First day – December 17		
Time	**Activities**	
08:30-08:50	**Registration**	
08:50.09:00	**Opening**	
	ROOM 1 (R58)	**ROOM 2 (R59)**
09:00-09:40	**César A. Hidalgo – Plenary Talk** The Infinite Alphabet and the Laws of Knowledge	
09:40-10:00	**Juan Luis Orrego** IR - Teaching through molecular dynamics. A didactic tool mix for thermodynamics and phase transition topics in the national curriculum	**Yasmín Navarrete** IR - Quantum physics outside of physics: The case in human color perception
10:00-10:20	**Maria Aznar Palenzuela** BM - Bacteriophage T7: link between a virtual and an experimental, atomic force microscope (AFM)	**Alice Gomes** SM - General q-Gaussian solutions of a mean-field kinetic equation associated with the nonlinear Fokker-Planck equation
10:20-10:40	**Coffee Break**	
10:40-11:00	**Hernán Gallegos** IR - Analysis of Spatiotemporal Propagation of Wildfires in Chile using Complex Networks	**Constanza Rivas Ortega** SM - Quasi one dimensional model for active wetting
11:00-11:20	**Juan Illanes** IR - The Architecture of Innovation: Quantifying National Design Capacity through a Complexity Lens	**Sergio Davis** SM - Superstatistical Monte Carlo simulation of kappa-distributed particles using Gibbs sampling
11:20-11:45	**Ignacio Ormazábal** IR - Can we improve communication on the lunar ring road? An insight from complex networks	**Sergio Curilef** NS - Multi-Relaxation Time Model for Quasi-Stationary States
11:45-12:00	**Flash poster session – Group No. 1**	
12:00-13:00	**Posters session – Group No. 1**	
13:00-15:00	**Lunch**	
15:00-15:25	**Víctor Muñoz** CS - Activity and Cumulative Entropy in MHD Simulations via the GOY Shell Model with fractal forcing	**Eugenio Vogel** SM - Entropic function related to Shannon entropy
15.25-15.45	**Pedro Julián** CS - Optimal search strategies in diffusion with stochastic resetting	**Diego Mora** IP - The Thermodynamics of Binary Decisions: Statistical Inference in Two-State Systems
15.45-16.05	**Esteban Zuñiga Puelles** IR - Electrical and thermal transport in natural and synthetic PbS, FeS_2 and $PbCuSbS_3$	**Boris Atenas** IP - An Information Measure to Detect Grade Inflation
16.05-16.25	**Jason Peña** CS - How do line tension, bending energy, and kinetics influence viral capsid self-assembly?	**Angel R. Plastino** IR - Morphology of Emission Spectral Lines in Be Stars: The Entropy-Complexity Plane Approach
16.25-16.40	**Coffee Break – Transfer to the Physics Department Auditorium**	
16.25-16.40	**Luisberis Velazquez – Public Talk (In Spanish)** Repensar la Educación Superior: Una mirada desde los Sistemas Complejos	
17.20-18.20	**Welcome Cocktail**	

Poster Session – Group No. 1	
José Benítez Rojas - ML Analysis of physicochemical parameters with machine learning for water quality assessment in the Loa River	**Felipe Tabilo - ML** Optimization of brine extraction using Artificial intelligence decision schemes in Atacama's salt flat wells
Diego Garcia Venegas - ML Neural Networks and Machine Learning Algorithms Applied to Ising Model	**Alejandro Rozas - BM** Red blood cell aggregation dynamics
Francisco Remonsellez - CC Statistical signatures of plant effects on hyper-arid soil properties in the Atacama Desert	**Edward Larroza - CS** Nonlinear Fisher–Kolmogorov Equations for Macroeconomic Predator–Prey Dynamics
Joel Linares - CS Fluctuations and Complexity Measures for Particles in the Tight-Binding Model	**Henrry Revollo - CS** Statistical analysis of the results of the general elections in Bolivia: 2025
Rafael Riveros-Ávila - DS The role of centrality in the distribution of chimera states on Duffing oscillator networks	**Erick Marco Peredo Hervas - IP** Joint Bayesian Inference of Orbital and Accelerated Proper Motion Parameters from Astrometric and Radial Velocity Observations of V773 Tau A

