

EVO*2025: EVOSTAR 2025

Program Committee Opening Keynote Closing
Keynote PROGRAM AUTHORS KEYWORDS

PROGRAM

Days: [Wednesday, April 23rd](#) [Thursday, April 24th](#)
[Friday, April 25th](#)

Wednesday, April 23rd

View this program: [with abstracts](#) [session overview](#) [talk overview](#)

09:15-09:40 Session 1: Conference opening

CHAIR: [Penousal Machado](#)

LOCATION: [Aula Magna](#)

09:40-10:40 Session 2: Plenary invited talk: Tea Tušar

CHAIR: [Eric Medvet](#)

LOCATION: [Aula Magna](#)

10:40-11:00 Coffee break

LOCATION: [Area Studio 5th floor](#)

11:00-13:15 Session 3A: EvoMUSART Image Making and Visual Art (i)

CHAIR: [Penousal Machado](#)

LOCATION: [Room A](#)

11:00 [Guillermo Iglesias](#), [Mar Zamorano](#) and [Federica Sarro](#)

Search-based Negative Prompt Optimisation for Text-to-Image Generation ([abstract](#))

11:25 [Samarth S Rao](#), [Saarth Vardhan](#), [Pavani R Acharya](#), [Oorjitha Ratna Jasthi](#) and [Natarajan Subramanyam](#)

An Ensemble Approach to Music Source Separation: A Comparative Analysis of Conventional and Hierarchical Stem Separation ([abstract](#))

11:50 [Marcel Salvenmoser](#) and [Michael Affenzeller](#)
Evolving the Embedding Space of Diffusion Models in the Field of Visual Arts ([abstract](#))

PRESENTER: [Marcel Salvenmoser](#)

12:00 [Amalia Foka](#)
Generating Virtual Landscapes and Environmental Narratives with StyleGAN2 ([abstract](#))

- 12:10 [Bruno Caldas Vianna](#)
Aesthetic biases and opacity tactics in the training of visual artificial intelligence models ([abstract](#))
- 12:20 [Claudia Rabaioli](#), [Alessandra Grossi](#) and [Francesca Gasparini](#)
Short video interestingness: a machine learning approach to determine creative cues in audiovisual production ([abstract](#))
- 12:30 [Daniel Lopes](#), [João Macedo](#), [Iria Santos](#), [Alvaro Torrente-Patiño](#), [João Correia](#) and [Penousal Machado](#)
Towards the Automatic Evaluation of Legibility for Graphic Design Posters ([abstract](#))
- 12:40 [Aven-Le Zhou](#), [Wei Wu](#), [Yu-Ao Wang](#) and [Kang Zhang](#)
Steering Large Text-to-Image Model for Abstract Art Synthesis: Preference-based Prompt Optimization and Visualization ([abstract](#))
- 12:50 [Veeramanohar Avudaiappan](#) and [Ritwik Murali](#)
Exploring Multi-Objective Evolution for Aesthetic & Abstract 3D Art ([abstract](#))
PRESENTER: [Ritwik Murali](#)

11:00-13:15 Session 3B: EML

CHAIR: [Mengjie Zhang](#)

LOCATION: [Room B](#)

- 11:00 [Leonardo Lucio Custode](#) and [Giovanni Iacca](#)
Social Interpretable Reinforcement Learning ([abstract](#))
- 11:25 [Joana Simões](#) and [João Correia](#)
EDCA - An Evolutionary Data-Centric AutoML Framework for Efficient Pipelines ([abstract](#))
- 11:50 [Francisco José Sedeño](#), [Jamal Toutouh](#) and [Francisco Chicano](#)
Generate more than one child in your co-evolutionary semi-supervised learning GAN ([abstract](#))
- 12:15 [Zimeng Lyu](#), [Devroop Kar](#), [Matthew Simoni](#), [Rohan Nadeem](#), [Avinash Bhojanapalli](#), [Hao Zhang](#) and [Travis Desell](#)
Evolving RNNs for Stock Forecasting: A Low Parameter Efficient Alternative to Transformers ([abstract](#))
- 12:40 [Kelly Hunter](#), [Sarah L. Thomson](#) and [Emma Hart](#)
Into the Black Box: Mining Variable Importance with XAI ([abstract](#))
- 13:05 [Hengzhe Zhang](#), [Alberto Tonda](#), [Qi Chen](#), [Bing Xue](#), [Evelyne Lutton](#) and [Mengjie Zhang](#)
Micro-Step Time-Series Regression: Insights from System Identification Using Symbolic Regression ([abstract](#))

PRESENTER: [Hengzhe Zhang](#)

11:00-13:15 Session 3C: EvoApplications: Misc Applications (i)

CHAIR: [Francisco Chavez](#)


LOCATION: [Room C](#)

11:00 [Erik Nielsen](#), [Andrea Ferigo](#) and [Giovanni Iacca](#)
A Coach-Based Quality-Diversity Approach for Multi-Agent Interpretable Reinforcement Learning ([abstract](#))

11:10 [Stefano Genetti](#), [Alberto Longobardi](#) and [Giovanni Iacca](#)
Evolutionary Reinforcement Learning for Interpretable Decision-Making in Supply Chain Management ([abstract](#))

