BRACIS
2015 Brazilian Conference on Intelligent Systems

ENIAC Encontro Nacional de Inteligência Artificial e Computacional

STIL Symposium in Information and Human Language Technology

4th Brazilian Conference on Intelligent Systems (BRACIS)

XII Encontro Nacional de Inteligência Artificial e Computacional (ENIAC)

and the X Brazilian Symposium in Information and Human Language Technology (STIL)

Program

Natal, RN

November 4 - November 7, 2015

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Invited Talks - BRACIS

Claudio Pinhanez

Title: Using AI to Understand the Internet of People

Abstract: This talk discusses how artificial intelligence techniques can be used to process and extract insights from data produced by people. Different projects from the IBM Research Brazil laboratory are used to illustrate the challenges and opportunities of AI in the Internet of People, including aplications in social media text analytics, life-event dectection, and social imagery processing. The talk also explores the use of AI and ML in new finance-related applications, including some results on the use of graph analytics on healthcare management data and a prototype of an intelligent agent for investment advice. The importance of quantitative and ethnographic studies as tools for algorithm discovery and validation in the Internet of People is also highlighted, with some examples from the laboratory's work on microcredit applications.

Shortbio: Claudio Pinhanez is a researcher, professor, and innovator. He currently leads the Social Data Analytics research group of IBM Research Brazil. he is a researcher of IBM Research since 1999, working on Social Media and Networks, Cognitive Computing, Service Science and Design, Ubiquitous Computing, and Human-Computer Interfaces. Claudio got his PhD. in 1999 from the MIT Media Laboratory, and has been a visiting researcher at the ATR-MIC (Japan) in 1996, and at the Sony Computer Science Laboratory (Japan) in 1998. He has also been an associate professor of the department of Computer Science of the University of São Paulo from 1987 to 1993. @cinhanez

Amedeo Napoli

Title: Concept Lattices for Knowledge Discovery and Knowledge Engineering

Abstract: Knowledge discovery in large and complex datasets is one main topic addressed by "Data Science" and is also a topic of first interest in "Science of Knowledge" (or Artificial Intelligence). Indeed data and knowledge are interacting: knowledge discovery is applied to datasets and has a direct impact on the design of knowledge bases (or ontologies). Accordingly, it could be interesting to have at hand a generic formalism supporting knowledge discovery and, as well, knowledge processing (knowledge representation and reasoning). In this presentation, we introduce some elements of Formal Concept Analysis (FCA), a mathematical formalism for data and knowledge processing. FCA starts with a binary table composed of objects and attributes and outputs a concept lattice. In a concept lattice, each concept is made of an intent (i.e. the description of the concept in terms of attributes) and an extent (i.e. the objects instances of the concept). Intents and extents are two dual facets of a concept that naturally apply in knowledge representation. Moreover, in some cases, the structure of a concept lattice can be visualized and allows a suggestive interpretation for human agents while being also processable by software agents. There are two main extensions of FCA, Relational Concept Analysis (RCA) for dealing with relational data and Pattern Structures (PS) for dealing with complex data (numbers, sequences, trees, graphs). We will discuss the capabilities of FCA and its extensions in knowledge discovery and knowledge engineering through various applications, including text mining, information retrieval, biclustering, recommendation, definition mining and discovery of functional dependencies.

Shortbio: Amedeo Napoli is a senior scientist at CNRS in France, with a doctoral degree in Mathematics and an habilitation degree in computer science. He is the scientific leader of the Orpailleur research team at the LORIA Laboratory in Nancy (CNRS – Inria Nancy Grand-Est – Université de Lorraine), which includes roughly 30 members. The main research theme of the team are knowledge discovery and knowledge representation. Amedeo Napoli is a specialist of formal concept analysis and variations (pattern structures and relational concept analysis), pattern mining, and text mining. In parallel, he is interested in description logics, case-based reasoning and classification-based reasoning, in semantic web technologies and especially in ontology engineering. He is involved in many research projects at the international and national levels with applications in biology, chemistry, and medicine. He participated in European Projects, French ANR projects, and industrial projects. He was involved in many international

collaborations with European countries, Canada, Russia, South of America (Argentina, Brazil, Chile). Regarding scientific animation, he participated as a chair or in the program committee of national and international conferences and workshops. Moreover, he has authored or co-authored more than two hundred publications while he has supervised around 25 PhD Theses.

Humberto Bustince

Title: Interval-valued Fuzzy Sets and Their Applications

Abstract: Since the introduction of fuzzy sets by Zadeh in 1965, different types of fuzzy sets have been defined, providing different theoretical approaches to the handling of uncertainty. However, in the applied field, the results obtained with them have not always been better than those obtained with type I fuzzy sets. This consideration leads skeptics about these sets to argue as follows: when we use new types of sets, we have almost always to handle more information but the improvement in the results is not proportional to the amount of information that we use. In my opinion, the problem stated in the last item arises from the difficulty to build the best fuzzy set for a given application we are working in. However, in recent years, the development of new techniques to build intervals in order to represent uncertainty and the introduction of a method to build admissible linear orders between intervals by means of aggregation functions have led to the development of applications where the use of interval-valued fuzzy sets provides better results than those obtained with fuzzy sets. We should remark that in the papers where this improvement is shown a comparison to the best fuzzy techniques for the considered problem is always carried out. In particular, I will present the new results obtained using interval-valued fuzzy sets for Classification problems which outperforms two state-of-the-art fuzzy classifiers, namely, the FARC-HD method and the FURIA algorithm.Image processing. The adaptation of Huang and Wang algorithm to the interval-valued fuzzy setting has allowed proving that for some regions in ultrasound images segmentation is better than the one obtained with the same algorithm making use only of type I fuzzy sets.