Second day – December 18		
Time	**Activities**	
08:30-09:00	**Registration**	
	ROOM 1 (R58)	**ROOM 2 (R59)**
09:00-09:40	**Kornelius Nielsch – Plenary Talk** Material Interfaces taking Control of Thermoelectric	
09:40-10:00	**Bastian Castorene** QT - On the Maximum Quantum Work in Critical Stirling Engines: Applications to Fibonacci–Lucas Degeneracies	**Jaime Cisternas** DS - A Kuramoto network that can solve the Traveling Salesman Problem
10:00-10:20	**Desiderio Vasquez** NP - Density-driven convection for fronts described by the Nikolaesky equation	**Antonio Rodríguez** DS - Diffusion crossover between q-statistics and Boltzmann-Gibbs statistics in the alpha-XY model
10:20-10:40	**Coffee Break**	
10:40-11:00	**Victoria Acosta** NP - Equilibrium properties and magnetization dynamics of magnetic nanoscrews	**Nicolás Herrera** DS - Normal modes of graphene via proper orthogonal decomposition
11:00-11:20	**Pablo Vilela** NP - Effects of convection on exothermic reaction fronts in Hele-Shaw cells	**Anne da Fonseca** DS - Symmetry Breaking in Time-Dependent Billiards
11:20-11:45	**Patricio Vargas** QT - Quantum phase transition extension to finite temperatures	**Cesar Maldonado** DS - Critical behavior of connected dynamical systems of the interval
11:45-12:00	**Flash poster session – Group No. 2**	
12:00-13:00	**Posters session – Group No. 2**	
13:00-15:00	**Lunch**	
15:00-18.00	**Social Activity: Excursion to Key Landmarks in Antofagasta**	
20:00-22:00	**Official Dinner**	

Poster Session – Group No. 2	
Lucas Pierry - IR AI-Powered Quantification of Finger Tapping: A Step Toward Diagnosing Parkinson's Bradykinesia	**Montserrat del Pilar Miranda Arenas - IR** Biomimetic Leaf Replication for Evapotranspiration Studies in Plants
José Armando Yucra Olivera - IR Revision of the Güdel-Benz relationship: Data Updating and Statistical Reassessment Using MCMC	**Yuvineza Gómez-Leyton - IR** Volcanic Neutrinography: Computational simulation using neutrinos as probes to explore magmatic chambers
Katherine Llopis - IR Microbial Diversity Along a Lake-to-Glacier Gradient in Glacier Grey, Torres del Paine, Chile	**Joel Linares - IR** Using Remote Sensing Data Analysis to Improve Richness Searching in the North of Chile
Hishan Farfán - NS q-Simplex: A Geometric Framework for the q-Triplet	**Cristóbal Neira - NS** Shannon Entropy and Mutability Applied to Seismic Time and Magnitude Series: A Case Study of the Mw 8.4 Illapel 2015 Earthquake, Chile
Francisco Choque - NS Numerical study of the Vlasov equation with drag and external field	**Rene Moreira Calizaya - NS** Characterization of the Quasi-Stationary States in the d-HMF Model with an External Field