11:20 [Fabian Köhnke](#) and [Christian Borgelt](#)
Variable-Size Genetic Network Programming for Portfolio Optimization with Trading Rules ([abstract](#))

PRESENTER: [Fabian Köhnke](#)

11:30 [Kritpol Bunjerdtaweeporn](#) and [Alberto Moraglio](#)
Building Cross-Sectional Trading Strategies via Geometric Semantic Genetic Programming ([abstract](#)) 

PRESENTER: [Kritpol Bunjerdtaweeporn](#)

11:40 [Wenlong Fu](#), [Qi Chen](#), [Bing Xue](#) and [Mengjie Zhang](#)
Facial Geometric Feature Extraction for Dimensional Emotion Analysis Using Genetic Programming ([abstract](#))

11:50 [Emanuele Nardone](#), [Tiziana D'Alessandro](#), [Claudio De Stefano](#) and [Francesco Fontanella](#)
Evolutionary Computation for Causality-Driven Feature Selection: A Preliminary Study ([abstract](#))

12:00 [Arthur Lequertier](#), [Alberto Tonda](#) and [Wolfram Liebermeister](#)
Inferring Reaction Elasticities from Metabolic Correlations in Cells through Multi-objective Evolutionary Optimization ([abstract](#))

12:10 [Diego Dantas Almeida](#), [Mariana Azevedo](#), [Victor Vieira](#), [Nelson Ion de Oliveira](#), [Anna Giselle Câmara Dantas Ribeiro Rodrigues](#), [Leonardo Bezerra](#), [Lucas Nunes](#), [Thaís Alves de Mendonça](#) and [Rodrigo Manfredini](#)
Optimizing the logistics operations of distribution network operators from a multinational electric utility company ([abstract](#))

12:20 [Ane Espeseth](#), [Martin Juříček](#), [Harald Michael Ludwig](#) and [Tea Tušar](#)
Hybrid Optimization of Horizontal Alignments in European Terrains: A Comparative Study ([abstract](#))

- 12:30 [Catalina Jaramillo Gonzalez](#), [Julian Togelius](#) and [Paul Squires](#)
Understanding trade-offs in classifier bias with quality-diversity optimization: an application to talent management ([abstract](#))
- 12:40 [Tea Tušar](#) and [Jordan N. Cork](#)
Using Local Correlation Between Objectives to Detect Problem Modality ([abstract](#))
- 12:50 [Quentin Renau](#) and [Emma Hart](#)
Algorithm Selection with Probing Trajectories: Benchmarking the Choice of Classifier Model ([abstract](#))

11:00-13:15 Session 3D: Late-Breaking Abstracts (LBAs)

CHAIR: [Antonio Mora](#)

LOCATION: [Room D](#)

- 11:00 [Vojtech Uher](#) and [Pavel Kromer](#)
Effect of Fitness Values Weighting on Clustering of Single-Objective Fitness Landscapes ([abstract](#))
- 11:10 [Lukas Hassel](#), [Kristian Verduin](#), [Bas Loyen](#), [Sarah Thomson](#), [Thomas Weise](#) and [Daan van den Berg](#)
The Traveling Tournament Problem: Constraint Violations for Different MaxStreak Values ([abstract](#))
- 11:20 [Bas Loyen](#), [Lukas Hassel](#), [Sarah Thomson](#), [Thomas Weise](#) and [Daan van den Berg](#)
The Traveling Tournament Problem: Valid Solutions are Very Different ([abstract](#))
- 11:30 [Chen Wang](#)
AI as Co-Creator: Reimagining Musical Authorship and Interaction in Human-AI Music Composition ([abstract](#))
- 11:40 [Hamid Assadi](#) and [Sam Cave](#)
Statistical-Mechanical Approach to Music: A Nature-Inspired Model for Rule-Free Composition ([abstract](#))
- 11:50 [William Langdon](#), [Justyna Petke](#) and [David Clark](#)
gem5/Z3/gcc/Clang/Redis glibc Heap Fitness Landscapes ([abstract](#))
- 12:00 [Juan Luis Jiménez Laredo](#), [Juan Julián Merelo Guervós](#), [Paulin Héleine](#) and [Damien Olivier](#)
Testing Self-Organized Load Balancing in Distributed Systems ([abstract](#))
- 12:10 [Luca Puzoli](#), [Gabriele Sbaiz](#) and [Luca Manzoni](#)
Multi-objective particle swarm optimization for environmental risk/benefit analysis ([abstract](#))
- 12:20 [Massimiliano Kaucic](#)
An Automated Financial Management System for Risk Budgeting Portfolio Optimization ([abstract](#))

