statistical method	STEIN, NICOLAS: An efficient analysis model for the stresses in arbitrary adhesive lap joints with flat laminated adherends	YOSHIDA, KIMIAKI: Effect of the Stress Multi-Axiality on the Creep Damage in Fine Grained HAZ of Mod. 9Cr-1Mo Steels	SRIVASTAVA, K.: Dislocation microstructure evolution in tungsten due to indentation loading simulated by discrete dislocation dynamics
10:00	ONISHI, YOUSUKE: Fatigue crack growth characteristic under hydrogen atmosphere in an ultra-low frequency region in Low Carbon and Interstitial Free Steels	ENSSLER, CHARLOTTE : Influence of artificial defects on the mechanical behavior of Au nanowires	SANDFELD, STEFAN: Formation of Persistent Dislocation Patterns in the Similitude Regime	ORTNER, BALDER: How to depict measured data and results in the matrix method	BENHADDOU, TAHA: Optimization of fatigue behavior of metallic shear joints	SEILS SASCHA: Thermal stability of ferritic and austenitic nanocluster containing ODS steels	LENOIR, GILLES: Characterization and modelling of the mechanical behaviour of Nb3Sn
10:15	MAZÁNOVÁ, VERONIKA: Short crack growth kinetics in heat resistant austenitic stainless steel Sanicro 25	BHOWMICK, SANJIT : In-Situ Electromechanical Properties of ZnO Nanowires	MAYER, ALEXANDER: Structural model of dislocation plasticity and twinning for high-rate deformation of metals	LYUBENOVA, NATALIYA: Finite Element modeling and investigation of the process parameters in Deep Rolling of a plane geometry	SINGH, GAURAV : MICROSTRUCTURE EVOLUTION AND DEFORMATION TEXTURE DURING ROLLING OF TIMETAL407	KUMAR, AMRITESH: Microstructure and micromechanics of directionally solidified eutectic alloys	LIU, DONG: Characterisation and modelling of nuclear graphite : from micrometres to metres
10:30	COFFEE BREAK						

	C 10 T. BECK		A9 K. SCHULZ		X2 O. KRAFT	I5 M. HEILMAIER	
11:00	OKAZAKI, SABURO: Application of parameter for estimation of threshold stress intensity factor range ΔK_{th} of small shear-mode cracks		KAPETANOOU, OLGA: Stress and Strain Fluctuations in Plastic Deformation of Crystals with Disordered Microstructure		GREISH, Y. E.: Preparation and Characterization of Neat and Thermally-treated Silicon Carbide Fibers-reinforced Gypsum Cements	BONK, SIMON: Tungsten (W) laminate pipes made of ultrafine-grained (UFG) W foil	
11:15	JIANG, JUN: Fatigue crack initiation near inclusions in Ni superalloys - a SEM based study with high resolution EBSD		CASTELLANOS, DAVID FERNANDEZ: Strain localization and surface effects in 2D and 3D stochastic models of amorphous plasticity		UEHARA, TAKUYA: Phase-field modeling for microstructure formation of metal foam materials	KUTELIA, ELGUJA: Internal Friction and Shear Modulus Temperature Dependence of 9%Cr Ferritic Steel P92 in 25 \div 750 °C Temperature Range	
11:30	NAKANISHI, SHIO: Non-destructive evaluation of multiple-site small cracks in high-temperature low cycle fatigue of an austenitic stainless steel by using multipoint probe DC potential difference measuring system		HEMMESI, KIMIYA: Numerical investigation of welding residual stress field in tubular joints considering the effects of solid-state phase transformation		GREISH, YASER E.: Fiber-reinforced Calcium Sulfate Bone Cement Composites with Enhanced Bioactivity, Mechanical Properties and Controlled Biodegradability	NAKAMURA, KYOKO: Bayesian approach to determine optimum inspection intervals for structural components of high temperature materials subjected to creep	
11:45	IZUMI, YUI: Crack detection by sonic-IR method using ultrasonic wave input through water		DREXLER, ANDREAS: The influence of GP and GDP precipitates on the viscoplastic material behaviour of Inconel 718		KHOSHGOFTAR, MOHAMMAD JAVAD: Mixed Elastic Variational Formulation of Composite Plates Based on Dimension Reduction Method	KRUEGER, ANTJE: Microstructural study on the intermetallic compound NiAl-Cr	
12:00	HOSSEINI-TOUDESHPY, H.: Low-cycle fatigue Simulation in micro-scale to obtain fatigue behavior of bimodal AL alloys		RAJENDRAN, A.M.: A representative volume element based multiscale modeling of fish scale		EL-ASFOURY, MOHAMED S.: Effect of Friction on Material Mechanical Behaviour in Non-equal Channel Multi Angular Extrusion (NECMAE)	BRITO, PEDRO: The crystallographic template effect preceding the formation of stable α -Al ₂ O ₃ during low temperature oxidation of Fe-Al alloys	

12:15	MORIN, GUILLAUME: Fatigue of automotive engine cylinder heads - A new model based on crack propagation and microstructure interaction		AOYAGI, YOSHITERU: Multiscale crystal plasticity simulation on anisotropic yielding behavior of ultrafine-grained metal				
12:30	CLOSING						