Third day – December 19		
Time	**Activities**	
	ROOM 1 (R58)	**ROOM 2 (R59)**
09:00-09:40	**Everton Santos Medeiros – Plenary Talk** Local control for the collective dynamics of self-propelled particles	
09:40-10:00	**Mario Molina** NP - Bound States in the Continuum in Fractional Quantum Lattices with Long-Range Hopping	**Mouna Sbai Idrissi** IR - Quantum physics outside of physics: The case in human color perception
10:00-10:20	**Rafael Riveros-Ávila** NP - Dissipative Rabi-like oscillations in an out-of-phase bi-localized parametrically driven system	**Javier Zamora** NS - Q-triplet characterization of solar wind time series near 1 AU
10:20-10:40	**Coffee Break**	
10:40-11:00	**Genly Leon** NP - Symbolic Laplace Modeling of Evolving Fractional Memory Kernels in Nonlinear Mechanical Systems	**Santiago V. Blas Laguzza** ML - Explainable Latent Representation Learning for Alzheimer's Disease: A β-VAE and Saliency Map Framework
11:00-11:20	**Edward Arévalo** NP - Formation and Dynamics of Periodic Spectrally Incoherent Solitons in Optical Fibers	**Carlos Cartes** IR - Mobility-based modeling of riot dynamics: application to Buenos Aires
11:20-11:45	**Orazio Descalzi** NP - Dissipative solitons in an optical fiber: stationary, oscillating and chaotic pulses	**Claudia Trejo Soto** IR - Filling phenomena in microfluidics: experimental and numerical approaches for rheological studies
11:45-12:00	**Flash poster session – Group No. 3**	
12:00-13:00	**Posters session – Group No. 3**	
13:00-15:00	**Lunch**	
15:00-15:40	**Roseli S. Wedemann – Plenary Talk** Some features of Fokker-Planck equations with power-law diffusion, curl forces and anisotropic potentials	
15:40-16:00	**Elías Santacruz** NS - Surface Tension and Interfacial Dynamics of Microscale Fluids Using SPH	**Dianela Herrera** ML - Monte-Carlo Optimization for Sampling Selection in Imbalanced Data Applied to Student Dropout Prediction
16:00-16.25	**Juan P. Carrillo-Mora** NS - Depinning and activated motion of chiral self-propelled robots	**Boris Maulén** SM - Configurational density of states from Abel's generalized integral equation
16.25-17:00	**Social Activity: Clausure Workshop**	

Poster Session – Group No. 3	
Luis Miguel Galvis Elizalde - NP Complex optimal landscapes in the generation of non-classical states of light via two coupled quantum oscillators	**Maria Teresa Veliz Aviles - NP** Approximate analytical functions for the eigenvalues of the Schrödinger equation with cubic anharmonic potential
Michel Aguilera - SM Thermodynamics of the 2D Dipolar Q-Clock Model: Exact calculation for small systems	**Matias Gonzalez - SM** Nonextensive primordial plasma, N_eff bounds, and a dynamical relaxation model for q
Juan Martin Rodriguez - SM Surface characterization by adsorption measurements: Competition between heterogeneous adsorption potential and adsorbate–adsorbate lateral interactions	**Camilo Lagos - SM** Statistical mechanics of a complex network of Ehrenfest urns
Martín Helmrich von Elgott Groves - SM Strain-Driven Inverse Chiral Skyrmion Stirling Engine	**Nikolas Naranjo - SM** Experimental study of granular flow in a 2D silo with a rotating obstacle
Nicolas Angel - SM Numerical Vlasov Dynamics and Nonequilibrium Transitions for the Dipole Hamiltonian Mean Field (d-HMF) Model	**Luisberis Velazquez - CS** Solvable Models of the Student Progression

IWoSP 2025 Topics

- **Artificial Intelligence & Machine Learning (ML)**
- **Biophysics modelling & Dynamics of biophysical systems (BM)**
- **Climate Change (CC)**
- **Complexity & Complex Systems (CS)**
- **Dynamical Systems (DS)**
- **Information Physics (IP)**
- **Interdisciplinary Research (IR)**
- **Nonequilibrium Systems (NS)**
- **Nonlinear Phenomena (NP)**
- **Quantum Thermodynamics (QT)**
- **Statistical Mechanics (SM)**