

TENTATIVE PROGRAM: ICPDF 2023, Punta Cana, Dominican Rep., Jan. 3-9

Rev. 10, January 5, 2023

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Before you go to the airport, fill out this form for entry to Punta Cana/DR, using the website below. It is required and serves as immigration/customs/ form, otherwise your airline will make you to fill it at the airport before departure
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Please note that the program is going to change but within your initial hotel reservation dates. If you change your hotel reservation, then make sure that you inform us immediately as we cannot track all reservations. If your paper is missing, or is assigned to a wrong session, or assigned a wrong presentation time duration, then please send an E-mail to khan@internationalplasticity.com & j.yoon@kaist.ac.kr, and it will be promptly corrected.

Your name, affiliation and country is listed in this file after the technical program. We will use this to print your nametag. Please report any problem before December 22, 2022, or as soon as you see it, so that your nametag is corrected before it is printed otherwise you may have a hand-written nametag as we will not have a color nametag printing facility at the conf. Chinese colleagues, please note that your family name should be the last name.

If there is a vegetarian in your party and you did not input it in the registration form, then send us an E-mail as soon as possible; if you fail to inform us then you cannot expect a special meal.

If you need the receipt for your registration fee, kindly send an E-mail to khan@internationalplasticity.com & j.yoon@kaist.ac.kr, NOW, we do not make receipt for every one as usually about 60% do not need/pick up the receipt. We will sent receipts to most of colleagues who have requested a receipt before the conference. If you do not request the receipt via an e-mail, we will assume that you do not need one. Please ask/pick up receipts only after Jan. 4 at the registration desk as registration desk is very busy Jan 3 & 4.

Early departure from your initial reservation is not allowed, you will be charged for all nights/days reserved. Please note that if your stay is less than 4 nights, then there is an additional charge in the registration fee (see registration form) as we discourage short participation in the conference.

We use the front pages of this program for announcements, thus please keep checking it frequently, possibly every other day.

For airport transfers, if you wish, please contact “ Vacaciones Barceló” using the link below:
<https://www.vacacionesbarcelo.com/transfer/dominican-republic/punta-cana/international-plasticity-desde-aeropuerto-punta-cana-a-hotel-barcelo-bavaro-palace-ida-vuelta-1671140384>

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We are requesting some colleagues to Chair sessions by putting their names on the program as Chair. If you cannot accept our invitation, then please inform us and we will change it. Chairs are requested to bring their laptops/tablets with USB input for session that you are chairing, as per our experience, it is most efficient as you know how to handle your own laptop if there is a problem. If you are unable to bring your own, you can borrow from one of the attendees in the same session for the reason above; there will be laptop available in the registration room for your use in the session if either of the above two options will not work for you. However, if you are not bringing your own laptop, then let us know and it will be safer for us to change the requested chairing responsibility.

Please print the program just before your departure to Punta Cana, but after December 30 as the program will keep changing until then, and even after that due to cancellation or missed flights. The conference will not provide hard copies; you can download it on your smart phone/ipad/laptop/tablet from our website. Hard copies are becoming obsolete these days with widespread use of electronic devices.

Please arrange health, travel or any other insurance that you may need as the conference does not carry any insurance on your behalf. Barcelo Bavaro Palace is a high category property, but you should observe normal safety precautions (not leave smart phone, ipad or laptop unattended; an electronic safe is in the rooms) and follow normal health precautions for travelling to a tropical resort, as well as observe prudent precautions against COVID (wear mask in the plane and in closed areas at the resort, not shaking hands & washing hands frequently). This resort has at least 7 fine dining restaurants and two buffet restaurants (one for local cuisine and another for international cuisine, both with large outside seating facing pools & the beach; also 3-4 restaurants have outside seating as well), please make reservations in the fine dining restaurants as soon as you reach there or even before you travel as they may get full. I understand the buffet restaurants have a lot of choices. In addition to these, there is a shopping center within the hotel complex, a train service (train looking trolley which stops about every 20 minutes at different point of interests), theatre etc.

You can download the Proceedings/Abstracts by clicking on the arrow below:



[ICPDF Proceedings 2023.zip 13MB](#)

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Tuesday, January 3, 2023

Registration 8:00 AM-6:00 PMRoom (Ibiza 4)

	TuA-1 (14:30-16:40)	TuA -2 (14:30-16:55)
	<i>Deformation Mechanisms in Hexagonal Metals I</i> (Room: Ibiza 1)	<i>Material Transformations and Plasticity I</i> (Room: Ibiza 2)
	** <i>Hiromi Miura & Jean-Sébastien Lecomte</i> ++	** <i>Valery I. Levitas</i> ++ & <i>Timothy Officer</i>
14:30 ~ 15:10	*** <u>Irene J. Beverlein</u> “Temperature-dependent motion of discrete dislocations in HCP materials”	*** <u>Valery I. Levitas</u> “Plasticity, strain-induced phase transformations, and microstructure evolution at high pressure”
15:10 ~ 15:40	* Qian Wang, <u>Jean-Sébastien Lecomte</u> , Christophe Schuman “Crystallographic analysis of hydride phase transformation and its effect on mechanical property of commercial pure Titanium”	* <u>Nobumichi Tamura</u> , Martin Kunz, Dilworth W. Parkinson “Studies of microstructure and mechanical properties under large deformation at the advanced light source”
15:40 ~ 16:10	* <u>Jian Wang</u> “Disconnection, disclination, step and facet associated with twinning in metals and minerals”	* <u>Timothy Officer</u> , Man Xu, Tony Yu, Amanda M. Dillman, David L. Kohlstedt, Zhongwen Zhan, Lupei Zhu, Yanbin Wang “From the LAB to the SLAB: transformational faulting at high pressure and temperature in Fe-Rich Olivine ($Mg_{0.25}, Fe_{0.75}$) ₂ SiO ₄ and implications for deep-focus earthquakes”
16:10 ~ 16:25	* <u>Hiromi Miura</u> , Chihiro Watanabe, Yoshiteru Aoyagi, Yojiro Oba, Masakazu Kobayashi “Microstructure and mechanical properties of heterogeneous-nanostructured austenitic stainless steel fabricated by heavy cold rolling”	+ <u>Andreas Prahs</u> , Lukas Schöller, Daniel Schneider, Britta Nestler “On crystal plasticity in a multi-phase field context”
16:25 ~ 16:40		* <u>Leonid Burakovskiy</u> , Darby J Luscher, Dean L Preston, Sky K Sjue “A model of the thermoelasticity of a multi-phase material”
16:40 ~ 16:55		

*** 40 minutes Semi-Plenary Lecture * 30 minutes keynote lecture, + 15 minutes invited presentation ** Chairs ++ Symposium Organizer

18:30 WELCOME RECEPTION/DINNER (Room: Mallorca)

Wednesday, Jan. 4, 2023

Registration 8:00 AM-5:30 PMRoom (Ibiza 4)

	WM-1 (8:30-10:40)	WM-2 (8:30-10:40)
	<i>Material Transformations and Plasticity II (Room: Ibiza 1)</i>	<i>Additive Manufacturing (Room: Ibiza 2)</i>
	** <u>Ying Li & Arun Devaraj</u>	** <u>Mohsen Mohammadi & Somayeh Pasebani</u>
8:30 ~ 9:10	*** Manish Vasoyal, <u>Dimitris C. Lagoudas</u> <i>"Investigation of size effects on the constitutive response of shape memory alloys using a mesoscale framework"</i>	*** <u>Hyoung Seop Kim</u> <i>"Constitutive modeling of cellular-structured metals produced by additive manufacturing for heterogeneous architected materials"</i>
9:10 ~ 9:40	* <u>Choong-Shik Yoo</u> , Minseob Kim, Alex Howard, and Sohan Ahmed <i>"Dynamic phase behavior of simple molecule under rapid pressure loading"</i>	* Jakub C. Preis, Milad Ghayoor, <u>Somayeh Pasebani</u> <i>"Multi-material and hybrid additive manufacturing toward manufacturing for design"</i>
9:40 ~ 10:10	* <u>Arun Devaraj</u> , Tingkun Liu, Changyong Park, Stanislav Sinogeikin <i>"Revealing the microstructural evolution mechanisms of metallic alloys during extreme shear deformation using high speed rotational diamond anvil cell and multimodal characterization and computational simulations"</i>	* Parisa Moazzen, <u>Mohsen Mohammadi</u> <i>"Microstructure control in stainless steel 316L: effects of energy inputs and scan strategy using additive manufacturing process parameters"</i>
10:10 ~ 10:25	+ <u>Zach D. Brunson</u> , Adam L. Pilchak, Satish Rao, Eric J. Payton, Aaron P. Stebner <i>"Martensite variant selection under applied stress: Accounting for transformation rotation & strain with a method for handling variant clusters"</i>	* <u>Christopher Newman</u> , Supriyo Ghosh, Marianne Francois
10:25 ~ 10:40	+ <u>Ying Li</u> , Zhongyuan Li, Jinlong He, Nikhil Tiwale, Keith J. Dusoe, Chang-Yong Nam, Seok-Woo Lee <i>"Quantitative insight into the ultrahigh modulus of resilience of core-shell su-8 nanocomposite fabricated by sequential infiltration synthesis"</i>	<i>"An implicit approach to phase field modeling of solidification for additively manufactured alloys"</i>