- 12:30 [Anthony Rasulo](#), [Julia Handl](#), [Kate Smith-Miles](#),
[Mario Andrés Muñoz](#) and [Manuel López-Ibáñez](#)
**Extending Instance Space Analysis via
Bipartite Network Communities** ([abstract](#))
- 12:40 [Hamish Pike](#)
Image classification by evolving bytecode
([abstract](#))
- 12:50 [Hiram Calvo](#), [Omar Juárez Gambino](#), [Consuelo-
Varinia García-Mendoza](#) and [Miguel Gabriel
Villarreal-Cervantes](#)
**Differential Evolution for Optimizing Ensemble
Weights in Multiclass Sentiment Classification**
([abstract](#))
- 13:00 [Julio Losada Rodríguez](#), [Pedro Castillo](#), [Antonio
Mora](#) and [Pablo García-Sánchez](#)
**Using SHAP to visualize Pre-Match Outcome
Prediction in Dota 2** ([abstract](#))
- 13:10 [Thanh Tung Ta Tran](#), [Tu Binh Vuong](#), [Minh Hoan
Tran](#), [Minh Hoang Vu](#) and [Cong Binh Dinh](#)
**Multi-Modal Fusion Techniques for Detecting
Abnormal Events in Videos** ([abstract](#))

13:15-14:15 Lunch

LOCATION: [Area Studio 5th floor](#)

14:15-16:05 Session 4A: EuroGP Best Paper
nominations

CHAIRS: [Bing Xue](#) and [Luca Manzoni](#)

LOCATION: [Room A](#)

- 14:15 [Marko Đurasević](#), [Mateja Đumić](#), [Francisco Gil-
Gala](#) and [Domagoj Jakobovic](#)
**Designing Lookahead Relocation Rules for the
Container Relocation Problem with Genetic
Programming** ([abstract](#))
- 14:40 [Claude Carlet](#), [Marko Đurasević](#), [Domagoj
Jakobovic](#), [Stjepan Picek](#) and [Luca Mariot](#)
**A Systematic Evaluation of Evolving Highly
Nonlinear Boolean Functions in Odd Sizes**
([abstract](#))
- 15:05 [Martin Hurta](#), [Anna Ovesna](#), [Vojtech Mrazek](#) and
[Lukas Sekanina](#)
**Multi-Objective Evolutionary Design of
Explainable EEG Classifier** ([abstract](#))
PRESENTER: [Martin Hurta](#)
- 15:30 [W B Langdon](#) and [David Clark](#)
**Population Diversity, Information Theory and
Genetic Improvement** ([abstract](#))
PRESENTER: [David Clark](#)
- 15:55 [Guillaume Doquet](#)
Unified Piecewise Symbolic Regression
([abstract](#))

14:15-16:05 Session 4B: EvoMUSART: Music and
Sound (i)

CHAIR: [Antonios Liapis](#)

LOCATION: [Room B](#)

14:15 [Arash Sadeghi Amjadi](#), [Andrew Vardy](#) and [Andrew Staniland](#)

**Towards Human-Quality Music
Accompaniment using Deep Generative
Models and Transformers** ([abstract](#))

14:40 [João Ramos](#), [Rolando Miragaia](#), [Gustavo Reis](#),
[Patrício Domingues](#) and [Carlos Grilo](#)

**Exploiting the Temporal Order of Sound
Features for Onset Detection** ([abstract](#))

15:05 [Luís Arandas](#), [Iulia Ionescu](#), [Murad Khan](#), [Mick Grierson](#) and [Miguel Carvalhais](#)

**All YIN No YANG: Geometric abstraction of oil
paintings with trained models, noise and self-
reference** ([abstract](#))

15:15 [Raymond Conlin](#) and [Colm O' Riordan](#)

Music Similarity Through Geometric Overlap
([abstract](#))

15:25 [Adam Deedman](#) and [Mathieu Barthet](#)

**Graph Neural Network vs Feature-based Folk
Music Evolution Analysis** ([abstract](#))

15:35 [Nicolás Rojas-Morales](#)

**Automated Selection and Ordering of Clip
Sequences for Music Videos based on Tonal
Tension and Visual Features** ([abstract](#))

15:45 [Pratik Khanal](#) and [Patrick J. Donnelly](#)

**EmotioNotes Dataset: Decoding emotions in
classical music through Concert Program
Notes** ([abstract](#))

15:55 [Petr Strepetov](#) and [Dmitrii Kovalev](#)

**SyMuRBench: Benchmark for symbolic music
representations** ([abstract](#))

14:15-16:05 Session 4C: EvoApplications:
Computational Intelligence for Sustainability

CHAIR: [Jamal Toutouh](#)

LOCATION: [Room C](#)

14:15 [Raziyeh Moghaddas](#), [Fabio Caraffini](#) and [Monika Seisenberger](#)

**A Multi-Agent System for Optimal Train
Scheduling in Single-Track Railways** ([abstract](#))

14:40 [Vahid Rasouli](#), [Álvaro Gomes](#) and [Carlos Henggeler Antunes](#)

**A Genetic Algorithm Approach for
Aggregation of Residential Electricity
Prosumers' Flexibility** ([abstract](#))

15:05 [Igor de Matos da Rosa](#), [Alison R Panisson](#) and
[Lenon Schmitz](#)

**A PSO-based MPPT with Dynamic Monitoring
Reset for PV Systems** ([abstract](#))

- 15:30 [Torjus Kallekleiv](#) and [Ole Jakob Mengshoel](#)
Fair Ambulance Allocation via Multi-Objective Evolutionary Optimization ([abstract](#))
- 15:55 [Josefa Díaz Álvarez](#), [Francisco Chavez](#) and [María José Moñino Espino](#)
An innovative approach for managing the water requirements of fig trees using artificial intelligence ([abstract](#))

