



23rd International Heat Pipe Conference (IHPC)

17th International Heat Pipe Symposium (IHPS)

May 24–28, 2026 | Gdańsk, Poland

Conference Programme

Sunday, May 24, 2026

Registration & Welcome

Time	Event
16:00–18:30	Participant Registration
18:30–20:00	Welcome Reception

Monday, May 25, 2026 Opening Ceremony • Keynote • Technical Sessions

Time	Event
08:00–09:00	Registration & Coffee Break
09:00–09:45	Official Opening Ceremony
09:45–10:30	Plenary Session I Keynote Lecture I – Prof. Dariusz Mikielewicz <i>Dissipation in modelling of complex two-phase flows</i> Session Chair Prof. Marcia Barbosa Henriques Mantelli
10:30–11:00	Coffee Break

	Technical Session I FUNDAMENTAL STUDIES Session Chair Prof. Sauro Filippeschi	Technical Session II ADDITIVE MANUFACTURING Session Chair Prof. Pawel Szymański
11:00-13:00	<ol style="list-style-type: none"> 1. <i>Study of boiling phenomena in porous medium for Heat Pipe application</i> M. Bois; B. Champel; M. Mariotto; M. Gradeck 2. <i>Thermographic analysis on inner fluid dynamics of two-phase flows: preliminary validation in a two-phase loop</i> L. Pagliarini; K. G. Domiciano; L. Krambeck; M. B. H. Mantelli; F. Bozzoli; M. Mameli; S. Filippeschi 3. <i>Preliminary Study on the Mechanisms of Phase Separation and Liquid Film Formation during Two-Phase Flow in a Bent U-Pipe</i> T. Duraziński; M. Stempniak; S. Pietrowicz; A. Nowak 4. <i>Research on the thickness and asymmetry of liquid film in channels close to the capillary limit</i> T. Duraziński; D. Tsuneoka; J. Okajima; A. I. Nowak 5. <i>Thermal Characterization of Spiral Pulsating Heat Pipes riding on the capillary limit in different gravity conditions</i> I. Marchi; L. Scateni; V. Dupont; N. Iwata; A. de Ryckel; S. Filippeschi; M. Mameli 6. <i>Merit Number vs. Thermal Resistance: Rethinking Working Fluid Selection in Loop Heat Pipes</i> M. Bernagozzi; M. Marengo 	<ol style="list-style-type: none"> 1. <i>Experimental Comparison Between a Grooved 3D-Printed Heat Pipe and a Conventional Plain Copper Heat Pipe</i> M. Szydłowski; G. Górecki; M. Łęcki; A. Gutkowski 2. <i>Additively Manufactured Triply Periodic Minimal Surface Wicks for Cylindrical Heat Pipes</i> S. W. Kang 3. <i>Experimental Study on the Performance of 3D Printed Functional Structures Integrating Vapor Chambers and Phase Change Materials</i> H. Zhang; Y. Guo 4. <i>Development of an Additively Manufactured Vapour Chamber for Heat Dissipation in Active Antennas. Design and Validation Campaign Results</i> S. V. Muñoz; S. Gilliland; F. J. Martín-Portugués Martín-Consuegra, 5. <i>Heat Sink Design Using Additively Manufactured 2D Vapor Chambers and Laser-Welded Fins</i> B. Agostini; D. Torresin; A. Petrov
13:00–14:00	Lunch	

