IEEE NTC Forum on Nanotechnology Focus – Machine Learning and Nanomechanics



21 – 22 October 2023 | Paestum (Salerno), Italy

Friday, 20 October, 2023

18:00 – 20:00 Welcome Dinner

Saturday, 21 October, 2023

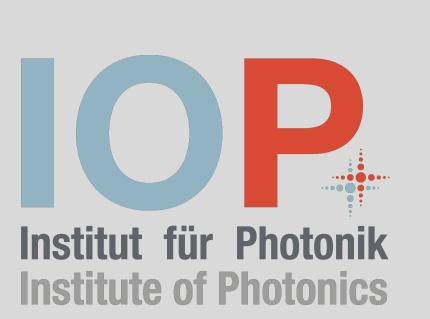
8:30 - 9:30	Breakfast
9:30 - 9:45	Opening Remarks (15 minutes) — Xiaoying Zhuang, Leibniz University Hannover
9:45 - 10:00	Keynote Talk (15 minutes) — James E. Morris, Portland State University • Introduction to the IEEE Nanotechnology Council (NTC)
10:00 - 10:30	 Invited Talk I (30 minutes) — Jakob Schwiedrzik, Empa Swiss Federal Laboratories for Materials Science and Technology Nanomechanics under extreme conditions for the development of novel metamaterials
10:30 - 10:50	Coffee Break (20 minutes)
10:50 - 11:20	Invited Talk II (30 minutes) — Yabin Jin, Tongji University • Intelligent design of phononic metamaterials with machine learning
11:20 - 11:50	 Invited Talk III (30 minutes) — Binh Huy Nguyen, Katholieke Universiteit Leuven • Machine learning-assisted techniques in MEMS design and characterization
11:50 - 12:10	Panel Discussion I (20 minutes)
12:10 - 13:40	Lunch (90 minutes)
13:40 - 14:10	 Invited Talk IV (30 minutes) — James E. Morris, Portland State University • Electronic conduction in discontinuous metal nanoparticle thin films: A detective story
14:10 - 14:40	 Invited Talk V (30 minutes) — Timon Rabczuk, Bauhaus University Weimar • Scientific machine learning and application in materials design
14:40 - 15:00	Coffee Break (20 minutes)
15:00 - 15:30	 Invited Talk VI (30 minutes) — Kirsten Weide-Zaage, Leibniz University Hannover Data management in the reliability simulation of microelectronic components
15:30 - 16:00	 Invited Talk VII (30 minutes) — Qiong Liu, Leibniz University Hannover • Flexoelectricity of two-dimensional (2D) materials studied using piezoelectric force microscopy (PFM)
16:00 - 16:20	Panel Discussion II (20 minutes) closed session
16:20 - 17:05	NTC Technical Committee Discussion (45 minutes) closed session — Future plan — Preparatory of committee member







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17:05 - 18:30	Reception and participants free discussion
18:30 - 20:00	Dinner

Sunday, 22 October, 2023

8:30 - 9:30	Breakfast
9:30 - 10:00	Invited Talk VIII (30 minutes)
	— Xiaoying Zhuang, Leibniz University Hannover
	 Machine learning for inverse materials design and mutliscale mechanics
10:00 - 10:30	Invited Talk IX (30 minutes)
	— Antonio Di Bartolomeo, Universita' degli Studi di Salerno
	 2D materials based field-effect transistors as photodetectors and sensors
10:30 - 11:00	Invited Talk V (20 minutes)
10.30 - 11.00	Invited Talk X (30 minutes) — Jianying He, Norwegian University of Science and Technology
	 Probing nanomechanical properties of additively manufactured high entropy alloys
11:00 - 11:20	Coffee Break (20 minutes)
11:20 - 11:50	Invited Talk XI (30 minutes) Ouanzhou Yao, Southern University of Science and Technology
	 Quanzhou Yao, Southern University of Science and Technology An application of machine learning in nano-Tribology: statistics on the stick-slip events
11:50 - 12:20	Invited Talk XII (30 minutes)
	— Teresa Cheng, Leibniz University Hannover
	 Nanomechanics of energy nanogenerators: triboelectric nanogenerators and piezoelectric nanogenerators
12:20 - 12:40	Panel Discussion III (20 minutes) closed session
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12:40 - 12:55	Concluding Remarks (15 minutes)
	— Xiaoying Zhuang, Leibniz University Hannover
19.55 19.55	Lunch (60 minutes)
12:55 – 13:55	Lunch (60 minutes)
14:00	Adjourn

Dinner provided for 20, 21, and 22 Oct
Lunch provided for 21, 22, and 23 Oct
Accommodation provided for 20 – 23 Oct