Shortbio: Humberto Bustince received his Bs. C. degree on Physics from the Salamanca University, Spain, in 1983 and his Ph.D. degree in Mathematics from the Public University of Navarra, Pamplona, Spain, in 1994. He has been a teacher at the Public University of Navarra since 1991, and he is currently a Full Professor with the Department of Automatics and

Computation. He served as subdirector of the Technical School for Industrial Engineering and Telecommunications from 01/01/2003 to 30/10/2008 and he was involved in the implantation of Computer Science courses at the Public University of Navarra. He is currently involved in teaching artificial intelligence for students of computer sciences. Dr. Bustince has authored more than 100 journal papers (Web of Knowledge), and more than 120 contributions to international conferences. He has also been co-author of four books on fuzzy theory and extensions of fuzzy sets. Moreover, he is member of the editorial committee of IEEE Transactions on Fuzzy Systems, Information Fusion and Fuzzy Sets and Systems. He is also editor-in-chief of Mathware & Soft Computing magazine (EUSFLAT) Since 2015 he is Fellow IFS and Senior IEEE Member

Invited Talks - STIL

Adam Pease

Title: Numeric and Symbolic NLP: A Promising Engagement

Abstract: Numeric, statistical and machine learning approaches to NLP have seen great success in the past decade. Classification, search and retrieval applications have led a revolution in computer science and created tremendous business value. But what about the grand goals of deep understanding and reasoning articulated at the dawn of research into Artificial Intelligence? Are they still relevant, and how can they be addressed? What are the current limitations of numerical approaches? What are the areas where symbolic and numerical approaches can work productively together to address currently unsolved problems?

This talk will attempt to provide an orientation to current research in symbolic NLP, including knowledge representation and ontology. Some pointers to current work that combines numeric and symbolic representations will also be presented.

Shortbio: Adam Pease is the Cognitive R&D Manager at IPsoft, where he and his team are building a conversational agent for customer service applications. He has led research in ontology, linguistics, and formal inference, including development of the Suggested Upper Merged Ontology (SUMO), the Controlled English to Logic Translation (CELT) system, the Core Plan Representation (CPR), and the Sigma knowledge engineering environment. Sharing research under open licenses, in order to achieve the widest possible dissemination and technology transfer, has been a core element of his research program. He is the author of the book "Ontology: A Practical Guide"

Lluís Padró

Title: FreeLing: All you wanted to know and were afraid to ask

Abstract: This talk will present FreeLing, and open-source tool suite for language processing, with support for over a dozen languages. The general capabilities of FreeLing will be described, as well as some applications and projects in which it has been used.Being a library, FreeLing is better exploited by custom user programs that access the processing modules. Thus, the internal architecture and data structures of the library, as well as several practical usage examples will be presented. Finally, an example of how to add a new language to the Library will be demonstrated.

Shortbio: Lluís Padró holds a degree in Computer Science by UPC (1989), and a PhD in Artificial Intelligence (1998). He worked as a software engineer from 1989 to 1991, when he joined UPC as a lecturer. In 1999, he got his current position as associate professor. His teaching experience includes a wide range of subjects in undergrad courses for Computer Science, Telecommunication Engineering, and Civil Engineering. The teached subjects range from Programming Basics to Calculability Theory, through Software Engineering, Compilers, and Operating Systems, with special emphasis on Open Source systems. He has advised about 40 degree thesis and served in many committees, either for degree, master, and PhD thesis. He has also teached courses in PhD programs both in the UPC and at Basque Country University (EHU/UPV).His research area is framed in Artificial Intelligence, specifically in Natural Language Processing, and more particularly in the development of language analyzers (morphological, syntactic, dependency, sense disambiguators, semantic role labellers, named entity recognizers, etc). In this area, he has published in prestiged conferences (ACL, ANLP, NAACL, EACL, COLING, EMNLP, RANLP, ...) and journals (Machine Learning, Computational Linguistics, Computers & the Humanities, Processamiento del Lenguaje Natural, ...) both Spanish and International. He has been advisor of seven PhD thesis.

PROGRAM OVERVIEW

Wednesday (04/11/2015)	
8:00 – 8:30	Opening Ceremony
8:30 – 10:00	Invited Talk – Interval-valued Fuzzy Sets and Their Applications, Humberto Bustince
10:00 – 10:30	Coffee Break
10:30 – 12:30	Technical Session 1
12:30 – 14:00	Lunch Break
14:00 – 16:00	Technical Session 2
16:00 – 16:30	Coffee Break
16:30 – 18:00	Invited Talk – Concept Lattices for Knowledge Discovery and Knowledge Engineering, Amedeo Napoli
18:00 – 19:00	Meeting: CEIA and CERN Steering committee
19:00 – 21:00	Welcome Cocktail
Thursday (05/11/2015)	
8:30 – 10:00	Invited Talk: FreeLing: All you wanted to know and were afraid to ask- Lluís Padró
10:00 – 10:30	Coffee Break
10:30 – 12:30	Technical Session 3
12:30 – 14:00	Lunch Break
14:00 – 16:00	Technical Session 4
16:00 – 16:30	Coffee Break
16:30 – 18:00	Invited Talk: Numeric and Symbolic NLP: A Promising Engagement - Adam Pease
20:00 – 23:00	Conference Dinner
Friday (06/11/2015)	

8:30 – 10:00	Invited Talk: Using AI to Understand the Internet of People - Cláudio Pinhanhez
10:00 – 10:30	Coffee Break
10:30 – 12:30	Technical Session 5
12:30 – 14:00	Lunch Break
14:00 – 16:00	Technical Session 6
15:00 - 16:00	Panel: A Discussion about the Potential and the Risks of Artificial Intelligence
16:00 – 16:30	Coffee Break
16:30 – 18:00	Technical Session 7
19:00 – 21:00	Meeting: CEPLN Steering committee
Saturday (07/11/2015)	
8:30 – 10:30	Technical Session 8
10:30 – 11:00	Coffee Break
11:00 – 12:30	Technical Session 9