14:00–16:00	Technical Session III PHP/OHP Session Chair Prof. Jocelyn Bonjour	Technical Session IV FUNDAMENTALS / NEW DEVELOPMENTS Session Chair Prof. Manfred Groll
	<ol style="list-style-type: none"> <i>Simplified sizing tool for selecting working fluids in oscillating heat pipes</i> F. Kilinc; V. Ayel; N. Riaud; C. Romestant; M. Sabah <i>Experimental investigation of the thermal efficiency of asymmetrical Flower Shape Oscillating Heat Pipe</i> D. Mazur; C. Czajkowski; N. Qian; S. Pietrowicz <i>Effect of superhydrophilic/phobic surface on the performance of Flat Plate Pulsating Heat Pipes filled with water</i> K. Le Floch; V. Ayel; H. Geçim; N. Riaud; C. Romestant; C. Martin <i>Flat-Plate Pulsating Heat Pipe tested under microgravity conditions: Part B- Visualizations and activation mechanisms</i> N. Riaud; V. Ayel; C. Romestant; R. Kari; F. Sacchelli; L. Cattani; F. Bozzoli; J. Landi; E. Carrubba <i>Thermal performance and flow characterization of oscillating heat pipe under ultrasonic field</i> F. Jiang; J. Xu; N. Qian; Y. Xie; Y. Fu; M. Marengo <i>Experimental Studies on Startup Transients in a Flat Plate Pulsating Heat Pipe: Effect of Working Fluid and Orientation</i> A. Nadaf; S. Yadav; C. Nashine; M. Pandey 	<ol style="list-style-type: none"> <i>Visualization of the geyser boiling phenomenon in two-phase thermosyphons operating with immiscible working fluids</i> F. G. Souza; L. H. R. Cisterna; M. B. H. Mantelli <i>Performance Map and Comparative Assessment of Mini Flat Heat Pipes</i> L. Krambeck; K. G. Domiciano; M. Marengo; M. Bernagozzi; M. B. H. Mantelli <i>Development and Transient Characterization of a Novel Biporous Wicked Stainless-Steel Miniature Loop Heat Pipe</i> S. Pratihari; T. Kumari; M. Pandey; M. Marengo <i>Operation of a Loop Heat Pipe–Vapor Chamber Hybrid Thermal Control System for High–Heat–Flux Heat Sources</i> S. Jeong; W. Joung <i>Bionic Two-Phase Heat Transfer Technology Inspired by the Water Transport System of Trees</i> H. Zhang; H. Bi; G. Li; Z. Jia; C. Liu; C. Wang; J. Miao <i>A Novel Heat Pipe for Internal Cooling for Cylindrical Cells in EV Battery Packs</i> C. S. Costa; L. Krambeck; D. K. Guessi; M. E. Beé; M. Bernagozzi; M. B. H. Mantelli
16:00–16:30	Coffee Break	
16:30–17:50	Technical Session V PHP/OHP Session Chair Prof. Nattawut Tharawadee	Technical Session VI FUNDAMENTAL STUDIES Session Chair Prof. Shung Wen Kang
	<ol style="list-style-type: none"> <i>Advanced stability analysis of oscillating heat pipes: characterizing start-up and overheating phenomena</i> C. Czajkowski; H. Ma; S. Pietrowicz <i>Development and validation of a novel 1D model of a pulsating heat pipe</i> P. Błasiak; M. Lewkowicz; C. Czajkowski; S. Pietrowicz <i>Flow Patterns of a Pulsating Heat Pipe Visualized Vertically and Horizontally</i> W. Qu; F. Liu; Z. Xue; B. Ai <i>Influence of non-condensable gas inside a pulsating heat pipe to optimize thermal stress during load cycles</i> C. Brede; S. Becker; F. Schwarz 	<ol style="list-style-type: none"> <i>Water Azeotrope Heat Pipe Working Fluids – Introduction, Overview, and Fundamental</i> J. Rosenfeld <i>Effect of the groove structure on the heat transfer performance of porous wicks under saturated vapor conditions</i> R. Hashimoto; K. Odagiri; Y. Akizuki; H. Nagano; H. Ogawa <i>Study on the Mechanism of Subcooled Capillary Evaporation Heat Transfer in Porous Structures under High-Heat-Flux</i> H. Wang; Z. Zhao; X. Yang; J. Wei <i>Characterization of polymeric heat pipe with interconnected hollow fins</i> Y. Seyve; F. Lefèvre; S. Cioulachtjian; V. Sartre

Tuesday, May 26, 2026

Technical Sessions

Time	Event	
9:00–9:45	Plenary Session II: Keynote Lecture II Dr. Bruce Drolen <i>Satellite Thermal Management Lessons Learned: CCHPs, LHPs, and OHPs</i> Session Chair Prof. Joon Hong Boo	
9:45–11:05	Technical Session VII LHP Session Chair Prof. Vincent Ayel	Technical Session VIII NEW DEVELOPMENTS Session Chair Prof. Marcia Barbosa Henriques Mantelli
	<ol style="list-style-type: none"> 1. <i>Design and Evaluation of Thin Silicon Loop Heat Pipe Fabricated by MEMS</i> M. Kurosaki; M. Hashimoto; R. Nomura; D. Jiang; M. Tada; N. Watanabe; H. Nagano; A. Ueno 2. <i>Development of Multi-Evaporator Loop Heat Pipe for Low-Flux Solar Heat Transport</i> M. Nishikawara; R. Hamada; T. Kuraishi; H. Yokoyama 3. <i>Loop Heat Pipe transport capability Figure of merit based on critical point, temperature and pressure, for fast working fluid ranking</i> V. Dupont; V. Christiaens; A. De Ryckel 4. <i>Development of Silicon-based LHPs for thermal management of 3D-IC</i> G. Xin; J. Shao; X. Cheng; D. Zhou; W. Du 	<ol style="list-style-type: none"> 1. <i>Demonstration of High-Temperature Grooved Heat Pipes Fabricated by Additive Manufacturing</i> S. Biswas; R. Meucci; R. Kulenovic; M. Werz; J. Starflinger 3. <i>Characterization of Charging-Discharging Dynamics in Boiling-Assisted Thermal Storage: From Vapor Entrapment to Counter-Current Flow Limitation</i> N. Tharawadee; N. Thuchayapong; W. Intagun; N. Soponpongpiat 3. <i>Evaluation of the cooling behavior of different cooling concepts for 2-phase approaches under the influence of mechanical vibrations and shocks</i> P. Ernst; F. Rohmann 4. <i>Preliminary Temperature Measurement within a Pulsating Heat Pipe Using Calibrated Optical Fiber Sensors</i> M. Stempniak; S. Pietrowicz; G. Statkiewicz-Barabach
11:05–11:30	Coffee Break	