14:15-16:05 Session 4D: EvoApplications: EvoLLMs

CHAIR: [Niki van Stein](#)

LOCATION: [Room D](#)

- 14:15 [Kevin Sim](#), [Quentin Renau](#) and [Emma Hart](#)
Beyond the Hype: Benchmarking LLM-Evolved Heuristics for Bin Packing ([abstract](#))
- 14:40 [Arthur Buzelin](#), [Yan Aquino](#), [Victoria Estanislau](#), [Pedro Bento](#), [Lucas Dayrell](#), [Samira Malaquias](#), [Caio Santana Trigueiro](#), [Guilherme Evangelista](#), [Caio Grossi](#), [Pedro Rigueira](#), [Luisa Gontijo Porfirio](#), [Marcelo Sartori Locatelli](#), [Wagner Meira Jr](#) and [Gisele Pappa](#)
Evolutionary Bias Identification with Embeddings ([abstract](#))
- 15:05 [Haoran Yin](#), [Anna Kononova](#), [Thomas Bäck](#) and [Niki Van Stein](#)
Controlling the Mutation in Large Language Models for the Efficient Evolution of Algorithms ([abstract](#))
- 15:30 [Roman Senkerik](#), [Adam Viktorin](#), [Tomas Kadavy](#), [Jozef Kovac](#), [Peter Janku](#), [Libor Pekar](#), [Hubert Guzowski](#), [Maciej Smolka](#), [Aleksander Byrski](#) and [Michal Pluhacek](#)
Open and Closed-source Models for LLM-generated Metaheuristics Solving Engineering Optimization Problem ([abstract](#))
- 15:40 [Francesca Da Ros](#), [Luca Di Gaspero](#) and [Kevin Roitero](#)
Probing LLMs on Optimization Problems: Can They Recall and Interpret Problem Features? ([abstract](#))

16:05-16:25 Coffee break

LOCATION: [Area Studio 5th floor](#)

16:25-17:45 Session 5A: EvoMUSART Best Paper Nominations

CHAIRS: [Penousal Machado](#) and [Colin Johnson](#)

LOCATION: [Room A](#)

- 16:25 [Keshav Bhandari](#) and [Simon Colton](#)
Yin-Yang: Developing Motifs With Long-Term Structure And Controllability ([abstract](#))

- 16:50 [Roisin Loughran](#) and [Ceara Treacy](#)
AI in Music and Healthcare: A Comparative Survey ([abstract](#))
- 17:15 [Josh Bruegger](#), [Diana Catana](#), [Vanja Macovaz](#),
[Matias Valdenegro-Toro](#), [Matthia Sabatelli](#) and
[Marco Zulich](#)
Large-image Object Detection for Fine-grained Recognition of Punches Patterns in Medieval Panel Painting ([abstract](#))

16:25-17:45 Session 5B: EvoApplications: Edge, fog & cloud + IASP&PR

CHAIR: [Stefano Cagnoni](#)

LOCATION: [Room B](#)

- 16:25 [Michal Bidlo](#) and [Ivana Saranova](#)
Multi-Purpose Image Filter Evolution Using Cellular Automata and Function-Based Conditional Rules ([abstract](#))
- 16:50 [Zhengxin Fang](#), [Hui Ma](#), [Gang Chen](#), [Sven Hartmann](#) and [Shiping Chen](#)
A Communication-aware and Energy-efficient Genetic Programming based Method for Dynamic Resource Allocation in Clouds ([abstract](#))
- 17:15 [Mir Hassan](#), [Kasim Sinan Yildirim](#) and [Giovanni Iacca](#)
A Genetic Algorithm-Based Parameter Selection for Communication-Efficient Federated Learning ([abstract](#))
 PRESENTER: [Mir Hassan](#)

16:25-17:45 Session 5C: EvoApplications: Advances in EC (ii)

CHAIR: [Emma Hart](#)

LOCATION: [Room C](#)

- 16:25 [Harald Michael Ludwig](#), [Ane Espeseth](#) and [Eric Medvet](#)
Trace-Elites: better Quality-Diversity with Multi-Point Descriptors ([abstract](#))
- 16:50 [Bruno Gašperov](#) and [Branko Šter](#)
Climbing the tower of meta-mutations - the role of higher-order mutations ([abstract](#))
- 17:15 [Sarah L. Thomson](#), [Quentin Renau](#), [Diederick Vermetten](#), [Emma Hart](#), [Niki van Stein](#) and [Anna V. Kononova](#)
Stalling in Space: Attractor Analysis for any Algorithm ([abstract](#))

16:25-17:45 Session 5D: EuroGP (i)

CHAIR: [Luca Manzoni](#)

LOCATION: [Room D](#)

- 16:25 [Gloria Pietropolli](#), [Davide Farinati](#), [Mauro Castelli](#),
[Luca Manzoni](#), [Sara Silva](#) and [Leonardo](#)

[Vanneschi](#)

Introducing Crossover in SLIM-GSGP ([abstract](#))

16:50 [Davide Farinati](#), [Gloria Pietropolli](#) and [Leonardo Vanneschi](#)