Technical Session 1 - Hyper-heuristics and Optimization

Wednesday (04/11/2015) 10:30 – 12:30
Chair: Aurora Pozo   **Room: Anfiteatro A - CCET**
10:30 –10:50 - Evaluating a Multi-Objective Hyper-Heuristic for the Integration and Test Order Problem GiovaniGuizzo, Silvia R. Vergilio, Aurora T. R. Pozo (UFPR)
10:50 – 11:10 - A Hyper-Heuristic for the Environmental/Economic Dispatch Optimization Problem Richard AderbalGoncalves, Carolina Paula de Almeida, Sandra Mara GuseScosVenske, Josiel Neumann Kuk, (UNICENTRO), Lucas MarcondesPavelski, MyriamRegattieri de B. da S. Delgado (UFPR)
11:10 – 11:30 - A Multi-Armed Bandit Hyper-Heuristic Alexandre Silvestre Ferreira (UFPR), Richard A. Gonçalves (UNICENTRO), Aurora Pozo(UFPR)
11:30 – 11:50 - Automated Iterative Partitioning for Cooperatively Coevolving Particle Swarms in Large Scale Optimization Peter Frank Perroni, Daniel Weingaertner (UFPR), MyriamRegattieri Delgado (UniversidadeTecnólogica Federal do Paraná)
11:50 – 12:10 - Evaluating methods for constant optimization of symbolic regression benchmark problems ViniciusVeloso De Melo,(UNIFESP), Benjamin Fowler, Wolfgang Banzhaf(Memorial University of Newfoundland)
12:10 – 12:30 - Stealthy path planning using navigation meshes MatheusRibeiro Furtado de Mendonca, HederSoares Bernardino, Raul Fonseca Neto (UFJF)

Technical Session 2 - Data Mining and Machine Learning

Wednesday (04/11/2015) 14:00 – 16:00
Chair: Fabio Cozman   **Room: Anfiteatro A - CCET**
14:00–14:20 - Dyna-MLAC: Trading Computational and Sample Complexities in Actor-Critic Reinforcement Learning Bruno Sousa Campos da Costa, WouterCaarls, Daniel SadocMenasché (UFRJ)
14:20 – 14:40 - A Cluster Based Hybrid Feature Selection Approach Pablo AndrettaJaskowiak, Ricardo José GabrielliBarretoCampello (USP)
14:40 – 15:00 - Semi-Supervised Multi-label k-Nearest Neighbors Classification Algorithms Danilo Carlos Gouveia de Lucena, Ricardo BastosCavalcantePrudencio (UFPE)
15:00 – 15:20 - IGMM-CD: A Gaussian Mixture Classification Algorithm for Data Streams with Concept Drifts Luan Soares Oliveira, Gustavo Enrique de Almeida Prado Alves Batista (USP)

15:20 – 15:40 - Selectively Inhibiting Learning Bias for Active Sampling
Davi Pereira dos Santos, André Carlos Ponce de Leon Ferreira de Carvalho (USP)

15:40 – 16:00 - Contextual Bandits for Multi-Objective Recommender Systems
AnisioLacerda (CEFET-MG)

Technical Session 3 - Best Papers Indications

Thursday (05/11/2015) 10:30 – 12:30
Chairs: Gisele L. Pappa e Kate Revoredo Cozman   Room: Anfiteatro A - CCET

10:30–11:00 - Scalable Fast Evolutionary k-means Clustering
Gilberto Viana de Oliveira, Murilo Coelho Naldi (UFV)

11:00 – 11:30 - Predicting high-performance concrete compressive strength using features constructed by Kaizen Programming
ViníciusVeloso De Melo (UNIFESP), Wolfgang Banzhaf (Memorial Univesity of Newfoundland)

11:30 – 12:00 - Multiobjective Binary ACO for Unconstrained Binary Quadratic Programming
MuriloZangari de Souza, Aurora Trinidad Ramirez Pozo (UFPR)

12:00 – 12:30 - An Adaptive Multi-Level Framework for Forest Species Recognition
Paulo Rodrigo Cavalin (IBM Research), Marcelo NepomocenoKapp (UNILA), Luiz Eduardo Soares de Oliveira (UFPR)

Technical Session 4 - Multi-agent systems

Thursday (05/11/2015) 14:00 – 16:00
Chair: André de Carvalho Cozman   Room: Anfiteatro A - CCET

14:00–14:20 -Towards Practical Argumentation in Multi-Agent Systems
Alison R. Panisson, Felipe Meneguzzi, Renata Vieira, Rafael H. Bordini (PUCRS)

14:20 – 14:40 - A Multi-agent Metaheuristic Optimization Framework with Cooperation
Maria Amélia Lopes Silva (UFV),Sérgio Ricardo de Souza (CEFET-MG),MarconeJamilsonFreitas Souza (UFOP) ,Sabrina Moreira de Oliveira (IBMEC-MG)

14:40 – 15:00 - Merging Argumentation Systems
Lucas Gonçalves de MouraLeite, ThiagoAlves Rocha, João Fernando Lima Alcântara (UFC)

15:00 – 15:20 - Evaluating Perception Filters in BDI Jason Agents
Marcio Fernando Stabile Junior, Jaime SimãoSichman (USP)

15:20 – 15:40 - Building up Conceptual Spaces: An ESOM Supported Strategy
SuelenMapa de Paula, Micael Cabrera Carvalho, Ricardo RibeiroGudwin (UNICAMP)

15:40 – 16:00 - An Occlusion Calculus Based on an Interval Algebra
Paulo E. Santos (FEI), Gérard Ligozat(Université Paris-Sud), Marjan Safi-Samghabadi (Alzahra State University)

Technical Session 5 - Learning from Text

Friday (06/11/2015) 10:30 – 12:30
Chair: SolangeRezende Cozman   Room: Anfiteatro A - CCET

10:30–10:50 - Ranking Keyphrases from Semantic and Syntactic Features of Textual Terms
Raquel Silveira, Vasco Furtado, VládiaPinheiro (UNIFOR)

10:50 – 11:10 - Adaptation of Discourse Parsing Models for the Portuguese Language
Erick GalaniMaziero, Graeme Hirst (University of Toronto), ThiagoAlexandreSalgueiroPardo (USP)