COFFEE/TEA (ROOM: MALLORCA)

	WM-5 (11:00-13:30)	WM-6 (11:00-13:15)	WM-7 (11:00-13:30)
	High/Medium Entropy Alloys (Room: Ibiza 1)	Characterization and Modeling of Plasticity of Metallic Alloys I (Room: Ibiza 2)	Metal Forming, Metal Design & Formability of Sheet Metals (Room: Menorca)
	**Jian Wang ++ & Nan Li	**Gabriela Vincze & Francisco Andrade Pires	** Jean-Philippe Ponthot & David Fullwood
11:00 ~ 11:30	* Diana Farkas “Multiscale simulations of mechanical properties of high entropy alloys”	* P. Hosemann , C. Peddeti, H. Tin, D. Frazer, A. Dong, J. Bickel “Materials property changes after irradiation evaluated using small scale mechanical testing”	* David T. Fullwood , Marko Knezevic, Michael P. Miles, Dane Sargeant, Rishabh Sharma, Zahidul Sarkar, Sowmya Daroju, Russell Marki “GNDs and springback in automotive-grade Aluminum: A combined HREBSD and strain-gradient-modeling study”
11:30 ~ 12:00	* D. C. Chrzan , E. Rothchild, S. Li, D. Jany, M. Poschmann, I. Winter, M. Asta “temperature and solute dependent core structures of (a)-type screw dislocations in HCP metals”	* Gang Lu “QM/MM modeling for mechanical properties of metals”	* Youngung Jeong , Bohye Jeon, Jaeseong Lee, Shin-Yeong Lee, Frédéric Barlat, Carlos N. Tomé “Self-consistent polycrystal finite element model for springback analysis”
12:00 ~ 12:30	* R.S. Haridas, P. Agrawal, A. Dahl, R.S. Mishra “Deformation induced transformation: revisiting burgers triangle with metastability engineered alloys”	* Gabriela Vincze , Marilena C. Butuc, Augusto Lopes “Effect of large plastic deformation and strain path changes on mechanical behaviour of aluminum alloys”	* Jean-Philippe Ponthot , Yannick Crutzen, Romain Boman, Michael Bruyneel, Myriam Delhomme, Malika Perrier, Anaïs Guyon “Application of the ALE formalism for modelling the cold drawing process of high-precision tubes”
12:30 ~ 12:45	+ Zhen Li , Liangchi Zhang “Mechanical property and microstructural evolutions of COCRFEMNNI high entropy alloy induced by cyclic-ultrasonic loading”	* Francisco M. Andrade Pires , Miguel V. Carvalho, Rui P. C. Coelho, Igor A. Rodrigues Lopes “Multiscale modeling of deformation and fracture of transformation induced plasticity alloys”	* David S. Wilkinson , Jidong Kang, Concetta Pelligra, Nizia Mendes Fonseca “The development of advanced high strength steels with excellent ductility through microstructural optimization”
12:45 ~ 13:00	+ Yao Shen , Hanxuan Mo, Guisen Liu, Jian Wang “Development of coupled crystal plasticity finite element method - phase field model and its applications in hexagonal metals”		
13:00 ~ 13:15	* Nan Li , Dongyue Xie, Muh-Chang Chen, Mohammed Zikry, Darby Luscher, Abigail Hunter, Saryu Fensin “In situ pillar compression in a SEM to understand dislocation-grain boundary interactions in CU”	+ William J. Lavie , James P. Rouse, Christopher J. Hyde “The use of small ring specimens in the study of thermodynamically-based plasticity”	* K.G. Prashanth “Selective laser melting of Cu–Ni–Sn: A comprehensive study on the microstructure, mechanical properties, and deformation behavior”
13:15 ~ 13:30			

	WA-1 (14:30-16:45)	WA-2 (14:30-16:45)	WA-3 (14:30-17:00)
	<i>Metal Forming, Metal Design & Formability of Sheet Metals (Room: Ibiza 1)</i>	<i>Plasticity & Damage in Geomaterials (Room: Ibiza 2)</i>	<i>Plasticity in Reactive and Unreactive Materials under Shock and Extreme Conditions I (Room: Menorca)</i>
	** Christian C. Roth & Zhi Deng	** David Littlefield & Hosni Idrissi	** Catalin Picu ++ & Vikas Tomar
14:30 ~ 15:00	* Zhi Deng , Raj Dasu, Cliff Butcher, Michael Worswick “Challenges in FLC applications to maximize aluminum stamping feasibility”	* Marte Gutierrez , Shuqi Ma “Thermodynamically consistent coupled plasticity-damage model for shales”	* Vikas Tomar , Tyler Dillard, Andrew Ehler, Abhijeet Dhiman “Dynamic stress evaluation due to hypervelocity impact using nanosecond mechanical Raman spectroscopy”
15:00 ~ 15:30	* Lemeng Zhang, Saksham Dhawan, Wenbin Zhou, LiLiang Wang “Development of a unified viscoplastic model for an Al-Mg-Si alloy undergoing ultra-fast thermo-mechanical processing”	* Hosni Idrissi , Patrick Cordier “Stress induced amorphization in olivine investigated by ex-situ and in-situ TEM nano-mechanical testing”	* Tommy Sewell , Pratik Das, Dilki Perera, Yenthi T. Nguyen, Puhao Zhao, Oishik Sen, H. S. Udaykumar “Tandem molecular dynamics and continuum simulations of shock-induced pore collapse in β -HMX: Getting right answers for correct reasons”
15:30 ~ 16:00	* Xiaodan Zhang “Tailor morphology, size and volume fraction of cementite for improvement of steels’ properties through thermomechanical or thermochemical processes”	* Nima Rahbar “An enzymatic self-healing mechanism for negative emission structural material”	* Catalin R. Picu , Mohammad Khan, Zhaocheng Zhang “Plasticity in molecular crystal HMX: Physical aspects and constitutive modeling”
16:00 ~ 16:30	* Zhusheng Shi , Xi Wang, Jianguo Lin “Experimental studies and constitutive modelling for creep age forming of aluminium alloys”	* David L. Littlefield , Gerald Pekmezi “A Mesoscale-based Computational Framework for Constitutive Characterization of Particulate Media”	* Santanu Chaudhuri , Janki B. Brahmabhatt, Xavier Bidault “Coupled Effects of Orientation, Plasticity, and Surface Free Energy in Energetic Molecular Crystals”
16:30 ~ 16:45	+ Anna Jarzebska , Robert Chulist, Karol Janus, Magdalena Wróbel, Daniel Wojtas, Łukasz Maj, Magdalena Bieda, Jakub Kwałko, Sylwia Przybysz, Jacek Skiba “Comprehensive study of mechanical behavior of bioabsorbable zinc alloys after hydrostatic extrusion preceded by hot extrusion”	+ Hesam Askari , Peter Miklavčič, Mokin Lee, Ethan Tokar “The unified behavior of low-velocity oblique impact into granular materials”	* Vasant S. Joshi , Frank J. Zerilli “Statistical crack mechanics applied to TNT and COMP-B”
16:45 ~ 17:00			