Exploring the Impact of Data Scale on Mutation Step Size in SLIM-GSGP ([abstract](#))

17:15 [Alina Geiger](#), [Martin Briesch](#), [Dominik Sobania](#) and [Franz Rothlauf](#)

Was Tournament Selection All We Ever Needed? A Critical Reflection on Lexicase Selection ([abstract](#))

17:25 [Giorgia Nadizar](#), [Francesco Rusin](#), [Eric Medvet](#) and [Gabriela Ochoa](#)

The Role of Stepping Stones in MAP-Elites: Insights from Search Trajectory Networks ([abstract](#))

17:35 [Camilo De La Torre](#), [Giorgia Nadizar](#), [Yuri Lavinas](#), [Robin Schwob](#), [Camille Franchet](#), [Hervé Luga](#), [Dennis Wilson](#) and [Sylvain Cussat-Blanc](#)

Evolved and Transparent Pipelines for Biomedical Image Classification ([abstract](#))

17:45-18:00 Break

18:00-20:00 Session 6: Poster session

LOCATION: [Area Studio 5th floor](#)

Thursday, April 24th

View this program: [with abstracts](#) [session overview](#) [talk overview](#)

09:00-11:00 Session 7A: EvoCOP: Applications

CHAIR: [Marie-Louise Lackner](#)

LOCATION: [Room A](#)

09:00 [Francesca Da Ros](#), [Luca Di Gaspero](#), [Marie-Louise Lackner](#) and [Nysret Musliu](#)

Instance Space Analysis and Algorithm Selection for a Parallel Batch Scheduling Problem ([abstract](#))

09:25 [Yuan Tian](#), [Yi Mei](#) and [Mengjie Zhang](#)

Generating (Semi-)Active Schedules for Dynamic Multi-mode Project Scheduling Using Genetic Programming Hyper-heuristics ([abstract](#))

09:50 [Corentin Juvigny](#), [Diego Delle Donne](#) and [Laurent Alfandari](#)

A Genetic Approach to the Operational Freight-on-Transit problem ([abstract](#))

10:15 [Justin Scouarnec](#), [Sara Tarij](#), [Corinne Lucet](#) and [Laure Brisoux-Devendeville](#)

Healthcare Facility Location Problem and Fitness Landscape Analysis ([abstract](#))

10:40 [Aldy Gunawan](#), [Samuel Alan Darmasaputra](#), [Sy Hoang Do](#) and [Vincent F Yu](#)

A Selective Vehicle Routing Problem for the Bloodmobile System ([abstract](#))

09:00-11:00 Session 7B: EvoApplications: Engineering

CHAIR: [Aniko Ekart](#)

LOCATION: [Room B](#)

09:00 [Kyriacos Mosphilis](#) and [Vassilis Vassiliades](#)

Optimizing Camera Placement for Chicken Farm Monitoring ([abstract](#))

PRESENTER: [Kyriacos Mosphilis](#)

09:25 [Suet Lee](#) and [Sabine Hauer](#)

Evolving Dynamic Fault Mitigation Strategies in a Robot Swarm for Collective Transport ([abstract](#))

09:50 [Mujtaba Hassan](#), [Jo Vliegen](#), [Stjepan Picek](#) and [Nele Mentens](#)

Designing Hardware-Friendly Hash Functions for Network Security Using Cartesian Genetic Programming ([abstract](#))

10:15 [Francesco Rusin](#), [Jan Fiala](#), [Julian Sanker](#) and [Aniko Ekart](#)

The Importance of Being Earnest: Multiple Heterogeneous Container Loading with a Simple Genetic Algorithm ([abstract](#))

09:00-11:00 Session 7C: EvoApplications: Bioinformatics and Health

CHAIR: [Stephen Smith](#)

LOCATION: [Room C](#)

09:00 [António Gaspar-Cunha](#), [João Melo](#), [Tomás Marques](#) and [António Pontes](#)

Methodology for Designing Injection Molds: Data Mining and Multi-Objective Optimization ([abstract](#))

09:25 [Steven Dockter](#), [Qi Chen](#), [Deepak Karunakaran](#) and [Yongshi Deng](#)

Analysis of Illicit Drug Mixtures at Festivals Using Portable Near-Infrared Spectroscopy with Genetic Programming ([abstract](#))

09:50 [Aidan Murphy](#), [Mark Kocherovsky](#), [Nir Dayan](#), [Illya Miralavy](#), [Assaf Gilad](#) and [Wolfgang Banzhaf](#)

A Symbolic Regression Screening Approach within Peptide Optimisation ([abstract](#))

09:00-11:00 Session 7D: EvoApplications: Real World Systems

CHAIR: [Francisco Fernandez De Vega](#)

LOCATION: [Room D](#)

09:00 [Agathe Métaireau Manche](#), [Clarisse Dhaenens](#), [Nadarajen Veerapen](#) and [Manuel Davy](#)

Adaptive Local Search for Real-World Multi-

Echelon Inventory Control ([abstract](#))

09:25 [Iqra Azfar](#), [Rabia Shahab](#), [Javeria Azfar](#) and [Syeda Saleha Raza](#)

Optimizing Dietary Plans Using Evolutionary Algorithms ([abstract](#))