11:10 – 11:30 - The Impact of Contrastive Corpora for Term Relevance Measures
Lucelene Lopes, Paulo Fernandes, Roger Granada, Renata Vieira (PUCRS)

11:30 – 11:50 - Exploring Resources for Sentiment Analysis in Portuguese Language
Larissa Astrogildo de Freitas, Renata Vieira (PUCRS)

11:50 – 12:10 - Li-Fraumeni Ontology: A case study of an ontology for Knowledge Discovery in a Cancer Domain.
Ricardo MouraSekeffBudaruiche (Estácio/USP), Renata Wassermann (USP) ,Diogo F.C. Patrão (CIPE), Maria Isabel Alves de Souza Waddington Achatz (CIPE)

12:10 – 12:30 - Text categorization based on dissimilarity representation and prototype selection
George Darmiton da Cunha Cavalcanti, Tsang IngRen (UFPE)

Technical Session 6 –Neural Network

Friday (06/11/2015) 14:00 – 15:00
Chair: Teresa Ludermir Cozman   Room: Anfiteatro A - CCET

14:00 -14:20 - Fitting Parameters on Quantum Weightless Neuron Dynamics
Fernando Maciano de Paula Neto, Teresa BernardaLudermir (UFPE), Wilson Rosa de Oliveira, Adenilton José da Silva (UFRPE)

14:20 – 14:40 - Speech recognition in noisy environments with Convolutional Neural Networks
Rafael Meneses Santos, Leonardo Nogueira Matos, Hendrik Teixeira Macedo, Jugurta Rosa MontalvãoFilho (UFS)

14:40 – 15:00 - A Set-Medoids Vector Batch SOM Algorithm Based on Multiple Dissimilarity Matrices
Francisco de AssisTenorio de Carvalho, Eduardo CintraSimões (UFPE)

Technical Session 7 –BRACIS Poster Session

Friday (06/11/2015) 16:30 – 18:00
Room: Poster Hall

novel ensemble approach based on balanced Perceptrons applied to microarray datasets
Karen Braga Enes, SauloMoraesVillela, Raul Fonseca Neto (UFJF)

A Parallel Approach of a Hybrid Particle Swarm Optimization Algorithm to Solve the Vehicle Routing Problem with Time Windows
Thiago Muniz Stehling,Sérgio Ricardo de Souza,Moacir F. de FrançaFilho (CEFET-MG)

A Portable OpenCL-based Approach for SVMs in GPU
Henry Emanuel Leal Cagnini (PUCRS), Ana T. Winck (UFSM), Rodrigo C. Barros (PUCRS)

Adaptive method for segmentation of vehicles through local threshold in the Gaussian Mixture Model
Kalyf Abdalla Buzar Lima, KelsonRômulo Teixeira Aires, Francisco W. Pereira dos Reis (UFPI)

Adaptive Navigation for Mobile Robots with Object Recognition and Ontologies
Jurasildo Oliveira Reinaldo, Rosiery da Silva Maia, Anderson Abner de Santana Souza (UERN)

Adding Value to Daily-Deals Recommendation: Multi-Armed Bandits to Match Customersand Deals
AnisioLacerda (CEFET-MG), Adriano Veloso (UFMG), NivioZiviani (Zunnit Technologies)

Capturing Relationships in Multi-Objective Optimization
GianFritsche, Andrei Strickler, Aurora Pozo (UFPR), Roberto Santana (University of the Basque Country)

Comparative study of Genetic Algorithm and Ant Colony Optimization algorithm performances for the task of guitar tablature transcription
Joao Victor Ramos, Andre Stylianos Ramos, Carlos N, Silla Jr., DaniloSipoliSanches (UTFPR)

Grouping similar trajectories for carpooling purposes
Michael Oliveira da Cruz, HendrikMacedo, Adolfo Guimarães(UFS)

Looking at the Bottom and the Top: a Hybrid Logical Relational Learning System Based onAnswer Sets
Victor Guimarães, AlinePaes (UFF)

Probabilistic Fuzzy Naive Bayes
Gabriel Moura, Mauro Roisenberg (UFSC)

Reference-Point Based Multi-swarm Algorithm for Many-Objective Problems
Andre Britto (UFS), Aurora Pozo (UFPR)

Solving NP-complete Problems using Quantum Weightless Neuron Nodes
Fernando Maciano de Paula Neto, Teresa BernardaLudermir (UFPE), Wilson Rosa de Oliveira, Adenilton José da Silva (UFRPE)

Solving Sokoban Optimally with Domain-Dependent Move Pruning
Renato R. Leme, André G. Pereira, Marcus Ritt, Luciana S. Buriol UFRGS

Transducer State Prediction System for Smart Environment Intelligent Control
Marcelo Bassani de Freitas, George D. C. Cavalcanti (UFPE), RobertSabourin (Université du Québec)

Using Markov Models to Learn the Sentiment of Soccer Fans from Bets and the Result of Matches
Rafael Pontes B omfim,João José Vasco Peixoto Furtado (UNIFOR)

Technical Session 8 - Learning and Recommender Systems

Saturday (07/11/2015) 8:30 – 10:30
Chair: Valeria Feltrim Cozman   Room: IMD B205

8:30–8:50 - Context-Aware Techniques for Cross-Domain Recommender Systems
Douglas Véras (UFRPE), Ricardo Prudêncio, Carlos Ferraz, AlyssonBispo, ThiagoProta (UFPE)

8:50 – 9:10 - DESiRe: A Dynamic Approach for Exploratory Search Results Recommendation
Lucas PupulinNanni, ValériaDelisandraFeltrim (UEM)

9:10 – 9:30 - KSIG: Improving the convergence rate in adaptive filtering using kernel Hilbert space
Éden Pereira da Silva, Carlos Alberto Estombelo-Montesco (UFS), Ewaldo E. Carvalho Santana (UFMA)