	Technical Session IX THERMOSYPHONS AND LOOP THERMOSYPHONS Session Chair Prof. Wukchul Joung	Technical Session X HP, PHP AND OHP FOR SPACE APPLICATIONS Session Chair Prof. Mauro Mameli
11:30–13:10	<ol style="list-style-type: none"> 1. <i>Modeling the Performance of an Inverted Thermosyphon during Vapor Transport</i> R. S. Calomeno; F. H. Milanez; M. B. H. Mantelli 2. <i>Experimental study on the energy harvesting performance of thermosyphon heat pipes using surfactant-assisted CNT and CNF nanofluids</i> B. Badamaa; Y. Sung 3. <i>Mitigating Geyser Boiling in a Loop Thermosyphon with a Meshed Annular Evaporator</i> L. Hatschbach; G. Gatti; A. Pereira; N. Pabon; F. dos Reis; M. B. H. Mantelli 4. <i>Geometric Optimization of a Thermosyphon for Efficient Data Center Room Cooling</i> F. S. Almeida; A. S. Ribeiro; F. G. de Souza; A. S. Pereira; N. Y. L. Pabon; L. H. R. Cisterna; M. G. Ó. Mizgier; M. B. H. Mantelli 5. <i>Experimental Comparison of Conventional and Loop Thermosyphons</i> P. Kumar; A. Khandelwal; S. Aalekh; S. Dash; A. Ambirajan; P. Dutta 	<ol style="list-style-type: none"> 1. <i>Thermal and microvibration characterization of a pulsating heat pipe (PHP) for space application</i> M. Wójcik; A. Jurkowski; K. Platek; Pietrowicz S.; A. Nowak; C. Czajkowski; T. Duraziński; P. Kołakowski; M. Kokot; V. Cleren 2. <i>Experimental Investigation and On-Orbit Application of Flexible Heat Pipes for China Space Station</i> C. Liu; H. Yi; L. Li; L. Wang; L. Cui; W. Lv; J. Huang; H. Zhang; J. Miao 3. <i>Development and Space Application of Deployable Thermal Radiators in China</i> L. Liu; Z. Fang; Q. Wu; H. Zhang; C. Liu; J. Huang; J. Miao 4. <i>Design of Pulsating Heat Pipe Interfaces for the Thermal Control of Solar Panels in the EXCITE CubeSat Project</i> M. Mameli; F. Iafrati; S. Filippeschi 5. <i>Oscillating Heat Pipe Enabled Lunar Thermal Storage</i> C. Wilson; S. Hilsenbeck; M. Merwin