09:50 [Elia Pacioni](#), [Francisco Fernandez De Vega](#) and [Davide Calvaresi](#)

FedGP: Genetic Programming for Evolutionary Aggregation in Federated Learning with Non-IID data ([abstract](#))

10:15 [Piper Welch](#), [Monica Li](#), [Shawn Beaulieu](#), [Annie Xia](#), [Dong Wang](#), [Medha Goyal](#), [Atoosa Parsa](#), [Corey O'Hern](#), [Rebecca Kramer](#) and [Josh Bongard](#)

Greater AI Design Control Aids Evolution of Computational Materials ([abstract](#))

11:00-11:20 Coffee break

LOCATION: [Area Studio 5th floor](#)

11:20-12:20 Session 8A: EvoApplications: Games

CHAIR: [Alberto Tonda](#)

LOCATION: [Room A](#)

11:20 [Florian Richoux](#)

Injecting Combinatorial Optimization into MCTS: Application to the Board Game boop. ([abstract](#))

11:45 [Dmytro Vitel](#), [Alessio Gaspar](#) and [Paul Wiegand](#)

Robust search for the underlying objectives in black-box games with binary outcomes ([abstract](#))

11:20-12:20 Session 8B: EvoMUSART: Image Making and Visual Art (ii)

CHAIR: [Aniko Ekart](#)

LOCATION: [Room B](#)

11:20 [Olga Vechtomova](#) and [Gaurav Sahu](#)

Balancing Indeterminacy and Structure: Neural Text Generation for Artistic Inspiration ([abstract](#))

11:45 [Jiaqi Wu](#) and [Eytan Adar](#)

Exploring Bridges Between Creative Coding and Visual Generative AI ([abstract](#))

11:20-12:20 Session 8C: EvoApplications: 30 years of PSO (i)

CHAIR: [Leonardo Vanneschi](#)

LOCATION: [Room C](#)

11:20 [Matteo Grazioso](#), [Chiara Gallese](#), [Leonardo Vanneschi](#) and [Marco S. Nobile](#)

A Survey of Modern Hybrid Particle Swarm Optimization Algorithms ([abstract](#))

11:45 [Daniele Papetti](#), [Andrea Tangherloni](#), [Vasco Coelho](#), [Daniela Besozzi](#), [Paolo Cazzaniga](#) and [Marco S. Nobile](#)
**We are Sending you Back... to the Optimum!
Fuzzy Time Travel Particle Swarm Optimization**
([abstract](#))

11:20-12:20 Session 8D: EvoApplications: Misc applications (ii)

CHAIR: [Sarah L. Thomson](#)

LOCATION: [Room D](#)

11:20 [Piper Welch](#), [Atoosa Parsa](#), [Shawn Beaulieu](#), [Corey O'Hern](#), [Rebecca Kramer](#) and [Josh Bongard](#)
Scalable Evolution of Logically Independent Polycomputational Materials ([abstract](#))

11:45 [Francesca Da Ros](#), [Luca Di Gaspero](#), [Marie-Louise Lackner](#), [Nysret Musliu](#) and [Michael Soprano](#)
Search Trajectory Networks Applied to a Real-world Parallel Batch Scheduling Problem
([abstract](#))

12:20-13:20 Session 9: Student workshop

CHAIRS: [Jéssica Parente](#) and [Alina Geiger](#)

LOCATION: [Room A](#)

13:20-14:20 Lunch

LOCATION: [Area Studio 5th floor](#)

14:20-16:00 Session 10A: EvoApplications Best Paper nominations

CHAIRS: [Emma Hart](#) and [Pablo García-Sánchez](#)

LOCATION: [Room A](#)

14:20 [Taran Cyriac John](#), [Qurrat Ul Ain](#), [Harith Al-Sahaf](#) and [Mengjie Zhang](#)
Genetic Programming with Co-operative Co-evolution for Feature Manipulation in Basal Cell Carcinoma Identification ([abstract](#))

14:45 [Max Taylor-Davies](#), [Gautier Hamon](#), [Timothé Boulet](#) and [Clement Moulin-Frier](#)
Emergent kin selection of altruistic feeding behaviour via non-episodic neuroevolution
([abstract](#))

15:10 [Ángel Fuentes-Almoguera](#), [Carlos García-Martínez](#) and [Gabriel Luque](#)
GPBus: Genetic Programming based Automated Machine Learning for Bus Delay Prediction ([abstract](#))

14:20-16:00 Session 10B: EvoMUSART: Music and Sound (ii)

CHAIR: [Roisin Loughran](#)

LOCATION: [Room B](#)

- 14:20 [Matteo Bizzarri](#) and [Satoshi Tojo](#)
**Foundations of LLCM: Labelled Lambek
 Calculus for Music Analysis** ([abstract](#))
- 14:45 [Elia Pacioni](#) and [Francisco Fernandez De Vega](#)
**Combining local search and directed mutation
 in evolutionary approaches to 4-part harmony**
 ([abstract](#))
- 15:10 [Thomas Didiot-Cook](#)
**Cellular Au-Tonnetz: A Unified Audio-Visual
 MIDI Generator Using Tonnetz, Cellular
 Automata, and IoT** ([abstract](#))
- 15:35 [Roberto Gallotta](#), [Antonios Liapis](#) and [Georgios N.
 Yannakakis](#)
**The Importance of Context in Image
 Generation: A Case Study for Video Game
 Sprites** ([abstract](#))