9:30 – 9:50 - Adapting Noise Filters for Ranking
Ana Carolina Lorena(UNIFESP), Luis Paulo Faina Garcia, André C. P. L. F. de Carvalho (USP)

9:50 – 10:10 - MLM-Rank: A Ranking algorithm based on the Minimal Learning Machine
Alisson S. C. Alencar, Weslley L. Caldas, Joao P. P. Gomes, Amauri H. de Souza Junior, Paulo A.C. Aguilar, Cristiano Rodrigues, Wellington Franco, Miguel F. de Castro, Rossana M.C. Andrade (UFC)

Technical Session 9 - Applications

Saturday (07/11/2015) 11:00 – 12:00
Chair: Ana Carolina Lorena   Room: IMD B205

11:00 – 11:20 - Ensemble of Adaptive Algorithms for Keystroke Dynamics
Paulo Henrique Pisani (USP), Ana Carolina Lorena (UNIFESP), Andre Carlos Ponce de Leon Ferreira de Carvalho (USP)

11:20 – 11:40 - SURF descriptor and pattern recognition techniques in automatic identification of pathological retinas
Rodrigo de Melo Souza Veras, Romuere Rodrigues Veloso e Silva, Flávio Henrique Duarte de Araújo (UFPI), FátimaNelsizeumaSombra de Medeiros (UFC)

11:40 – 12:00 - Deep Learning for Wind Speed Forecasting in Northeastern Region of Brazil
Anderson Tenório Sergio, Teresa BernardaLudermir (UFPE)

12:00 – 12:20 - Predictingovertemperature events in graphics cards using regression models Francisco Caio M. Rodrigues, Lucas P. Queiroz, Joao Paulo P Gomes, Javam C. Machado (UFC)
12:20 – 12:40 – A Computer Vision system for Guidance of VTOL UAVs Autonomous Landing Felipe Leonardo Lôbo Medeiros, VitorConradoFaria Gomes, Márcia Rodrigues Campos de Aquino, Diego Geraldo (Divisão de GeointeligênciaInstituto de EstudosAvançados), Marcos Eduardo Lopes Honorato, Luiz Henrique Moreira Dias (UNIFESP)

Technical Session 1 – Planning/Multi-agent systems/Natural Language Processing

Wednesday (04/11/2015) 10:30 – 12:30
Chair: Heloisa de Arruda Camargo   **Room: Anfiteatro B - CCET**
10:30 – 10:50 - An Action Model Learning Method for Planning in Incomplete STRIPS Domains. Romulo Leite and Volmir Wilhelm. - Universidade Federal do Paraná.
10:50 – 11:10 - Planejamento Probabilístico com Becos Sem Saída. Thiago D. Simão, Leliane Nunes de Barros and Felipe Leno Da Silva - Universidadede São Paulo.
11:10 – 11:30 - Base de Conhecimento em Agentes Inteligentes Mapeada por Meio de Diagrama de Estados. Sirlon Thiago Diniz Lacerda, Gelson da Cruz Junior and Sandrerley Ramos Pires. - Instituto Federal de Goiás and Universidade Federal de Goiás. **11:30 – 11:50 - Análise comportamental para proteção da criança nas redes sociais por meio de mineração de interações e sistemas multiagentes.** Mário Sérgio Rodrigues Falcão Júnior, Enyo José Tavares Gonçalves, Ticiana Linhares Coelho da Silva and Marcos Antonio de Oliveira. - Universidade Federal do Ceará. **11:50 – 12:10 - Comunicação de expressões espaciais em sistemas multi-agentes utilizando a Ego-Esfera Qualitativa.** Felipe Rodrigues, Paulo Santos and Marcos Lopes.- Centro Universitário da FEI and Universidade de São Paulo. **12:10 – 12:30 - Paramopama: a Brazilian-Portuguese Corpus for Named Entity Recognition.** Carlos Mendonça Júnior, Hendrik Macedo, Thiago Bispo, Flávio Oliveira, Nayara Silva and Luciano Barbosa.- Universidade Federal de Sergipe and IBM Research.

Technical Session 2 - Clustering / Semantic Web

Wednesday (04/11/2015) 14:00 – 16:00
Chair: Francisco de Assis Tenorio de Carvalho   **Room: Anfiteatro B - CCET**
14:00 – 14:20 - Identification of Music Genres by Using Communities Detection in Complex Networks. Andrés Eduardo Coca Salazar and Liang Zhao. - Universidade Tecnológica Federal do Paraná and Universidade de São Paulo.
14:20 – 14:40 - Desenvolvimento de critérios de validação de múltiplos agrupamentos em MapReduce. Vinícius Conceição, Mariana Pereira, Kemilly Garcia and Murilo Naldi.- Universidade Federal de Viçosa.
14:40 – 15:00 - Inferring MicroRNA-Disease Associations using Self-Organizing Maps. Alessandra Santana and Marcos Quiles. Universidade Federal de São Paulo.

15:00 – 15:20 Edge Hierarchical Clustering (EHC): Uma Abordagem para Agrupamento Hierárquico de Dados em Redes de Associação.
Alessandro M. Silva, Aline M. Madoenho and Ricardo M. Marcacini. - Universidade Federal de Mato Grosso do Sul.

15:20 – 15:40 - Um Avaliador de Ontologias Baseado em Programação Lógica Orientada por Restrições.
Cleyton Rodrigues, Frederico de Freitas and Ryan Ribeiro de Azevedo. - Universidade Federal de Pernambuco.

15:40 – 16:00 - Ontologia para o Suporte a um Sistema de Assistência Domiciliar à Saúde. Edhelmira L. Medina, José Viterbo, Orlando Loques, Daniela Trevisan. - Universidade Federal Fluminense.

Technical Session 3 - Text and Data Mining

Thursday (05/11/2015) 10:30 – 12:30
Chair: Fabio Gagliardi Cozman   Room: Auditório CCET

10:30 – 10:50 - Quanto mais simples, melhor! Categorização de Textos baseada na Navalha de Occam.
Renato M. Silva, Akebo Yamakami and Tiago Almeida. Universidade Estadual de Campinas and Universidade Federal de São Carlos.