*** 40 minutes Semi-Plenary Lecture * 30 minutes keynote lecture, + 15 minutes invited presentation ** Chairs ++ Symposium Organizer

Thursday, January 5, 2020

Registration 8:00 AM-5:00 PM(Ibiza 4)

	ThM-1 (8:30-10:45)	ThM-2 (8:30-10:30)	ThM-3 (8:30-10:45)
	<i>Plasticity at High Strain Rate and Temperature I (Room: Ibiza 1)</i>	<i>Interfaces and their Roles in Plasticity, Damage, and Fracture I (Room: Ibiza 2)</i>	<i>Characterization and Modeling of Materials for Advanced Manufacturing I (Room: Menorca)</i>
	** Elżbieta Pieczyska & Michael J Cox	** Ryan Sills ++ & Michael Chandross	** David Anderson ++ & Brad Kinsey
8:30 ~ 9:00	* Michael J Cox , Robert. M. Quinn, Longhui H Zhang, David. Townsend, Timothy Cartwright, Giles Aldrich-Smith, Paul A. Hooper, John P Dear “Development and validation of a new hopkinson bar for testing hazardous materials”	* Jeffrey M. Rickman “Interfacial phenomena: phase transitions and mechanical properties”	* Tudor Piroteala, Richard Newton, Akshay Kulkarni, Sebastijan Jurendic, David Anderson “Development of high strength 7xxx aluminum alloys for automotive applications”
9:00 ~ 9:30	* Henryk Paul , Robert Chulist, Izabela Mania “Shear banding in copper and Cu-8%at.Al alloy single crystals of {112}<111> and {123}<634> initial orientations deformed at high strain rates”	* Ryan B. Sills , Nipal Deka, David Gordon “Stability and energy of line defects in interfaces and boundaries”	* Wen J. Meng , Xiaoman Zhang, Reza Namakian, Dorel Moldovan “Probing failure of metal/ceramic interfaces: A combined experimentation–simulation study”
9:30 ~ 9:45	* Elżbieta A. Pieczyska , Katarzyna Kowalczyk-Gajewska, Maria Staszczak, Karol Golasinski, Judyta Sienkiewicz, Jacek Janiszewski “Mechanical behavior and the related temperature changes investigated for β Ti alloy - GUM metal during loading in wide range of the strain rates”	+ Frank W. DelRio , Filippo Mangolini, David P. Adams, Ping Lu, Tomas F. Babuska, John F. Curry “Friction and wear of nanocrystalline Platinum-Gold alloys”	+ Abrar Ebrahim, Qi Zhang, Brad L. Kinsey , Jinjin Ha “Artificial neural network for advanced anisotropic yield criterion parameters prediction for commercially pure titanium”
9:45 ~ 10:00		+ Michael Chandross , Nicolas Argibay “Low friction in metallic contacts via grain boundary sliding”	+ Yong Hou , Myoung-Gyu Lee, Jianping Lin, Junying Min “Experimental characterization of complex anisotropic hardening in Quenching and Partitioning (Q&P) steel subject to biaxial non-proportional loadings”
10:00 ~ 10:15		+ Xiaowang Zhou , Michael E. Foster, Ryan B. Sills “Molecular dynamics studies of helium bubble effects on grain boundary fracture vulnerabilities in an Fe70Ni11CR19-1%W austenitic stainless steel”	* Zhutian Xu , Lei Sun, Linfa Peng, Xinmin Lai, Ming Wang Fu
10:15 ~ 10:30	“Bayesian calibration of a viscoplasticity model”	+ Eric R Homer , Akarsh Verma, Darcey Britton, Jarod Robinson, Oliver K Johnson, Gregory Thompson, Shigenobu Ogata “Non-arrhenius grain boundary migration explained by classical thermally activated mechanisms”	“ICPDF '23 – Fracture size effect of foils affected by the geometry-grain sizes and their modeling”
10:30 ~ 10:45	+ Christian C. Roth , Vincent Grolleau, Dirk Mohr “Static and dynamic in-plane torsion testing of sheet metal”		+ Xuefeng Tang , Zhizhou Wang, Xinyun Wang, Lei Deng, Mao Zhang, Pan Gong, Junsong Jin, M.W. Fu “Study of the size-dependent plastic heterogeneity and asymmetry during micro-forming of α -titanium using strain gradient crystal plasticity model”

COFFEE/TEA

(Room: Mallorca)

	ThM-5 (11:00-13:30)	ThM-6 (11:00-13:30)	ThM-7 (11:00-13:30)
	Crystal Plasticity (Room: Ibiza 1)	High Strain-rate Phenomena, Dynamic Fracture and Fragmentation I (Room: Ibiza 2)	Shape Memory Alloys, Polymers, & Composites (Room: Menorca)
	**Tomáš Mánik & Yoshiteru Aoyagi	** Justin Wilkerson ++ & Ankit Srivastava ++	** Sandra Klinge & Oscar Lopez-Pamies
11:00 ~ 11:30	* Bjørn Holmedal , Baptiste Reyne, Tomáš Mánik “A minimum-spin tensor with no rotations during simple shear”	* Stefan Offermanns , Stefan Weihe “Deformation and failure of ductile piping subject to gaseous detonation loads”	* Oscar Lopez-Pamies , Bhavesh Shrimali “A complete phase-field theory for the nucleation and propagation of fracture in viscoelastic elastomers”
11:30 ~ 12:00	* Yoshiteru Aoyagi “Crystal plasticity modeling on martensitic transformation induced plasticity based on lattice deformation”	* Ankit Srivastava , Zahra Ghasemi, J.A. Rodríguez-Martínez, Tiago dos Santos “Dynamic indentation and strain-rate sensitivity of materials”	* Emrah Demirci , Yavaşween Hewavidana, Andy Gleadall, Behnam Pourdeyhimi, Vadim V. Silberschmidt “Modelling of nonwoven fibrous materials: orientation distribution function and fiber crimp”
12:00 ~ 12:30	* Tomáš Mánik , Hassan M. Asadkandi, Baptiste Reyne and Bjørn Holmedal “Open, efficient and robust implicit implementations of crystal and continuum plasticity models in FEM”	* Dan Mordehai , Roman Kositski, Natan Karaev “Multiscale model of shock induced plasticity in tantalum”	* Rui Xiao “A mean-field shear transformation zone theory”
12:30 ~ 12:45	* Yu Zou “Pobbing small-scale plasticity and fracture in high-entropy alloys and quasicrystals”	* Justin W. Wilkerson , Thao Nguyen, D.J. Luscher “High-fidelity and reduced-order models of intergranular spall failure”	+ Sandra Klinge , Serhat Aygün “Thermomechanical model for strain-induced crystallization in polymers”
12:45 ~ 13:00			+ Junyong Park , Jeong Whan Yoon “Damage mechanics Considering strength differential (SD) effect for particle reinforced metal matrix composite”
13:00 ~ 13:15	+ Hassan M. Asadkandi , Tomáš Mánik, Bjørn Holmedal “Open-source implementations and comparison of explicit crystal-plasticity fem”	+ J.C. Nieto-Fuentes , N. Jacques, T. Virazels, J.A. Rodríguez-Martínez “Localization and fracture of radially-expanded metallic rings via single-stage gas gun impact tests”	
13:15 ~ 13:30	+ Baptiste Reyne , Tomáš Mánik, Bjørn Holmedal “Open-source implementation of advanced continuum distortional plasticity models”	+ A. R. Vishnu , M. Marvi-Mashhadi, J. C. Nieto-Fuentes and J. A. Rodríguez-Martínez “New insights into the role of porous microstructure on dynamic shear localization”	