13:10–14:00	Lunch	
14:00–16:00	Technical Session XI VAPOR CHAMBERS AND HEAT PIPES Session Chair Prof. Hosei Nagano	Technical Session XII HIGH TEMPERATURE HEAT PIPES Session Chair Prof. Abhijit Date
	<ol style="list-style-type: none"> 1. <i>Design and characterisation of an aluminium nitride vapor chamber for power electronics thermal management</i> T. Camus; B. Champel; M. Mariotto; L. Sterna 2. <i>Improving thermal efficiency in a wick-less vapor chamber by modifying surface wettability</i> I. Kurniawati; Y. Sung 3. <i>Estimation and Validation of Permeability for Mesh–Groove Composite Wick Integrated in an Ultra-Thin Vapor Chamber</i> P.-J. Wang; S.-C. Wong 4. <i>Investigation of the Thermal Performance Optimization of Heat Pipes: Role of Orientation and Working Fluid Type</i> S. Devesh; V. Gumtapure; T. K. Hotta 5. <i>Design of a Cryogenic Thermal Control System for Ground Validation of Space Power Transmission Systems Based on High-Temperature Superconducting Cables</i> Y. Wang; K. Xiao; G. Li; Q. Wu; H. Wang; S. Liu; F. Weng; H. Zhang; J. Miao 	<ol style="list-style-type: none"> 1. <i>Thermalhydraulics Benchmark on Modelling of Sodium Heat Pipes using Canadian Nuclear Laboratories Experiments</i> K. Podila, C. Azih, A. Morrelae, M. Anderson 2. <i>Performance Comparison of Sodium Heat Pipes with Different Wicks</i> P. Maqueo; C. Azih; R. MacCoy; R. McGrath 3. <i>Effect of Noncondensable Gas Pressure on Temperature Uniformity Characteristics of a Potassium Heat Pipe Furnace Liner</i> E. An; W. Joung 4. <i>Replicability of heat transfer experiments with sintered wick alkali metal (sodium) heat pipes at temperatures up to 700°C</i> C. Azih; P. Maqueo; R. MacCoy; R. McGrath; M. Anderson; N. Rousseau 5. <i>Experimental Investigation of a Potassium Heat Pipe at Different Inclination Angles</i> R. Meucci; A. Germini; S. I. C. Castro; R. Kulenovic; J. Starflinger
16:00–16:30	Coffee Break	
16:30–17:30	Technical Session XIII LHP Session Chair Prof. Marco Marengo	Technical Session XIV PHP/OHP Session Chair Prof. Abhijit Date
	<ol style="list-style-type: none"> 1. <i>Comparison Between Stainless-Steel and Copper as Casing Materials for Ultra-Thin Loop Heat Pipes</i> K. D. Domiciano; L. Krambeck; M. E. Beé; M. B. H. Mantelli 2. <i>Study for Optimizing Hydrodynamic Characteristics of Biporous Wicks in Loop Heat Pipes</i> R. Mizoguchi; M. Nishikawara; Y. Tsuji; S. Hongfei; A. Suzuki; M. Kobashi 3. <i>Startup Characteristics of a kW-Class Loop Heat Pipe with the Evaporator under Adverse Orientation</i> H. Lan; L. Bai; Y. Zhang; S. Nie; G. Lin 	<ol style="list-style-type: none"> 1. <i>Experimental investigation on the electricity generation and heat dissipation ability of a ferrofluid pulsating heat pipe</i> T. P. Nguyen; V. H. Duong; T. N. Nguyen; V. C. Le; Q. B. P. Doan; V. T. Mai; T. T. H. Pham; S.-M. Seo; M. S. Lee; 2. <i>Influence of Centrifugal Accelerations on Thermal Performance of Radial-Rotating Oscillating Heat Pipes</i> N. Qian; W. Ding; M. Marengo; S. Pietrowicz; J. Xu; Y. Fu 3. <i>Energy partition analysis in the grinding of Inconel-718 superalloy with heat pipe grinding wheel under MQL condition</i> Y. Fu; C. Li; F. Jiang; S. Pietrowicz; M. Marengo; N. Qian