14:20-16:00 Session 10C: EuroGP (ii)

CHAIR: [Bing Xue](#)

LOCATION: [Room C](#)

- 14:20 [Luigi Rovito](#), [Lorenzo Bonin](#), [Davide Farinati](#),
[Leonardo Vanneschi](#), [Luca Manzoni](#), [Andrea De
 Lorenzo](#) and [Gloria Pietropoli](#)
**Exploring the Integration of Cellular Structures
 in Genetic Programming-based Methods**
 ([abstract](#))
- 14:45 [Khulud Alharthi](#), [Zahraa S Abdallah](#) and [Sabine
 Hauert](#)
**Ghost Swarms: Learning Swarm Rules from
 Environmental Changes Alone** ([abstract](#))
- 15:10 [Mark Kocherovsky](#), [Marzieh Kianinejad](#), [Ilyya
 Bakurov](#) and [Wolfgang Banzhaf](#)
**On the Effectiveness of Crossover Operators
 in Cartesian Genetic Programming** ([abstract](#))
- 15:35 [Julian Trautwein](#), [Michael Heider](#), [Henning Cui](#)
 and [Jörg Hähner](#)
**Ant-based Metaheuristics Struggle to Solve
 the Cartesian Genetic Programming Learning
 Task** ([abstract](#))

14:20-16:00 Session 10D: EvoCOP: Seeds of
 Inspiration

CHAIR: [Stefan Voss](#)

LOCATION: [Room D](#)

- 14:20 [Ze Wang](#), [Tim Suess](#), [Nikolay Popov](#) and [Lars
 Nagel](#)
**Price-and-branch Heuristic for Vector Bin
 Packing** ([abstract](#))
 PRESENTER: [Ze Wang](#)
- 14:45 [Corentin Masson](#), [Xavier F. C. Sánchez-Díaz](#) and
[Ole Jakob Mengshoel](#)
**Visualizing Pseudo-Boolean Functions:
 Feature Selection and Regularization for**

Machine Learning ([abstract](#))

15:10 [Aishwarya Radhakrishnan](#) and [Timo Kötzing](#)
Mixed-Binary Problems Optimized with Fast Discrete Solver ([abstract](#))

PRESENTER: [Aishwarya Radhakrishnan](#)

15:35 [Simon Anderer](#), [Nicolas Justen](#), [Bernd Scheuermann](#) and [Sanaz Mostaghim](#)
Studies on Survival Strategies to Protect Expert Knowledge in Evolutionary Algorithms for Interactive Role Mining ([abstract](#))

16:00-16:20 Coffee break

LOCATION: [Area Studio 5th floor](#)

16:20-18:00 Session 11A: EvoCOP Best Paper nominations

CHAIR: [Martin Krejca](#)

LOCATION: [Room A](#)

16:20 [Tarek Boufar](#), [Omar Rifki](#) and [Matthieu Basseur](#)
Diversification through Candidate Sampling for a Non-Iterated Lin-Kernighan-Helsgaun Algorithm ([abstract](#))

16:45 [Aishwaryaprajna](#) and [Jonathan Rowe](#)
Evolutionary Anytime Algorithms ([abstract](#))

17:10 [Arnaud Liefooghe](#), [Gabriela Ochoa](#) and [Sébastien Verel](#)
LON/D — Sub-problem Landscapes in Multi-objective Decomposition ([abstract](#))

17:35 [Sumit Adak](#) and [Carsten Witt](#)
A Runtime Analysis of the Multi-Valued Compact Genetic Algorithm on Generalized LeadingOnes ([abstract](#))

16:20-18:00 Session 11B: EvoApplications: Digital Healthcare and Personalised Medicine + Analysis of EC Methods

CHAIR: [Marta Vallejo](#)

LOCATION: [Room B](#)

16:20 [Chiara Camilla Migliore Rambaldi](#), [David Stanicel](#), [Marco Roveri](#) and [Giovanni Iacca](#)
Addressing Radiotherapy Scheduling with a Bin Packing Problem Formulation: A Comparative Study of Exact Solvers and Genetic Algorithms ([abstract](#))

16:45 [Yumnah Hasan](#), [Allan de Lima](#), [Darían Fernández de Bulnes](#), [Douglas Motadías](#) and [Conor Ryan](#)
Grammatical Feature Construction for Enhanced Interpretability in Breast Cancer Classification ([abstract](#))

17:10 [Xinxin Xu](#), [Fangfang Zhang](#), [Yi Mei](#), [Mengjie Zhang](#), [Huili Gong](#) and [Xiangqian Ding](#)
Multi-Tree Genetic Programming for Dynamic Tugboat Scheduling ([abstract](#))

17:35 [Jose Manuel Muñoz](#), [Odin Moron-Garcia](#), [Omar Costilla-Reyes](#) and [J. Ignacio Hidalgo](#)
Estimation of total body fat using symbolic regression and evolutionary algorithms.
([abstract](#))

16:20-18:00 Session 11C: EvoApplications: Advances in EC

CHAIR: [Pablo García-Sánchez](#)

