



FACULTAD DE
CIENCIAS
UNIVERSIDAD DEL BÍO-BÍO

PROGRAMACIÓN WORKSHOP EN MATEMÁTICA
MULTIDISCIPLINAR 2024

Miércoles 27

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| 14:30–15:00 | Apertura | |
| 15:00–16:00 | Enrique Zuazua FAU, Germany | TBA |
| Coffee Break | | |
| 16:30–17:00 | Élder Villamizar UIS, Colombia | Analysis of a water-biomass model in hydroecology |
| 17:00–17:30 | Diana Narváez UOH | Perturbed degenerate state-dependent sweeping processes with convex and nonconvex sets |
| 17:30–18:00 | Rodrigo Gutiérrez UCM | Binge drinking and sociocultural factors: A mathematical modeling from microenvironment individual's |

Jueves 28

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| 09:30–10:00 | Viviana Rivera UCM | Modelización matemática para el estudio de invasiones biológicas |
| 10:00–10:30 | Roberto Aedo UBB | Desarrollo de un sistema de caracterización del potencial de aguas subterráneas a través de técnicas de inteligencia artificial |

Coffee Break

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| 11:00–11:30 | Raimund Bürger UdeC | The effect of bias flow and numerical simulation of the transport of liquid components in a model of a flotation column |
| 11:30–12:00 | Gonzalo Rivera ULA | Virtual Element Methods for the Oseen Eigenvalue Problem: A Nonconforming Approach |

Almuerzo

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| 14:30–15:00 | Ana Belén Villegas UdeC | Assessing the functional response Holling type IV for the diatoms-zooplankton interaction |
| 15:00–15:30 | Gino Montecinos UFRO | Numerical algorithms for advection-diffusion-reaction equations based on a relaxation procedure, with biomedical applications |
| 15:30–16:00 | Edward Turner UBB | The hidden rhythms of life: How quasispecies dynamics reveal insights into cancer and viral adaptation |

Coffee Break

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| 16:30–17:00 | Rodrigo Lecaros UTFSM | Unique continuation and controllability for a non-local formulation of surface gravity waves |
| 17:00–17:30 | Diego Rueda UIS, Colombia | Numerical analysis for a diffusive SIS epidemic model with repulsive infected-taxis |
| 17:30–18:00 | Joaquín Fernández UBB | TBA |

Viernes 29

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| 09:00–09:30 | Nicolás Torres U. Granada, Spain | A qualitative analysis of an $A\beta$ -monomer model with inflammation processes for Alzheimer's disease |
| 09:30–10:00 | Yolanda Gómez UBB | Semiparametric approach with cure fraction for modeling oncology data |
| 10:00–10:30 | Miguel Serón UBB | TBA |

Coffee Break

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| 11:00–11:30 | Javier Vega UBB | Soluciones de eyección-colisión en el problema restringido parabólico de 3 cuerpos |
| 11:30–12:00 | Davide Fassino UPT, Italy | Adaptive Virtual Element Methods: from bi-dimensional to three-dimensional extensions |
| 12:00–12:30 | Yvan Baldera UCM | Modelamiento matemático de la biodegradación del PLA en compostaje |