10:50 – 11:10 - Predição da Qualidade de Respostas em Fóruns de Desenvolvedores Utilizando Mineração de Dados.
Cristian Milano and Emerson Paraiso. Pontifícia Universidade Católica do Paraná.

11:10 – 11:30 - Incorporação de representação vetorial distribuída de palavras e parágrafos na classificação de SMS SPAM.
Raul Aguiar and Ronaldo Prati. Universidade Federal do ABC.

11:30 – 11:50 - Um Levantamento do Uso de Algoritmos de Aprendizado Supervisionado em Mineração de Opiniões.
Alexandre Lunardi, José Viterbo and Flávia Bernardini. Universidade Federal Fluminense.

11:50 – 12:10 - Filtragem Automática de Spam nos Comentários do YouTube.
Túlio Alberto, Johannes Lochter and Tiago Almeida. Universidade Federal de São Carlos.

12:10 – 12:30 - AnxECGStream: A Tool for Anxiety Diagnosis Using ECG Data Streams and Data Stream Mining.
Welton Barbosa, José Viterbo, Flavia Bernardini and Patrick Moratori. Universidade Federal Fluminense.

Technical Session 4 - Best Papers Indications

Thursday (05/11/2015) 14:00 – 16:00
Chairs: Gina Maira Barbosa de Oliveira and Karina Valdivia Delgado
Room: Anfiteatro B - CCET

14:00 – 14:20 - Bayesian Networks of Bounded Treewith: A Performance Analysis.
Fabio Machado, Denis Mauá and Fabio Cozman. Universidade de São Paulo.

14:20 – 14:40 - Detecção de Opinião em Mensagens Curtas usando Comitê de Classificadores e Indexação Semântica.
Johannes Lochter, Rafael Zanetti and Tiago Almeida. Universidade Federal de São Carlos.

14:40 – 15:00 - A Tractable Class of Model Couting Problems.
Denis Maua and Fabio Cozman. Universidade de São Paulo.

15:00 – 15:20 - Tratando dados desbalanceados em classificação hierárquica.
Victor H Barella and Andre Carvalho. Universidade de São Paulo.

15:20 – 15:40 - Discussion

15:40 – 16:00 - Voting

Technical Session 5 - Applied Computational Intelligence and Machine Learning

Friday (06/11/2015) 10:30 – 12:30
Chair: Aurora Trinidad Ramirez Pozo   Room: Anfiteatro B - CCET

10:30 – 10:50 - Servovisão direta: teoria e experimentos.
Geraldo Silveira, Leonardo Miranda and Ely Carneiro de Paiva. CTI Renato Archer and Universidade Estadual de Campinas.

10:50 – 11:10 - Temporal Series Prediction using Decision Trees: A Case Study in the Pink Shrimp Harvest.
Paulo Drews-Jr, Thiago Turra, Karina S. Machado and Luiz Felipe Dumont. Universidade Federal do Rio Grande.

11:10 – 11:30 - Análise Comparativa de Algoritmos Evolutivos Multiobjetivo Aplicados no Problema de Restabelecimento de Energia Elétrica.
Luciana Menezes Xavier de Souza, Danilo Sipoli Sanches and Marcelo Favoretto Castoldi. Universidade Tecnológica Federal do Paraná.

11:30 – 11:50 - Conformação Cega de Feixe em Antenas Adaptativas utilizando Aprendizagem por Reforço.
Náthalee Almeida, Tiago de Sousa, Marcelo Fernandes e Adrião Dória Neto. Universidade Federal Rural do Semi-Árido and Universidade Federal do Rio Grande do Norte.

11:50 – 12:10 - Sistema de Controle Fuzzy Aplicado ao Monitoramento de Abrigos de Cultivo.
Ronaldo Tadeu Murguero Junior, Anderson Luiz Fernandes Perez, Cristiano Santos Pereira de Abreu, Tiago Jampietro Bastos, Vinicios Luneburger Anacleto, Eliane Pozzebon and Rafael Gustavo Ferreira Morales. Universidade Federal de Santa Catarina and Empresa de Pesquisa Agropecuária e Extensão Rural de Santa Catarina.

12:10 – 12:30 - Cálculo da razão escavação/disco com o uso de algoritmo de agrupamento semissupervisionado e morfologia matemática.
Luis Guilherme Santos, Marcos Frazão, Rodrigo Veras and Flávio Henrique Duarte de Araújo. Universidade Federal do Piauí.

Technical Session 6 - Recommender Systems / Logic

Friday (06/11/2015) 14:00 – 15:00
Chair: Leliane Nunes de Barros   Room: Auditório CCET

14:00 – 14:20 - Medidas de Esparsidade para Combinação de Recomendação Baseada em Confiança e Filtragem Colaborativa.

Gabriel A. V. Azuirson and Ricardo B. C. Prudêncio. Universidade Federal de Pernambuco.

14:20 – 14:40 - Combining Privileged Information to Improve Context-Aware Recommender Systems.

Camila Vaccari Sundermann, Marcos Aurélio Domingues, Ricardo Marcondes Marcacini and Solange Oliveira Rezende. Universidade de São Paulo and Universidade Federal do Mato Grosso do Sul.

14:40 – 15:00 - Specifying Probabilistic Relational Models with Description Logics.

Fabio Gagliardi Cozman and Denis Deratani Mauá. Universidade de São Paulo.

Technical Session 7 - Classification

Friday (06/11/2015) 16:30 – 18:00
Chair: Andre Ponce de Leon F. de Carvalho   Room: Auditório CCET

16:30 – 16:50 -Adaptação da Medida Incerteza Simétrica para a Seleção de Atributos no Contexto de Classificação Hierárquica Monorrótulo.

Thieres Nardy Dias and Luiz Merschmann. Universidade Federal de Ouro Preto.

16:50 – 17:10 - O uso seletivo de classificadores binários na solução de problemas multirrótulos.