	ThA-1 (14:30-16:55)	ThA-2 (14:30-17:10)
	<i>Cyclic Plasticity, Deformation Mechanisms & Microstructure Evolution (Room: Ibiza 1)</i>	<i>Deformation Mechanisms in Hexagonal Metals II (Room: Ibiza 2)</i>
	**Hyung-Jun Chang & Zbigniew Kowalewski	** Yudong Zhang++ & Jay Carroll
14:30 ~ 15:10	*** Solon Tsimpoukis, Stelios Kyriakides “Spatiotemporal evolution of localized deformation in NiTi tubes cycled thermally under constant stress”	*** Carlos N. Tomé , Youngung Jeong “Elasto-visco-plastic modeling of thermal ratcheting in uranium”
15:10 ~ 15:40	* Zbigniew L. Kowalewski , Mateusz Kopec, Adam Brodecki “Suitability of modern optical methods and standard nondestructive techniques in monitoring of damage due to static or cyclic loadings”	* Jay D Carroll , Zachary Casias, Christopher M. Laursen, Philip Noell “Fatigue behavior of additively manufactured Ti-5553”
15:40 ~ 16:10	* Hyung-Jun Chang , Vikram Phalke, Tonya Rose, Serge Kruch, Samuel Forest “Investigations of very high cycle fatigue behavior and stored energy prediction by using dislocation dynamics theory”	* Yudong Zhang , Fengming Qiang, Emmanuel Bouzy, Hongchao Kou, Jinshan Li “Grain fragmentation mechanisms of a phase in tmn tial alloy during uniaxial isothermal compression”
16:10 ~ 16:25	+ Lorenzo Romanelli , Ciro Santus, Tommaso Grossi, Matteo Pedranz, Matteo Benedetti “Efficient procedure for the identification of the Chaboche isotropic-kinematic hardening model parameters”	* Stephane Godet , Odeline Dumas, Loic Malet, Frederic Prima “Reorientation Induced Plasticity (RIP) in high-strength titanium alloys: An insight into underlying mechanisms and resulting mechanical properties”
16:25 ~ 16:40	+ Yang He , Liangchi Zhang “An investigation into the deformation mechanism of AFM Si tip under cyclic impact loading”	
16:40 ~ 16:55	+ Donghwan Noh , Hyunsung Choi, Jeong Whan Yoon “Application of the reduced texture approach to predict plastic anisotropy, reverse loading, and fracture”	+ Sean Agnew , Michael A. Ritzo “Effect of climb-accommodated flow in the crystal plasticity modeling of forming limits : Application to HCP Mg alloys”
16:55 ~ 17:10		+ Ricardo Henrique Buzolin , Franz Miller Branco Ferraz, Michael Lasnik, Alfred Krumphals, Maria Cecilia Poletti “A dislocation-based model for the microstructure evolution and the flow stress of near-β titanium alloys”

*** 40 minutes Semi-Plenary Lecture * 30 minutes keynote lecture, + 15 minutes invited presentation ** Chairs ++ Symposium Organizer

Friday, January 6, 2023

Registration 8:00 AM-5:00 PMRoom (Ibiza 4)

	FM-1 (8:30-10:30)	FM-2 (8:30-10:15)	FM-3 (8:30-10:30)
	<i>Multiscale Plasticity in Extreme Environments (Room: Ibiza 1)</i>	<i>Linkages Between Condensed Matter Physics and Plasticity (Room: Ibiza 2)</i>	<i>Effects of Hydrogen & Measurements at Different Length Scales and Corrosion of Superalloy (Room: Menorca)</i>
	** <i>Giacomo Po ++ & Alexander Kauffmann</i>	** <i>Curt Bronkhorst ++& Sean Agnew ++</i>	** <i>J C Stinville & Ramathanan Thevamaran</i>
8:30 ~ 9:00	* <u>Victor L. Berdichevsky</u> "Thermodynamics of dislocation plasticity"	* <u>Avinash M. Dongare</u> , Sergey Galitskiy, Ke Ma "Modeling plasticity contributions in BCC metal microstructures at the mesoscales"	* <u>Robert Hull</u> , Prachi Pragnya, Jeriah Bankson "Real-time nanoscale measurements of corrosion of inconel-625 alloys by in-situ transmission electron microscopy"
9:00 ~ 9:30	* <u>Giacomo Po</u> , Yue Huang, Yang Li, Kristopher Baker, Benjamin Ramirez Flores, Thomas Black, James Hollenbeck, Nasr Ghoniem "A model of thermal creep and annealing in finite domains based on coupled dislocation climb and vacancy diffusion"	* <u>Mingda Li</u> "Interfacial and bulk defect resolution using ultrafast diffraction and scientific machine"	* <u>Abdelali Oudriss</u> , Siva Murugan, Marie. Landeiro Dos Reis, Jamaa Bouhattate, Xavier Feaugas "The consequences of dislocations patterns, long/short range internal stresses, and vacancies on the hydrogen diffusion and trapping in nickel single crystal"
9:30 ~ 10:00	* <u>Alexander Kauffmann</u> , Daniel Schliephake, Susanne Obert, Aditya Tirunilai, Frauke Hinrichs, Georg Winkens, Huichao Wu, Hemanth Thota, Yolita Eggeler, Frank Mücklich, Michael Engstler, Bronislava Gorr, Martin Heilmaier "Mechanical response of pesting-resistant Mo-Si-Ti alloys for high temperature applications"	* <u>Curt A. Bronkhorst</u> , Tao Jin, Charles K. C. Lieou, Jack Rees "Structural and thermodynamic representation of adiabatic shear banding"	* <u>J.C. Stinville</u> , M.A. Charpagne, D. Texier, V. Valle "Deformation slip and twinning at cryogenic temperatures by high-resolution digital image correlation" (Moved to SuA-2 on Jan.8)
10:00 ~ 10:15	* <u>Yinan Cui</u> , Changqiu Ji, Yang Li, Nasr Ghoniem "A concurrent irradiation-mechanics multiscale coupling model"	+ <u>Sean R. Agnew</u> , Daniel J. Savage, Miroslav Zecevic, Ricardo A. Lebensohn, Carlos N. Tome, Donald W. Brown "In-situ X-ray and neutron diffraction-based calibration of physics-based constitutive models of the shape memory effect"	* <u>Ramathanan Thevamaran</u> , Claire Griesbach, Jizhe Cai "Synergistic improvement of mechanical properties of metals through impact-induced nanostructural evolutions"
10:15 ~ 10:30			(Moved to SaM-6 on Jan.7)

COFFEE/TEA

(Room: Mallorca)

	FM-6 (11:00-13:40)	FM-7 (11:00-13:40)
	<i>Mechanics of Soft Materials from Plasticity, Damage, Fracture, and Failure (Room: Ibiza 1)</i>	<i>Advances in Understanding Deformation of Materials in honor of Huseyin Sehitoglu I (Room: Ibiza 2)</i>
	** <i>Stephan Rudykh</i> ++ & <i>Mikhail Itskov</i> ++	** <i>Bin Li</i> ++ & <i>Stéphane Berbenni</i>
11:00 ~ 11:40	*** <u>John L. Bassani</u> “Toughness of hydrogels”	*** <u>H. Sehitoglu</u> , O. K. Celebi, A. S. K. Mohammed “A theory for prediction of Critical Resolved Shear Stress (CRSS) for metallic materials”
11:40 ~ 12:10	* <u>Konstantin Volokh</u> “Material-sink approach to modelling fracture of soft materials”	* <u>Stéphane Berbenni</u> “A FFT-based method to compute the mechanical fields of interfacial defects: application to martensitic transformations”
12:10 ~ 12:40	* <u>Stephan Rudykh</u> “Magnetomechanical deformations and instability-induced microstructure transformation in soft magnetoactive materials”	* Boyu Liu, Zhen Zhang, Fei Liu, <u>Bin Li</u> , Zhiwei Shan “Lattice transformation in deformation graining of single crystal magnesium under c-axis compression”
12:40 ~ 12:55	* <u>Vadim V. Silberschmidt</u> , Shirsha Bose, Simin Li, Elisa Mele “Deformation and fracture of collagen”	+ <u>Sidharth Ravi</u> , Huseyin Sehitoglu “Nanoscale origins of functional fatigue in shape memory alloys”
12:55 ~ 13:10		+ <u>Orcun K. Celebi</u> , Daegun You, Ahmed Sameer K. Mohammed, Huseyin Sehitoglu “Critical stress prediction for high entropy alloys upon accurate dislocation core description”
13:10 ~ 13:25	* <u>Mikhail Itskov</u> , Khiêm Ngoc Vu, Jean-Benoît Le Cam “Mechanics and thermodynamics of strain-induced crystallization in rubbers”	+ <u>Dominic I. Jarecki</u> , Bensingh Dhas, Arun R. Srinivasa, Prakash Thamburaja, J. N. Reddy, Nagaraja Iyyer “An elasto-plastic moment-curvature relation based model for fast modeling of fatigue progression in frame structures”
13:25 ~ 13:40		+ <u>Yufeng Zheng</u> , Dian Li “Investigation of twinning induced plasticity and transformation induced plasticity in the metastable beta titanium alloys”