Wednesday, May 27, 2026

Keynotes • Technical Sessions • Poster Session • Guided Tour • Gala Dinner

Time	Event	
9:00–9:45	Plenary Session III Keynote Lecture III Prof. Vincent Ayel <i>Flat Plate Pulsating Heat Pipes: operating principles and open issues, from ground to microgravity conditions</i> Session Chair Prof. Dariusz Mikielewicz	
9:45–10:15	Coffee Break	
10:15–12:15	Technical Session XV PHP/OHP Session Chair Prof. Slawomir Pietrowicz	Technical Session XVI HEAT PIPES APPLICATIONS Session Chair Prof. Jay M. Ochterbeck
	<ol style="list-style-type: none"> 1. <i>Characteristics of Oscillating Heat Pipe with Asymmetric Diameter Channel</i> H. Nagai; A. Kawaguchi 2. <i>Oscillating (Pulsating) Heat Pipe Operational Limits: Modeling and Validation</i> B. Drolen; C. Wilson 3. <i>Effect of sidewall thermal conductivity on the thermal performance of flat plate pulsating heat pipes</i> A. S. Labalte; H. Fatahi; A. Kumar; Amnache A.; L. G. Fr�chette 4. <i>Studies of PHP with CASCO code and its experimental validation</i> V. Nikolayev; S. Baji�; G. Boudier; E. Blond�; T. Coquard; M. Abela; M. Mameli; S. Fillipeschi 5. <i>Oscillating Heat Pipe Radiators for Intermediate Temperature Applications</i> A. Miller 6. <i>Impact-Triggered Rapid Vapor Generation from Metastable Liquid During Oscillating Heat Pipe Startup Revealed by Neutron Imaging</i> S. Mishkhas; J.-J. Peir; S.-L. Jeng; C.-C. Wang 	<ol style="list-style-type: none"> 1. <i>Additively manufactured planar sodium heat pipe: Capillary performance of Inconel 718 wicks</i> N. Hehmke; M. Weitzer; J. Karl 2. <i>Experimental and Numerical Studies on Cooling of LED headlamp in automotive by Closed-Loop Pulsating Heat Pipe</i> P. Charoensawan; N. Seehawong; M. Groll 3. <i>Effect of thermal boundary conditions on the dynamic behavior of heat pipe for low-powered electronic devices</i> C. Nashine; S. J. Hoque; S. K. Sarma; A. Iqbal 4. <i>Experimental Investigation of Mini Channel Heat Pipes</i> N. Iwata; V. Dupont; C Billet; Ch. Popper; A. De Ryckel 5. <i>Variable Conductance Radiator System for Space and Planetary Habitats</i> C. Tarau, R. Abdelmaksoud, J. Diebold, S. Rokkam, W. Johnson
12:15–13:15	Lunch	
13:15–14:15	Poster Session – Voting for the Best Poster	
16:00–17:30	Guided Tour – Walking Tour of Gdansk Old Town	
18:30–22:30	Gala Dinner – Great Armoury (Wielka Zbrojownia), Gdańsk Award Ceremony (George Grover Medal, Donald M. Ernst Award)	

Thursday, May 28, 2026

Round Table Discussion • Technical Sessions • Closing Ceremony

Time	Event	
09:15–10:30	Round Table Discussion on <i>Challenges and Opportunities for Heat Pipe Heat Exchangers in Industrial Applications</i> Dr. Helen Skop	
10:30–11:00	Coffee Break	
11:00–12:40	Technical Session XVII HEAT PIPE APPLICATIONS Session Chair Dr Pawel Szymański	Technical Session XVIII PHP AND LHP APPLICATIONS Session Chair Mr. Wolfgang Supper
	<ol style="list-style-type: none"> 1. <i>Numerical Study on Heat Pipe Cooling High Specific-power Motor in Near-space Solar UAV and Terrestrial Experiment Validation;</i> Z.-H. Xue; Y. Yu; W. Qu 2. <i>Thermal Management of Large Area Heat Loads Using Ar-Loop Heat Pipe</i> N. Van Velson; R. Kumar; J. Sonnek; C. Tarau 3. <i>Study on the Characteristics of a Loop Heat Pipe Applied to the Radiative Cooling System of a Space Optical Camera</i> J. J. Wen; R. Xie; B. Yang; J. Cheng; F. Cheng 4. <i>A New Cesium Heat Pipe Surface Temperature Calibrator Developed at National Institute of Metrology (NIM)</i> X. Yan; Y. Feng; L. Wang; W. Wang 5. <i>Inclination Effect on the Performance of Pulsating Heat Pipes for Electric Motor Cooling</i> H. Aziza, R. Boubaker, N. Iwata, V. Dupont, S. Harmand 	<ol style="list-style-type: none"> 1. <i>Exploratory Study of Pulsating Heat Pipes embedded as windings of an innovative Axial Flux Electric Motors</i> S. Filippeschi; M. Mameli; M. Petacco; N. Gori; C. Simonelli; L. Sani; A. Musolino 2. <i>First application of cooling in superconducting magnets by cryogenic pulsating heat pipes</i> T. Dixit; G. Authelet; V. Stepanov; T. Lecrevisse; P. Fazilleau; B. Baudouy 3. <i>Fused Deposition Modeling-Fabricated Pulsating Heat Pipe for Solar Thermal Desalination</i> T. Kulshrestha; M. K. Das; K. Muralidhar; I. Kong; A. Date, 4. <i>Capillary Jet Loop, experimental demonstration of the cooling capability of a flat-dcc box component for secondary electronic thermal management</i> V. Dupont; C. Popper; A. De Ryckel 5. <i>Effect of Inclination Angle against Gravity on the Start-up and Operating Performance of L-shaped Loop Heat Pipe</i> J. Cheng; R. Xie; X. Cui; J. Wen; B. Yang
12:40–13:20	Closing Ceremony Announcement of IHPC 2028 Host	
13:20–14:30	Lunch & Adjourn	

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