Adriano Rivolli and André Carvalho. Universidade de São Paulo and Universidade Tecnológica Federal do Paraná.

17:10 – 17:30 - Explorando a Fronteira de Pareto na Ordenação de Regras de Classificação.

Caique Oliveira and Andre Britto. Universidade Federal de Sergipe**.**

17:30 – 17:50 Vehicle Shape Recognition Using SVM and ASM.

Maria G. S. Aragão, Rafael M. Santos and Leonardo N. Matos. Universidade Federal de Sergipe.

Technical Session 8 - Short talks

Saturday (07/11/2015) 8:30 – 10:30   & 10:30 – 11:00 (Poster Session)
Chairs: Gina Maira Barbosa de Oliveira and Karina Valdivia Delgado
Room: IMD B206

8:30 – 8:40 - Previsão de Resultados de Jogos do Campeonato Brasileiro de Futebol: Uma Abordagem de Mineração de Dados.

Carlos Bezerra Segundo, Alexandre Abreu and Ahmed Esmin. Universidade Federal de Lavras.

8:40 – 8:50 - DocTraining: Um Ambiente 3D Multiagente como Suporte ao Treinamento de Estudantes de Medicina.

Rodrigo Monteiro de Lima, Araken de Medeiros Santos, Francisco Milton Mendes Neto, Francisco Tailânio de Macedo, Ademar França de Sousa Neto, Felipe César Pinheiro Leão, Maria Luzia Silva de Carvalho, Fernando Henrique Alves. Universidade Federal Rural do Semiárido.

8:50 – 9:00 - Detecção de Novidades em Aparelhos Eletrônicos através do Monitoramento do Consumo de Energia.

Thamires C. Luz, Tiago A. Almeida and Fábio L. Verdi. Universidade Federal de São Carlos.

9:00 – 9:10 Reconhecimento de Entidades Nomeadas para o Português Usando o OpenNLP.

Evandro Fonseca, Gabriel Chiele, Renata Vieira and Aline A. Vanin. Pontifícia Universidade Católica do Rio Grande do Sul and Universidade Federal de Ciências da Saúde de Porto Alegre.

9:10 – 9:20 - ResDial Corpus: Some Statistics and Correlations.

Acauã Batista, Norton Roman and Ana Monteiro. Universidade de São Paulo and Faculdade Campo Limpo Paulista.

9:20 – 9:30 - VazaBarris and Poxim Corpora: Augmenting NLP Software Ability to Deal with Informal Brazilian Portuguese.

Flávio Santos, Nayara Silva, Luciano Barbosa, Thiago Bispo, Carlos Junior and Hendrik Macedo. Universidade Federal de Sergipe and IBM Research.

9:30 – 9:40 - Construção automática de uma base AIML para Chatbot: um estudo baseado na extração de informações a partir de FAQs.

Luciano Severo de Souza and Silvia Maria Wanderley Moraes. Pontifícia Universidade Católica do Rio Grande do Sul.

9:40 -9:50 - Reconhecimento de padrões faciais: Um estudo.

Alex Silva and Marcos Cintra. Universidade Federal Rural do Semi-Árido.

9:50 10:00 Classificação de motoristas utilizando lógica difusa.

Victor Biasibetti and Rejane Frozza. Universidade de Santa Cruz do Sul.

10:00 – 10:10 - Comparisson of Fuzzy C Means, K-Means and K-Medoids for Clustering in the Bag Of Visual Words Algorithm.

Daniel Fernando Tello Gamarra and Marco Antonio De Souza Leite Cuadros. Universidade Federal de Santa Maria and Instituto Federal do Espirito Santo.

10:10 – 10:20 - Classificação Automática de Lesões de Pele em Imagens Médicas Utilizando Máquinas de Comitê.

Gabriel Carvalho Moura, Romuere Rodrigues Veloso E Silva, Nayara Holanda Moura, Emerson de Sousa Silva and Flávio Henrique Duarte de Araújo. Universidade Federal do Piau.

Technical Session 3– chair: Valeria Feltrin (UEM)

Thursday (05/11/2015) 10:30 – 12:30 Room: Anfiteatro B - CCET
10:30 – 10:54hs - PrepNet.Br: a Semantic Network for Prepositions Débora Garcia (UFSCar), Bento Dias-da-Silva (UNESP)
10:54– 11:18hs - VerbLexPor: um recurso léxico com anotação de papéis semânticos para o português Leonardo Zilio (UFRGS), Maria José BocornyFinatto (UFRGS), Aline Villavicencio (UFRGS)
11:18 – 11:42hs - Desambiguação de Homógrafos-Heterófonos por Aprendizado de Máquina em Português Brasileiro Leonardo Hamada (UFPA), Nelson Neto (UFPA)
11:42 – 12:06hs - N-Gramas de Caractere como Técnica de Normalização Morfológica para Língua Portuguesa: Um Estudo em Categorização de Textos Guilherme Guimarães (PUCRS), Marcus Meirose (PUCRS), Silvia Moraes (PUCRS)
12:06 – 12:30hs - Avaliação da flexão verbal do novo dicionário de formas flexionadas do Unitex-PB Oto Vale (UFSCar), Jorge Baptista (Universidade do Algarve)

Technical Session 7 – chair: Vládia Pinheiro (UNIFOR)

Friday (06/11/2015) 14:00 – 16:00 Room: Anfiteatro B - CCET
14:00 – 14:24hs - Joint semantic discourse models for automatic multi-document summarization Paula Figueira Cardoso (USP), Thiago Pardo (USP)
14:24 – 14:48hs - Enriching entity grids and graphs with discourse relations: the impact in measuring local coherence in multi-document summaries Márcio Dias (USP), Thiago Pardo (USP)
14:48 – 15:12hs - Campos Aleatórios Condicionais Aplicados à Detecção de Estrutura Retórica em Resumos de Textos Acadêmicos em Português Alexandre Andreani (UEM),Valéria Feltrim (UEM)
15:12 – 15:36hs - On Strategies of Human Multi-Document Summarization Ariani Di Felippo (UFSCar), Thiago Pardo (USP), Renata Tironi de Camargo (UFSCar)
15:36 – 16:00hs - Building and Applying Profiles Through Term Extraction Lucelene Lopes (PUCRS), Renata Vieira (PUC-RS)