	FA-1 (14:30-17:00)	FA-2 (14:30-17:00)	FA-3(14:30-16:30)
	Finite Hyperelasticity, Plasticity, anisotropy & Visco-plasticity I (Room: Ibiza 1)	Machine-learning Based Modeling (Room: Ibiza 2)	Plasticity in Reactive and Unreactive Materials under Shock and Extreme Conditions II (Room: Menorca)
	** Eun-Ho Lee & Guadalupe Vadillo	** Shi-Hoon Choi & Kaan Inal ++	** David Damm & H. S. Udaykumar ++
14:30 ~ 15:00	* Martin Kroon , MB Rubin “An eulerian formulation of orthotropic elasticity and inelasticity”	* Abhijit Brahme, Waqas Muhammad, Kaan Inal “An advanced artificial intelligence framework to simulate structural crashworthiness”	* H. S. Udaykumar , Oishik Sen, Garrett M. Tow, Puhao Zhao, James P. Larentzos, John K. Brennan, and Tommy Sewell “Molecular dynamics and crystal-plasticity guided material models for HMX and RDX under shocks”
15:00 ~ 15:30	* Guadalupe Vadillo , Sarvenaz Hashem, Navab Hosseini “3D simulations and microstructural modeling of anisotropic and tension-compression asymmetric ductile metals”	* Colin Bonatti , Bekim Berisha, Dirk Mohr “Recurrent neural network modeling of elastoplastic solids”	* Ryan R Wixom , Joseph D Olles, Robert Knepper, Cole D Yarrington, Rajen B Patel, Victor Stepanov “The effects of microstructure on detonation wave spreading in nanoparticle tatb”
15:30 ~ 16:00	* Arash Yavari “The universal program of nonlinear hyperelasticity”	* Shi-Hoon Choi , Lalit Kaushik, Ki-Seong Park “Development of machine learning framework for prediction of mechanical properties based on microstructure and processing condition knowledge”	* Rémi Dingreville “Dynamic behavior and shock-induced spallation of cocrfemni high-entropy alloys across scales”
16:00 ~ 16:15	* Marzia S. Vaccaro, Francesco P. Pinnola, Raffaele Barretta, Francesco Marotti de Sciarra “Nonlocal shape functions and a finite element model for small-scale beams”	* Shigenobu Ogata , Fanshun Meng, Shuhei Shinzato, Junping Du “Atomistic modeling of hydrogen impact on plasticity and fracture of iron”	+ David L Damm , James Stewart, Robert Knepper, Judith Brown, Michael Sakano, Mitch Wood “Microscale models of energetic materials with strength and plasticity informed by molecular dynamics”
16:15 ~ 16:30			+ Kaitlynn M Fitzgerald , Garrett J Pataky “The deformation and buckling of fccz metamaterials via creep at elevated temperatures”
16:30 ~ 16:45	+ Eun-Ho Lee , MB Rubin “Eulerian constitutive equation for the anisotropic and asymmetric inelastic behaviors using microstructural vectors”	+ Waqas Muhammad , Abhijit Brahme, Kaan Inal “A machine learning-based framework to predict local strain distribution and the evolution of plastic anisotropy & fracture in additively manufactured alloys”	
16:45 ~ 17:00	+ Yong Hou , Junying Min, Myoung-Gyu Lee “A high-order non-associated flow rule based anisotropic plasticity model covering a wider range of stress states”	+ Orcun K. Celebi , Daegun You, Ahmed Sameer K. Mohammed, Diab W. Abueidda, Seid Koric, Huseyin Sehitoglu “CRSS determination combining ab-initio framework and surrogate neural networks”	

*** 40 minutes Semi-Plenary Lecture * 30 minutes keynote lecture, + 15 minutes invited presentation ** Chairs ++ Symposium Organizer

Saturday, January 7, 2023

Registration 8:00 AM-5:00 PM(Ibiza 4)

	SaM-1 (8:30-10:40)	SaM-2 (8:30-10:30)	SaM-3 (8:30-10:45)
	<i>Material Transformations and Plasticity III (Room: Ibiza 1)</i>	<i>Nonlinear Material Modeling and their Numerical Treatment (Room: Ibiza 2)</i>	<i>Void & Crack Growth, Fatigue and Fracture (Room: Menorca)</i>
	** Andreas Prahls & Levente Balogh	** Tim Ricken++ & Holm Altenbach++	** Gabriel P. Potirniche & Katarzyna Kowalczyk-Gajewska
8:30 ~ 9:00	<p>* <u>Levente Balogh</u>, Lucas Ravkov, Ondrej Muránsky</p> <p><i>“Quantifying complex defect structures created by advanced manufacturing using X-ray diffraction”</i></p>	<p>* <u>Kerstin Weinberg</u></p> <p><i>“Data-driven finite element computation of foamy material using stochastic representative volume elements”</i></p>	<p>* <u>Katarzyna Kowalczyk-Gajewska</u>, Saketh Virupakshi, Karol Frydrych, Guadalupe Vadillo</p> <p><i>“Void growth in hcp crystals deforming by slip and twinning – numerical analyses and micromechanical modelling”</i></p>
9:00 ~ 9:30	<p>* <u>Alexander R. Umantsev</u></p> <p><i>“Two-step mechanism of macromolecular nucleation and crystallization: field theory and simulations”</i></p>	<p>* <u>Alexander Staroselsky</u>, Luke Borkowski, Masoud Anahid, Wei Hu</p> <p><i>“Microstructure-sensitive thermomechanical material processing simulation capability”</i></p>	<p>* <u>Christopher J. Larsen</u></p> <p><i>“Phase-field fracture without softening or nucleation”</i></p>
9:30 ~ 9:45	<p>+ <u>Istemi B. Ozsoy</u>, Valery I. Levitas</p> <p><i>“Micromechanical modeling of stress-induced martensitic phase transformations in elastic materials”</i></p>	<p>* Johanna Eisenträger, <u>Holm Altenbach</u>, Junqi Zhang, Sascha Eisenträger, Chongmin Song</p> <p><i>“A framework for modelling creep in composites based on the scaled boundary finite element method”</i></p>	<p>* <u>Gabriel P. Potirniche</u>, Srijan Bhandari, Robert R. Stephens, Nicholas Shaber, Indrajit Charit</p> <p><i>“Computational and experimental studies of creep-fatigue crack growth in alloy 709 at elevated temperatures”</i></p>
9:45 ~ 10:00	<p>+ <u>Istemi B. Ozsoy</u>, Valery I. Levitas</p> <p><i>“Micromechanical modeling of transformation-induced plasticity”</i></p>		
10:00 ~ 10:30	<p>*** <u>P.W. Voorhees</u>, A.F. Chadwick, A. Birnbaum, J. Steuben, I. Athanasios, J. Michopoulos, J.G. Santos Macias, M.V. Upadhyay, G. Wagner</p> <p><i>“The development of grain structure during additive manufacturing: a comparison between experiment and simulation”</i></p>	<p>* <u>Tim Ricken</u></p> <p><i>“Multiscale simulation of porous multiphase materials”</i></p>	<p>* <u>Pritam Chakraborty</u>, Syed M. Kazim</p> <p><i>“A crystal plasticity model of thermo-mechanical fatigue for titanium alloys”</i></p>
10:30 ~ 10:40 / 10:45			<p>+ Thomas Tancogne-Dejean, <u>Christian C. Roth</u>, Thilo Morgeneyer, Dirk Mohr</p> <p><i>“Ductile failure under shear loading: results from in-situ laminography experiments on aluminum 2024 and fb600 steel”</i></p>

COFFEE/TEA (Room:Mallorca)