LOCATION: [Room C](#)

16:20 [Claude Carlet](#), [Marko Đurasević](#), [Domagoj Jakobovic](#), [Luca Mariot](#) and [Stjepan Picek](#)
The More the Merrier: On Evolving Five-valued Spectra Boolean Functions ([abstract](#))

16:45 [Renan Beran Kilic](#), [Kasim Sinan Yildirim](#) and [Giovanni Iacca](#)
Multi-Objective Evolutionary Optimization of Virtualized Fast Feedforward Networks
([abstract](#))

PRESENTER: [Renan Beran Kilic](#)

17:10 [Tobias Rodemann](#) and [Christiane Attig](#)
Real Application Challenges in Evolutionary Optimization? People! ([abstract](#))

17:35 [Yang Cao](#), [Rui Zhong](#), [Jun Yu](#) and [Masaharu Munetomo](#)
Adjacent Distance Matrix-based Competitive Swarm Optimizer ([abstract](#))

16:20-18:00 Session 11D: EvoApplications: 30 years of PSO (ii)

CHAIR: [Marco S. Nobile](#)

LOCATION: [Room D](#)

16:20 [David Ibehej](#) and [Jakub Kudela](#)
An Investigation of Structural Bias in Particle Swarm Optimization ([abstract](#))

16:45 [So Fukuhara](#) and [Masao Arakawa](#)
Proposal of Efficient Particle Swarm Optimization for Constrained Optimization Problems ([abstract](#))

17:10 [Alberto Moraglio](#) and [James McDermott](#)
Geometric Particle Swarm Optimization in Program Trace Optimization ([abstract](#))

17:35 [Nathan Patera](#) and [John Sheppard](#)
Analyzing the Effects of Memetic Variations on Convergence in Overlapping Swarm Intelligence ([abstract](#))

18:00-19:30 On your own

19:30-22:00 Conference dinner

Friday, April 25th

View this program: [with abstracts](#) [session](#)

[overview](#) [talk overview](#)

09:30-11:00 Session 12A: EvoMUSART: Stories and Animation

CHAIR: [Colin Johnson](#)

LOCATION: [Room A](#)

09:30 [Brian Zimmerman](#), [Gaurav Sahu](#) and [Olga Vechtomova](#)

Future Sight: Fine-tuning Language Models for Dynamic Story Generation ([abstract](#))

09:55 [Youchun Liu](#), [Lei Wang](#) and [Danqi Zheng](#)

Exploring the Application of AIGC in Ink-Wash Animation Creation: A Case Study of Dragon Gate ([abstract](#))

10:20 [Dalong Hu](#), [Minsoo Choi](#), [Nandhini Giri](#), [Christos Mousas](#) and [Nicoletta Adamo-Villani](#)

Perceptions of AI in Animation Production ([abstract](#))

09:30-11:00 Session 12B: EvoCOP: Learning-Based Approaches

CHAIR: [Gabriela Ochoa](#)

LOCATION: [Room B](#)

09:30 [Olivier Goudet](#), [Adrien Goeffon](#), [Frédéric Saubion](#) and [Sébastien Verel](#)

Meta-learning of Univariate Estimation-of-Distribution Algorithms for Pseudo-Boolean Problems ([abstract](#))

09:55 [Saba Sadeghi Ahouei](#), [Denis Antipov](#), [Aneta Neumann](#) and [Frank Neumann](#)

Feature-based Evolutionary Diversity Optimization of Discriminating Instances for Chance-constrained Optimization Problems ([abstract](#))

10:20 [Malek Sarhani](#) and [Stefan Voss](#)

Adaptive neighborhood search based on landscape learning: a TSP study ([abstract](#))

09:30-11:00 Session 12C: EvoApplications: Green computing & sustainable complex systems

CHAIR: [Josefa Díaz Álvarez](#)

LOCATION: [Room C](#)

09:30 [Carlos Cotta](#) and [Jesús Martínez Cruz](#)

Evaluating the Impact of Hysteretic Phenomena and Implementation Choices on Energy Consumption in Evolutionary Algorithms ([abstract](#))

09:55 [Francisco Chávez de la O](#), [Josefa Díaz Álvarez](#) and [María José Moñino Espino](#)

Hybridization of techniques based on Genetic Algorithms and Neural Networks to determine the water requirements of fig trees. ([abstract](#))

10:05 [Jj Merelo](#), [Gustavo Romero López](#) and [Mario Garcia Valdez](#)

Measuring energy consumption of BBOB fitness functions ([abstract](#))

11:00-11:30 Coffee break

LOCATION: [Area Studio 5th floor](#)

11:30-12:30 Session 13: Plenary invited talk: Daniela Besozzi

CHAIR: [Leonardo Vanneschi](#)

LOCATION: [Aula Magna](#)

12:30-13:30 Session 14: Conference closing

LOCATION: [Aula Magna](#)

13:30-14:15 Lunch

LOCATION: [Area Studio 5th floor](#)

14:15-15:15 Session 15: SPECIES AGM

CHAIR: [Penousal Machado](#)

LOCATION: [Aula Magna](#)

15:15-18:00 Optional afternoon social trip

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