Conference
Tutorial
Tutorial at GECCO 2017
Tutorial
Programming grammatical genetic programming, wireless communications networks
heat recovery
Algorithm on Onemax
evolutionary algorithms, local search
Evolutionary Cognitive Architecture
Improvement
Coloring Problem sum coloring problem, tabu search
and Exploitation in DOPs tradeoff, pre-post testing
recommender systems, stochastic multi-criteria acceptability analysis
Creativity
Controller
Problems unclonable functions, vectorial boolean functions
system, system synthesis, technical operations research
Robotics
Measure
graph drawing
Simulations in 2-d on a Torus
Study
Non-hyper-spherical Graph-based Approach analysis, evolutionary computation, feature construction, graph-based clustering
Rotorcraft self-adaptation
Features in Tetris
Edge Assembly Crossover and Partition Crossover recombination operators, traveling salesman problem
optimization, operator autoadaptation
population size control, self-adaptation
systems, stochastic models
Multi-objective Optimization Problem optimization, parallelization, self-adaptation
Multimodal Networks optimization, stochastic multimodal networks
uncertainty
Optimization Problem algorithm, multi-objective optimization, real world problem
visualization
Defense Networks network
algorithms
Differential Evolution evaluation
Behavioural Specialization
CMA-ES on the Noiseless BBOB Testbed
exploratory landscape analysis, graphical user interface
Networks
Genetic Algorithms
Evolutionary Robotics
learning, performance test
first improvement, local search, single machine scheduling
Kriging optimization
Annealing: Two Industrial Case Studies
via Anti-concentration analysis
runtime analysis, stop at first constructive mutation, theory
Morphology of Artificial Structures robots, morphogenesis, swarm systems
Evolutionary Algorithms
Crossover
dominance
Simulation multi-agent systems, soccer simulation

Wind-damage Prediction in the Forestry Sector
black-box optimization
Problems symbolic regression and classification
Through NEAT reinforcement learning
Optimization Problems
Through Surrogate-assisted Illumination
equations
performance measures
single-objective
Changing Variables parallel
in a Real-world Optimisation Problem transportation
for Novel Semantics-preserving Transforms validation
Optimization large-scale global optimization
Programming digital circuits, evolutionary optimization, parallel systems, transistor-level
Based on Quadratic Approximations of the Fitness quadratic approximation, shifted gray codes
Problem multi-objective optimization, multi-objectivization
for Offline Learning
Real-valued Optimisation Functions intelligence
novelty search, soft robots, surprise search
exploit development
Parameters Selection
Problems multi-point, probabilistic support vector machine, surrogate-based optimization
Prediction systems biology
Acoustic-articulatory Parameter Inversion of Vowels
Optimisation
neural networks
Optimization solution quality
search algorithms
forests, symbolic regression, variable importance
Studies Using Genetic Programming bioinformatics, genetics, multifactor dimensionality reduction,
python
Grammar for Solving Symbolic Regression Problems algorithms, linear genetic programming, symbolic
regression
Non-evolutionary Approaches slope coefficients, protein design, replica exchange, simulated annealing,
simulation-based multiobjective optimization
Study
Algorithm: A Comparison Between Dynamic Adaptation of Parameters and Randomized Parameterization
Results and Outlook evolution, on-line evolution
Metaheuristics
multi-class
Based on CMA-ES
Problem
Fronts
excursions
Preservation of the Best Found Solution
Optimisation
Algorithms optimization, multi-population, multi-strategy
Evolution Strategy
Genetic Algorithm genetic algorithm, social networks
Many-objective Optimization Problems
Developmental System
optimization
Noiseless Testbed nature-inspired metaheuristics
open-ended evolution
networks, perturbation strength
interleaving generations, parallelization

Algorithms parameter tuning, swarm intelligence

problem features

Adaptation Methods

Statistical Analysis of Multifactorial EC Experiments algorithm, moving the goalposts, problem ancillarization, statistical analysis, test suite analysis

Many-objective Problem robust optimisation

modelling, symbolic regression

distribution, parameter estimation

Fuzzy ART: An Initial Exploration rand index, clustering, evolutionary computing, hyper-heuristics, unsupervised learning

Imbalance

Simplification generalization, overfitting, push

contamination, DNA sequences, GGGP, GI, GP, NCBI GEO, NGS, SBSE, big data cleanup, bioinformatics, data cleansing, genechip, genetic improvement, hitch-hiking genes, identification and correction of mislabelled genes, microarray, molecular biology, next generation sequencing, search based software engineering, software engineering

optimization, quadratic programming

Coevolve Cooperative Agent Behavior

Optimization: A Practical Comparison

Algorithm operator

Learning: The Benefits of Exchanging Solutions

Numerical Optimization Problems memetic algorithm

Context menu planning

Protocols

Applied to Test Data Generation test data generation

morphogenesis, soft robotics

StarCraft

Constraints approach, multi-component problem, scheduling

novelty search, surprise search

Discovery covering

Multi-objective Optimization surrogate

model building

Performance: A Comprehensive Comparative Study and New Insights algorithms

Difficulty niching

Algorithms optimisation

semantic genetic programming, principled design, recursive programs, semantics

Planning Problems optimization, knee point, mission planning

Task-specific Clusters of Effective Networks Neural networks, Transfer Entropy

asynchronous parallel evolution, evolutionary computing

optimization, novelty search, quality diversity

Estimation of Distribution Algorithms distribution algorithm, filter selection, genetic algorithms, model building optimisation, multi-scale search, restart hopfield network with generative association, time-complexity