	SaM-5 (11:00-13:45)	SaM-6 (11:00-13:15)	SaM-7 (11:00-13:30)
	High Strain-rate Phenomena, Dynamic Fracture and Fragmentation II (Room: Ibiza 1)	Interfaces and their Roles in Plasticity, Damage, and Fracture II (Room: Ibiza 2)	Machine-learning Based Modeling & Neural Networks (Room: Menorca)
	** Dirk Mohr & José A. Rodríguez-Martínez ++	** Ryan Sills ++ & Ian S. Winter	** Ludovic Noels & Alexander Hartmaier
11:00 ~ 11:30	* José A. Rodríguez-Martínez , Juan C. Nieto-Fuentes, Nicolas Jacques, Mohammad Marvi-Mashhadi, Komi E. N'souglo "Modeling dynamic formability of porous ductile sheets subjected to biaxial stretching: actual porosity versus homogenized porosity"	* Amit Misra "Hierarchical microstructures and deformation mechanisms of laser additively manufactured Fe-Cu alloys"	* Alexander Hartmaier , Ronak Shoghi, Jan Schmidt, Abhishek Biswas "Data-oriented constitutive modeling for plasticity and damage"
11:30 ~ 12:00	* Xueyang Li, Christian C. Roth, Dirk Mohr "Neural network based temperature and strain rate dependent plasticity and fracture modeling"	* Frederic Sansoz "Grain-boundary solute segregation and strain localization mechanisms in nanocrystalline alloys"	* Ludovic Noels , Ling Wu, Van Dung Nguyen "Redefinition of the interactions in deep-material-networks"
12:00 ~ 12:30	* Gabriel Seisson , Skander El Mai "From experiments and numerical modeling to fast running engineering models: A fragmentation strategy"	* Ian S. Winter , Tomas Ooppelstrup, Robert E. Rudd, Timofey Frolov "Nucleation of grain boundary phases"	* Ling Wu , Ludovic Noels "Dimension reduced and breakdown of recurrent neural networks in the context of multiscale analyses"
12:30 ~ 12:45	* Arunachalam M. Rajendran "Modeling of shock and impact response of glass reinforced plastics"	+ Raiyan Seede , Kyle Johnson, Philip J. Noell "Ductile failure and damage localization in Al6061-T6 characterized by in-Situ X-ray computed tomography and neural network segmentation"	* Heng Li , Yanfeng Yang "Neural network based machine learning to predict stress-strain responses of alpha titanium sheets under complex loading paths"
12:45 ~ 13:00		+ Fernando D. León-Cázares , Joseph Ronevich, Chris San Marchi, Coleman Alleman "Stress-dependent energy barriers of dislocation reactions: a generalized line tension model"	
13:00 ~ 13:15	+ A. R. Vishnu , G. Vadillo and J. A. Rodríguez-Martínez "Void growth in ductile materials with actual porous microstructures"	+ David E Page , David T. Fullwood, Robert H. Wagoner, Eric R Homer "Grain boundary-dislocation interaction simulations designed to allow transmission"	+ Kyeongjae Jeong , Heung Nam Han "Neural network-based indentation plastometry for parameter identification of anisotropic yield function"
13:15 ~ 13:30	* Bryan Zuanetti , Darby J. Luscher, Kyle J. Ramos, Cynthia A. Bolme "Determining the representative response of polycrystalline materials in small scale dynamic experiments"	* Ramathasan Thevamaran , Claire Griesbach, Jizhe Cai "Synergistic improvement of mechanical properties of metals through impact-induced nanostructural evolutions"	+ Jan Gerlach , Alexander Schowtjak, Waqas Muhammad, Abhijit P. Brahma, Lena Koppka, Till Clausmeyer, Kaan Inal, A. Erman Tekkaya "Prediction of damage-induced mechanical properties based on measured void data"
13:30 ~ 13:45			

	SaA-2 (14:30-16:10)	Sa-3 (14:30-16:10)
	<i>Atomistic Simulations, Molecular Dynamics, Dislocation Dynamics & Nano-Indentation</i> (Room: Menorca)	<i>Advances in Understanding Deformation of Materials in honor of Huseyin Sehitoglu II</i> (Room: Ibiza 2)
	** Niaz Abdolrahim & Aida Nonn	** R. Chulist & Seid Koric
14:30 ~ 15:10	*** <u>Henning F. Poulsen</u> “Visualising dislocation dynamics in the bulk by dark field x-ray microscopy”	*** <u>Surya R. Kalidindi</u> “AI/ML for multiscale mechanics”
15:10 ~ 15:40	* <u>Aida Nonn</u> , Bálint Kiss, Weria Pezeshkian, Thomas Tancogne-Dejean, Albert Cerrone, Miklos Kellermayer, Yuanli Bai, Tomasz Wierzbicki “Deciphering the structure of the Sars-Cov-2 virus through nanoindentation, molecular dynamics and finite element simulations”	* <u>R. Chulist</u> , A. Wójcik, A Sozinov, M. Faryna, N. Schell, W. Skrotzki, T. Tokarski, W. Maziarz “Periodic shuffling of atomic layers in nimga shape memory and high entropy alloys”
15:40 ~ 16:10	* <u>Niaz Abdolrahim</u> , Lijie He, Jerardo Salgado “Predicting phase transition mechanisms by integrating atomistic simulations, experiments, and AI techniques”	* <u>Seid Koric</u> , Diab W. Abueidda “Deep learning models of thermo-mechanical plastic and visco-plastic material behavior”

16:20-17:20 Khan International Medal/Award Lecture: Jeong Whan Yoon
(**Carlos Tome ; Room: *Ibiza 1*)

J.W.Yoon, "Constitutive and Fracture Modeling for Anisotropic Metals"

*** 40 minutes Semi-Plenary Lecture * 30 minutes keynote lecture, + 15 minutes invited presentation ** Chairs ++ Symposium Organizer

Sunday, January 8, 2023

Registration 8:00 AM-5:00 PM(Ibiza 4)

	SuM-1 (8:30-10:40)		SuM-2 (8:30-10:45)
	<i>Deformation Mechanisms & Multiscale Modeling (Room: Ibiza 1)</i>		<i>Material Transformations and Plasticity IV (Room: Ibiza 2)</i>
	** <i>Sandra Klinge & Ill Ryu</i>		** <i>Dmitry Popov ++ & Abigail Hunter</i>
8:30 ~ 9:10	*** <u>Ricardo Lebensohn</u> <i>“Recent progress in FFT-based methods for microstructure-aware plasticity applications”</i>	8:30 ~ 9:00	* <u>Dmitry Popov</u> , Maddury Somayazulu, Nenad Velisavljevic <i>“Experimental capabilities to investigate transformations of materials under extreme pressure-temperature conditions at hpcat”</i>
9:10 ~ 9:40	* <u>Ill Ryu</u> , Cuong Nguyen, Nicole Aragon, Hojun Lim <i>“Multiscale and multiphysical modeling of defect driven plasticity and its applications”</i>	9:00 ~ 9:15	+ <u>Ying Li</u> , Zhiqiang Shen, Huilin Ye, Qiming Wang, Martin Kröger <i>“Sticky rouse time features the self-healing of supramolecular polymer networks”</i>
9:40 ~ 9:55	+ <u>Jianbin Xu</u> , Odd Sture Hopperstad , Bjørn Holmedal, Tomáš Maník, Knut Marthinsen <i>“Experimental and numerical investigation on the spatio-temporal characteristics of the portevin-le chatelier effect in an aluminium alloy”</i>	9:15 ~ 9:30	+ <u>Andreas Prah</u> s, Martin Reder, Daniel Schneider, Britta Nestler <i>“On the thermal influence on the growth of inclusions in an elastoplastic matrix”</i>
9:55 ~ 10:10	+ <u>Sandra Klinge</u> , Marc Graham <i>“Multiscale modeling of calcified polymer hydrogels”</i>	9:30 ~ 9:45	+ <u>Zach D. Brunson</u> , Michael B. Wakin, Aaron P. Stebner <i>“A new triclinic-asymmetric yield criterion developed using a six-dimensional geometric approach to implicit asymmetry and anisotropy”</i>
10:10 ~ 10:40	* <u>Bruce A. Remington</u> <i>“New regimes of high energy density materials science”</i>	9:45 ~ 10:15	* <u>Abigail Hunter</u> <i>“Mesoscale investigation of dislocation-grain boundary interactions in metals and alloys”</i>

COFFEE/TEA (Room: Mallorca)

	SuM-5 (11:00-13:00)	SuM-6 (11:00-13:30)	SuM-7 (11:00-13:15)
	<i>Material Transformations and Plasticity V (Room: Ibiza 1)</i>	<i>Behavior & Modeling of Advance Materials (Room: Ibiza 2)</i>	<i>Behavior and Modeling of Granular Materials and Damage in Geo-Structures (Room: Menorca)</i>
	** Patrick Cordier & Marko Knezevic	** Hesam Askari & Benjamin Cameron	** Yunping Xi & Alexander Puzrin
11:00 ~ 11:30	* <u>Marko Knezevic</u> “Strain rate and temperature sensitive crystal plasticity modeling of strain-induced martensitic transformations in wrought and additively manufactured stainless steels”	* <u>Guocai Chai</u> , Raveendra Siriki, Joakim Nordström, Zhihua Dong, Levente Vitos “Influence of nitrogen on deformation twinning and plasticity in advanced austenitic stainless steels”	* <u>Ioannis Anastasopoulos</u> , Athanasios Agalianos “Strike-slip faulting and its effects on structures: numerical and physical modelling”
11:30 ~ 12:00	* <u>Barbara Lavina</u> “The transformative power of synchrotron microdiffraction techniques in high-pressure sciences”	* <u>Damien Texier</u> , Charles Romain, Quentin Sirvin, Vincent Velay, Julien Genée, Kévin Cave, Dominique Poquillon, Daniel Monceau, Eric Andrieu “Size effect on the mechanical behavior of polycrystalline metallic materials: influence of grain size, free-surface and precipitation state”	* <u>Alexander M. Puzrin</u> “Growth of slip surfaces in the landslide influence zone”
12:00 ~ 12:30	* <u>Patrick Cordier</u> “Modeling plastic deformation of the mineral phases of the earth’s mantle”	* <u>Gi-Dong Sim</u> , Injong Oh, Hojang Kim “Effect of carbon addition and passivation on the mechanical behavior of freestanding al thin films”	* <u>Peijun Guo</u> , Tao Xie, Dieter F. Stolle “Development of extended STZ model for granular soils subjected to combined static loading and vibration”
12:30 ~ 13:00	* <u>Jonathan Almer</u> , Peter Kenesei, Jun-Sang Park, Andrew Chuang, Armand Beaudoin “Revealing deformation and fracture using high-energy X-rays”	* <u>Benjamin C. Cameron</u> “Determining plastic material properties from observed heterogeneous strain fields: singularities in the governing equations”	* <u>Yunping Xi</u> , Yuxiang Jing, and Basil Alsharari “The effect of nuclear irradiations on concrete and concrete structures in nuclear power plants”
13:00 ~ 13:15		+ <u>Hesam Askari</u> , Shoieb Chowdhuri, Aditya Dey “Strain engineering of 2D van der waals materials for nano-electronic and quantum devices”	+ <u>Philippe Carrez</u> “Plasticity under extremely low strain rate”
13:15 ~ 13:30		+ <u>Toko Tokunaga</u> , Koji Hagihara, Shuhei Ohsawa, Shohei Uemichi, Daisuke Egusa, Eiji Abe “Controlling factor of the strengthening of mille-feuille structured alloys accompanied by kink-band formation”	

	SuA-1 (14:30-17:00)	SuA-2 (14:30-18:00)	SuA-3 (14:30-17:45)
	Modelling of Geo-materials & Structures (Room: Ibiza 1)	Deformation Mechanisms, Size Effects and Modeling (Room: Ibiza 2)	Characterization and Modeling of Materials for Advanced Manufacturing II (Room: Menorca)
	** J Ciambella & Valentina Salomoni	** Thomas Tancogne-Dejean & Peidong Wu	** Cliff Butcher & Michael Worswick
14:30 ~ 15:00	* Valentina A. Salomoni , Alberto Antonini <i>"Fractional advection-diffusion analyses in geomaterials via the adomian decomposition"</i>	* Peidong Wu <i>"Evaluation of twinning models for HCP materials"</i>	* Michael Worswick , Suh Ho Lee, Jacqueline Noder, Jose Imbert, Cliff Butcher <i>"On the interaction of fracture limits and folding stability in ultra-high strength axial crush members"</i>
15:00 ~ 15:30	* J Ciambella , MB Rubin <i>"A viscoplastic model with non-affine deformation and rotation of a distribution of embedded fibers"</i>	* Vincenzo Gattulli , D Addressi, D Fusco, C Rinaldi <i>"An efficient damage-plasticity model suitable for the training of deep neural network"</i>	* Cliff Butcher , Kenneth Cheong, Amir Zhumagulov, Armin Abedini, Advait Narayanan, David Anderson <i>"Constitutive and fracture characterization of 6xxx structural aluminum sheet in proportional and non-proportional strain paths"</i>
15:30 ~ 16:00	* Carmelo E. Majorana , Beatrice Pomaro <i>"Dynamic stability of damped structural elements"</i>	* Thomas Tancogne-Dejean , Vincent Grolleau, Dirk Mohr <i>"Static and dynamic indentation response of Li-Ion batteries: experiments and modeling"</i>	* Bao Meng <i>"Multiscale yield and fracture behavior of ultra-thin metal sheets: characterization and modeling"</i>
16:00 ~ 16:30	* Gianluca Mazzucco , Beatrice Pomaro, Beaudin Freinrich Dongmo, Jiangkun Zhang, Valentina A. Salomoni, Carmelo E. Majorana <i>"Mesoscale modeling of building materials"</i>	* Yanshan Lou , Chong Zhang, Jeong Whan Yoon <i>"A stress invariant-based function for differential-anisotropic hardening: experimental verification and convexity analysis"</i>	* Xiaoguang Fan <i>"Dependency of microstructural evolution on strain path during hot working of titanium alloy: mechanisms, modeling, and application"</i>
16:30 ~ 17:00	* Nico De Marchi, Massimiliano Ferronato, Giovanna Xotta , Valentina Salomoni <i>"Wave propagation on fully saturated anisotropic porous media: a numerical study"</i>	* Wang Cai, Chaoyang Sun , Chunhui Wang, Linghui Meng, M.W. Fu <i>"Plastic deformation behaviour of ultrafine grained TWIP steels: experiment and crystal plasticity simulations"</i>	* Hejun Du , Kaijuan Chen, How Wei Benjamin Teo, Weidong Li, Kun Zhou, Jun Zeng <i>"Material and mechanical characteristics of polyamide 12 (PA 12) additive-manufactured by multi jet fusion"</i>
17:00 ~ 17:15		* J.C. Stinville , M.A. Charpagne , D. Texier , V. Valle <i>"Deformation slip at high temperatures by high-resolution digital image correlation"</i>	+ Madhav Baral , Yannis P. Korkolis <i>"Characterization and modeling of plasticity and ductile fracture of tubular specimens"</i>
17:15 ~ 17:30			+ Tao Wang , Haoran Zhang, Qingshan Ding, Xiao Liu, Qingxue Huang <i>"Effect of low frequency electric pulsed on the interfacial microstructure evolution and deformation behavior of copper/steel ultra-thin laminated strip"</i>
17:30 ~ 17:45		* WenChun Jiang , XueFang Xie, ZhiLong Dong <i>"Microstructure-based multiscale and heterogeneous elasto-plastic properties of 2205 duplex stainless steel welded joints: experimental and modeling"</i>	+ Guofeng Han, Enzhen Ren, Ji He <i>"Simple shear deformation of sheet metals: finite strain perturbation analysis and high-resolution quasi-in-situ strain measurement"</i>
17:45 ~ 18:00			

*** 40 minutes Semi-Plenary Lecture * 30 minutes keynote lecture, + 15 minutes invited presentation ** Chairs ++ Symposium Organizer

18:30 BANQUET DINNER (Room: Mallorca)

Monday, January 9, 2023

Mostly left open for tours.