Combat Swarms optimal control, path integral control

Algorithms for Regression Tasks multiple regression

Bi-objective Permutation Flowshop Scheduling Problem

Success

Velocity Constraint system, motion control design

particle swarm optimisation

Bank Based on Knowledge Tree

optimization, normalized cross correlation

Multivariate Calibration selection

Open-pit Mining

and Efficient Search

Bit-wise Noise running time analysis

Incomplete Data missing data, multiple imputation

Diversity-based Parent Selection parent selection, runtime analysis, theory

Approximate BDD Optimization algorithm

Artificial Evolution

on Healthcare Records selection, genetic algorithm, healthcare cost utility project, healthcare records, logistic generalized linear regression, stability selection

lever systems, shape representation

Patterns

classification

Solving Two-stage Stochastic Scheduling Problems

the Compact GA to Relax Genetic Drift population based incremental learning

Order Sort sorting

in Evolutionary Robotics

Collaboration with a Multi-cloud Platform

protein modeling, stochastic optimization, structural dynamics

Processors for Improving Performance and Accuracy evolutionary algorithms

Based on Parallel Cooperative Coevolution and Fitness Metamodeling

MetaCompose

Learning Classifier System

mutation operator, power-law distribution

particle swarm optimization

Many-objective Optimization decomposition-based evolutionary algorithms, isolated solutions

the Hierarchical Bayesian Optimization Algorithm operators, knowledge-intensive operators, mutation operators, probabilistic model

optimization, self-adaptation, self-adapted operators

Algorithm

Problems with Interaction Detection differential grouping, genetic algorithm, global optimization, large-scale optimization

Robotics

optimization, nonnegative matrix factorization

Coevolution in Solving Large Scale Problems

kriging, surrogate models

Algorithm for the Travelling Thief Problem problems, Travelling Thief Problem

for Distributed Programs balancing

in Smart Grids optimization, smart grid

optima networks, quadratic assignment problem

Crossover and Random Segment Mutation symbolic regression

Problem with Electric Modular Vehicles urban logistics, vehicle routing problem

Intuitive Navigation and Solution Selection optimization

Networks

Recombination and Local Search pseudo-boolean optimization

Evolutionary Algorithm

Uncertain Capacitated Arc Routing Problem capacitated arc routing problem

Real-valued Gene-pool Optimal Mixing Evolutionary Algorithm real-valued optimization, scalability

Temperature Demand visualisation, waste heat recovery

Problem

and Diversity redundancy, visualization

Programming regression

Ensemble Classifier voting ensemble

Parameters: A Case Study pushGP, software synthesis

Problems analysis

Black-box Optimization Problems hyper-heuristics

stochastic environments

popsize adaptation

assignment, traffic congestion

software testing

Algorithm on Random Satisfiable 3-CNF Formulas instances, runtime analysis, satisfiability, theory

Landscapes
Multiobjective Optimization
Problems in Mining programming
Classification of Patterns in Financial Ultra-high Frequency Time Series
Problem real-world problems, transportation
Problem? low-dimensional representation, surrogate model
verification, program synthesis
Box zeroth-level classifier system (ZCS)
Learning Concepts synthesis, uncertainty sampling
Features dispersion metric, fitness distance correlation, information landscape, metrics, numerical optimisation
Mechanisms in Evolutionary Swarm Robotics
urban transportation
knap-sack problem, multiobjective optimization, resource allocation
engineering
Understanding the Artificial Anasazi anasazi, calibration, theory discovery
recurrent neural networks
Unbounded External Archive
Pseudo-boolean Optimisation
uncertainty handling
Wrapper-based Genetic Programming Methods engineering, representation learning
Used to Find Improved Iterative Numerical Methods algebra
software synthesis
colony
Classification
Cities
multitask learning
Costs in Prediction of Patient Recruitment in Multicentre Clinical Trials
Multi-objective Evolutionary Algorithm for Expensive and Different Evaluation Time multi-objective optimization, parallel evaluation, surrogate evaluation model
Computing classification, neuroevolution
leakage power, power consumptions reduction
Travelling Salesman Problem
multiobjective optimization, semantic-based genetic programming
Prediction
mutational robustness
with Cell Signaling Pathways
Programming cryptography, island model, linear genetic programming, nonlinearity
Optimization in Combinatorial Problems multiobjective optimization
computation, exact cover, fitness sharing, genetic algorithm, niches, niching, resource-defined fitness sharing, sharing, speciation, species, sudoku
Molecular Optimization
postprocessing, preprocessing
Classification
synthesis, machine learning
local search
Regression prediction, linear quantile regression, quantile regression, quantile regression forests, symbolic regression
Problems artificial neural networks, classification
optimization, speedup technique, transportation
theory, unknown solution length
model, evolutionary robotics
neural networks, neuroevolution
multimodal optimization, scalarization
learning
Algorithms smart mobility