Dinner on Jan. 3, 2023 (Menu is tentative)

Dinner Menu:

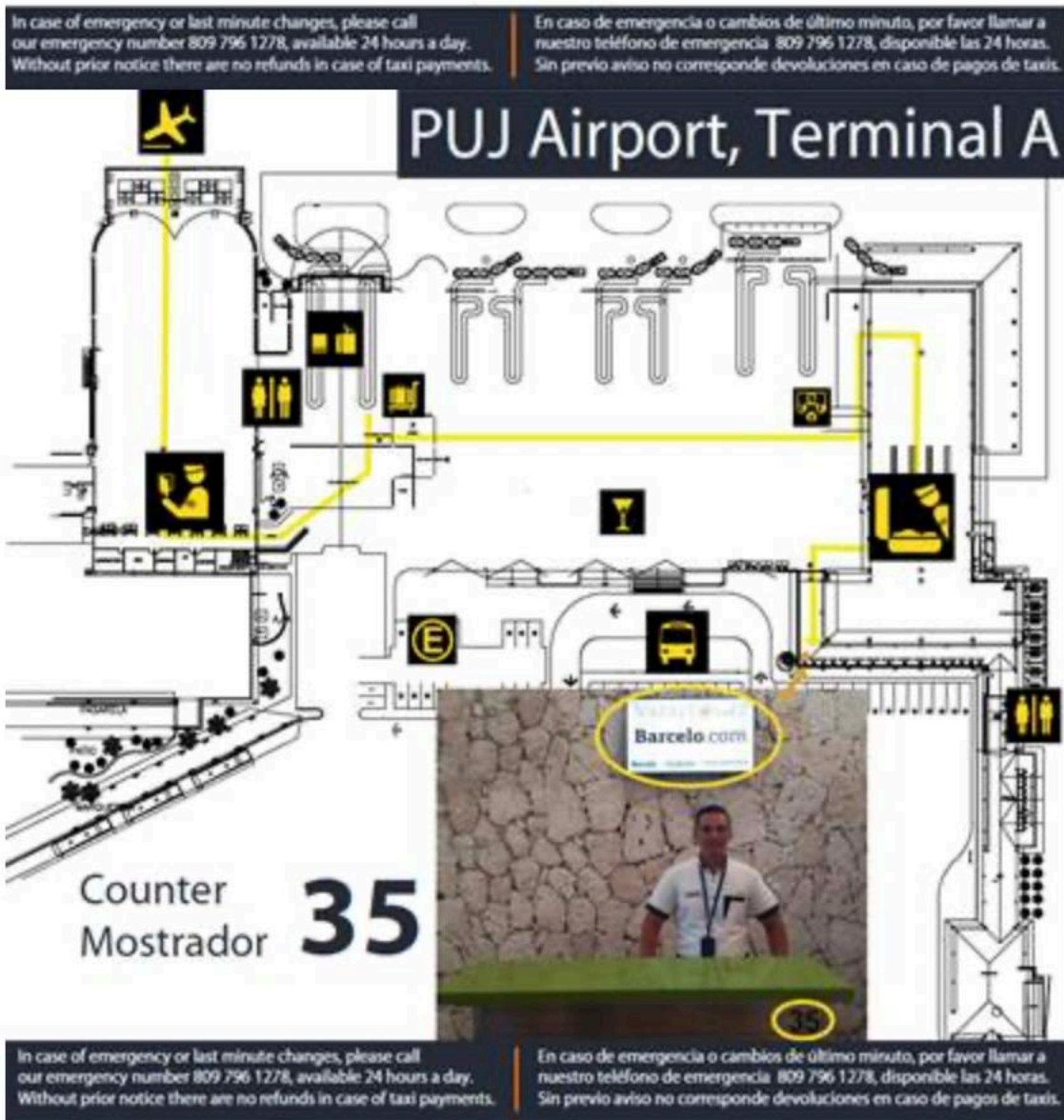
- **1st Course:** *Fresh tropical salad with baby spinach, mango, strawberry, apple, caramelized walnut, watermelon cubes and pineapple accompanied by tamarind vinaigrette.*
- **2nd Course:** *Lobster chowder with wonton shrimp and saffron oil.*
- **3rd Course:** *Beef sirloin with blue cheese sauce and Shrimps with white wine essence, served with eggplant lasagna. (Note: Shrimp Portion will be 3oz).*
- **4th Course:** *Cocoa sponge cake filled with dark chocolate and raspberry cream with Rompope liquor sauce.*

Dinner on Jan. 8, 2023 (Menu is tentative)

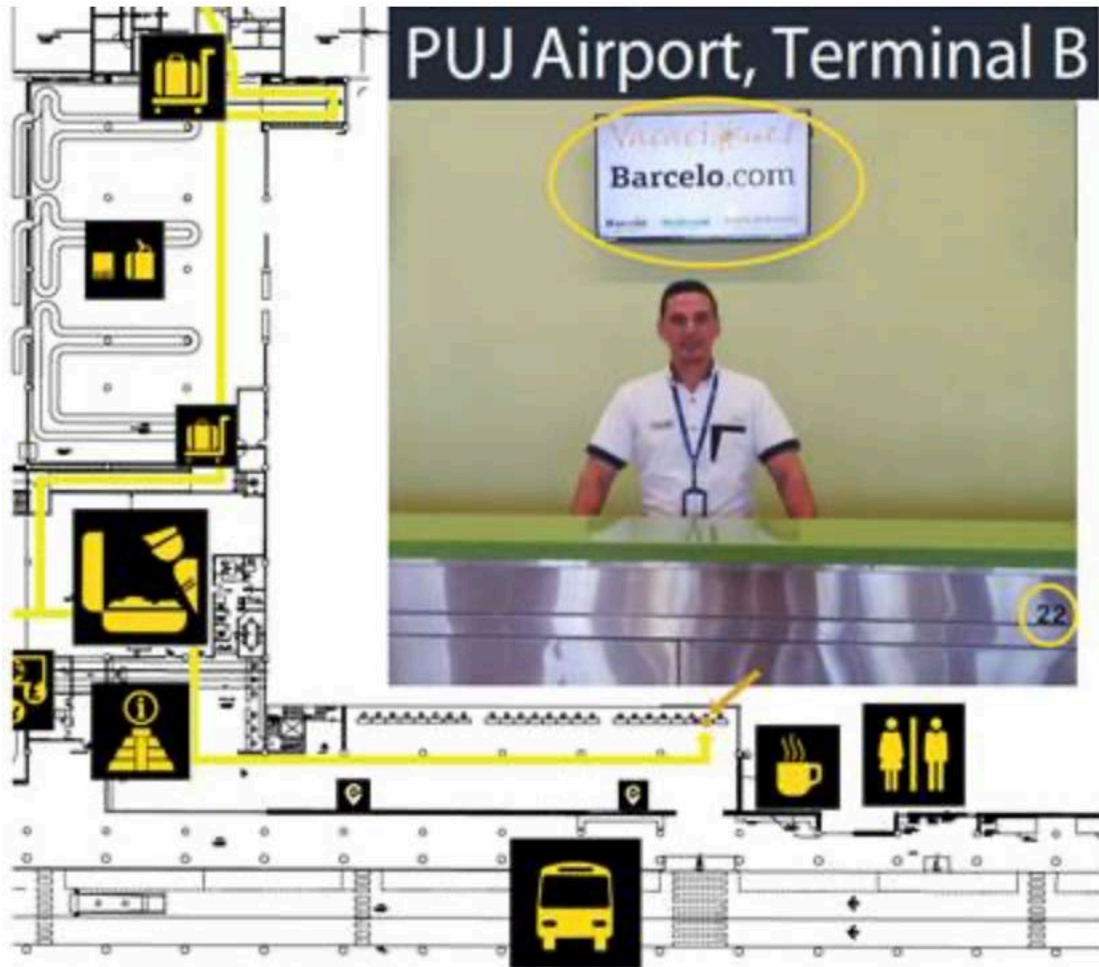
Dinner Menu:

- **1st Course:** *Seafood stew (No fish).*
- **2nd Course:** *Green salad with cherry tomato, avocado caramelized, roasted red pepper and crostini goat cheese, papaya vinaigrette.*
- **3rd Course:** *Rack of lamb and lobster tail with mushroom risotto.*
- **4th Course:** *Tiramisu.*

Airport Transfer Details (see the yellow path in airport layout sketches below):



PUJ Airport, Terminal B



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