optimisation, infill criteria, scalarisation methods
Search
Graphs learning
Architectures learning, designing neural network architectures
the BBOB Noiseless Testbed criterion
games
an Event Based Encoding movement analysis, parkinson's disease, time series analysis
Application
Evolution Strategy
Representation multitree, textures
CMA Evolution Strategy regression, surrogate modelling
Valve Point Effects: A Case Study
Service Composition combinatorial optimisation, multi-objective, representations, web service composition
for Optimization and VNS scheduling
composition
programming, noise impact, symbolic regression
Problem workflow scheduling
Grammatical Evolution Approach Classification, Grammar-based Genetic Programming, NeuroEvolution
Classification Algorithms
Based on Practical Perspectives
Windows
Models for CMA Evolution Strategy regression, surrogate modelling
problems, travelling thief problem
Problem Using Memetic Algorithms algorithm, multi-objective optimization
Incomplete Data construction, incomplete data
Rate
Dynamic Uniform Constraints analysis, uniform constraint
in the Semantic Web
source, optimization framework
parameter genetic algorithm, support structure
Two-echelon Vehicle Routing Problem vehicle routing problem
optimization, traveling time
Level Diagrams pareto front visualization
A Tale of Woe and a Proof-of-concept optimisation, non-functional properties
Mixture Learning distribution algorithm, hierarchical clustering
and the Energy Lab 2.0
quality diversity
Fitness Landscape Perspective optimization
Multi-agent Localization
for the Traveling Salesman Problem salesman problem
Algorithm optimization, scalability
Learning mining
Subproblems
Problem operators
Entropy-based Building-block Learning optimal mixing, program synthesis
Quality Improvements multi-objective optimization
Soil Moisture Analytics time series decomposition
Problems of Increased Complexity
Optimization
Swarm Optimization algorithm, particle swarm optimization
Computation
Evolution
Problems hybridization, meta-heuristics, modelling
Problems Using Decomposition optimization, inverse-problem, photosynthetic chlorophyll proteins,
structure derivation
Testing testing, test data generation

Cellular Automata automata, nonlinearity, orthogonal latin squares, pairwise balancedness, quaternary strings

Algorithms algorithms, multimodal optimization, pedestrian detection

substitution boxes

optimization, strand displacement

Uncertainty

genetic programming, overfitting, semantic learning machine, stopping criteria

model, support vector regression, warfarin dose prediction

Programming geosciences, soil-vegetation-atmosphere system, spatial variability

Construction computation, feature construction, k-means

Expensive Optimization Problems balance, power electronic circuit

Optimized Compression for Autonomous Sensory Agents

recurrent neural network, turbine engine vibration

evolution, on-line evolution

Robot Morphologies assembly, transferability

semantic genetic programming

Evolutionary, Swarm and Memetic Computation Algorithms swarm intelligence

for Parameter Tuning

machine learning, multicore, parallel, tensorflow, vectorized

principles of evolutionary computing

optimization

Optimization selection, pattern classification

Grammatical Evolution and Symbolic Aggregate Approximation

Dynamic Economic Emission Dispatch dispatch, machine learning, multi-objective optimisation, neural networks

evolution

Landscapes assignment problem

Algorithm and Linear Regression from Real Patient Data terminal

sensor-based UAV path planning

Optimization Using Gaussian Process Regression algorithm, multi-objective optimization

Evolutionary Algorithms

Brachytherapy Treatment Planning Problem for Prostate Cancer Using Evolutionary Multi-objective Optimization Algorithms optimization, partial evaluation, radiotherapy

Variable Space Diversity Control

Container Industry meta-heuristics, production planning

learning, uncertainty

the Placement of Catheters in HDR Brachytherapy for Prostate Cancer Using a Novel Multi-objective Model-based Mixed-integer Evolutionary Algorithm

Safety Planning with UAV vehicles

Freeze-drying of Lactic Acid Bacteria system, symbolic regression

Inter-contact Time

Based on Evolutionary Computation continuous observation, task scheduling

Redistricting in Mexico

production and logistics problem models, synergy effects

programming, sef-repair, self-assembly, swarm robotics

Symbolic Regression GP Variants offspring selection, population dynamics, symbolic regression

HeuristicLab meta-heuristic, network, optimization