Technical Session 8 – Chair: Diana Santos (UiO)

Friday (06/11/2015) 16:30 – 18:30 **Room: Anfiteatro B - CCET**
16:30 – 16:54hs- Anotando um Corpus de Notícias para a Análise de Sentimentos: um Relato de Experiência Mariza Dosciatti (UTFPR), Lohann Ferreira (PUCPR), Emerson Paraiso (PUCPR)
16:54 – 17:18hs - Semi-Automatic Construction of a Textual Entailment Dataset: Selecting Candidates with Vector Space Models Erick Fonseca (USP), Sandra Maria Aluísio (USP)
17:18 – 17:42hs - An Annotated Corpus for Sentiment Analysis in Political News Gabriel Arruda (USP), Norton Roman (USP), Ana Monteiro (Unicamp)
17:42 – 18:06hs - RePort - Um Sistema de Extração de Informações Aberta para Língua Portuguesa Victor Santos (UNIFOR), Vladia Pinheiro (UNIFOR)
18:06 – 18:30hs - Tesauros Distribucionais para o Português Rodrigo Wilkens (UFRGS), Leonardo Zilio (UFRGS), Eduardo Ferreira (UFGRS), Gabriel Goncalve (UFRGS),Aline Villavicencio (UFRGS)

TiLIC PROGRAM

Poster Session (Technical Session 4)

Thursday (05/11/2015) 14:00 – 16:00
Room: Poster Hall

Desenvolvimento de um Sistema de Pergunta e Resposta baseado em Corpus
Adriano Jorge Soares Arrigo, Elvio Gilberto Silva, Henrique Pachioni Martins, Patrick Pedreira Silva - Universidade Sagrado Coração

Análise de Sentimentos para português brasileiro usando redes neurais recursivas
HenricoBertini Brum, Fábio Natanel Kepler - Universidade Federal do Pampa

Geração de Modelo para Reconhecimento de Entidades Nomeadas no OpenNLP
Gabriel C. Chiele, Evandro Fonseca, Renata Vieira - Pontifícia Universidade Católica do Rio Grande do Sul

Comparação do algoritmo sequencial e paralelo para contagem de palavras e contexto
Eduardo Delazeri Ferreira, FrancieliZanonBoito, Aline Villavicencio - Universidade Federal do Rio Grande do Sul

Exploração de parâmetros para criação de Tesaurus Distribucionais preditivos
Eduardo Delazeri Ferreira, Rodrigo Souza Wilkens, Aline Villavicencio - Universidade Federal do Rio Grande do Sul

Redes Sociais como Fonte de Informação para Cidades Inteligentes
Mickael R. C. Figueredo, Nélio Cacho, Carlos A. Prolo - Universidade Federal do Rio Grande do Norte

O Desenvolvimento de um Sistema Computacional de Sumarização Multidocumento com Base em um Método Linguisticamente Motivado
Guilherme Gonçalves, Thiago A. S. Pardo - Universidade de São Paulo

Etiquetação morfossintática de textos em português do Brasil no domínio do e-commerce
Márcio Lima Inácio, Helena de Medeiros Caseli - Universidade Federal de São Carlos

Avaliação de Algoritmos de Seleção de Conteúdo utilizando Rastreamento de Olhar
Alex GwoJen Lan, IvandréParaboni, Flávio Luiz Coutinho - Universidade de São Paulo

Reconhecimento de entidades nomeadas em textos em português do Brasil no domínio do e-Commerce
Lucas Hochleitner da Silva, Helena de Medeiros Caseli - Universidade Federal de São Carlos

Uma avaliação de analisadores morfológicos do português
Jéssica O. de Souza, André C. Santiago, Katiuscia de M. Andrade, Mardônio J. C. de França, Hélio L. B. Silva, Ananda L. Freire, Leonel F. de Alencar, Rossana M. C. Andrade- Universidade Federal do Ceará

NePaLE: Uma ferramenta computacional de suporte à avaliação de paráfrases
Rafael de Oliveira Teixeira, Eloize Rossi Marques Seno, Helena de Medeiros Caseli
Instituto Federal de São Paulo, Universidade Federal de São Carlos

Extração de relações semânticas de textos em português do Brasil no domínio do e-commerce
Leonardo Henrique Tozzatto Volpe, Helena M Caseli - Universidade Federal de São Carlos

JDP PROGRAM

Technical Session 1 –JDP 2015 Artigos com Apresentação Oral I

Wednesday (04/11/2015) 10:30 – 12:30 – Chair: Maria José Bocorny Finatto Room: Auditório do CCET
10:45–11:10 - Contrastive analysis of the syntactic-semantic classification of locative verbs in Brazilian and European Portuguese Roana Rodrigues (UFSCar), Jorge Baptista (Universidade do Algarve), Oto Vale (UFSCar)
11:10 – 11:35 - A criação de um corpus de sentençasatravés de gramáticaslivres de context Tiago Cunha (UFC)
11:35 – 12:00 - A inconsistência do tratamentodispensadoàspreposiçõespelagramáticatradicional Débora Garcia (UFSCar), Bento Dias-da-Silva (UNESP)
12:00 – 12:25 - Explorandohierarquiasconceituaispara a seleção de conteúdonasumarizaçãoautomáticamultidocumento Andressa Zacarias (UFSCar), Ariani Di Felippo (UFSCar), Thiago Pardo (USP/ICMC)

TechnicalSession 2 –JDP 2015 Artigos com Apresentação Oral II

Wednesday (04/11/2015) 14:00 – 16:00 – Chair: Maria José Bocorny Finatto Room: Auditório do CCET
14:15–14:40 - Emdireção à caracterização da complementaridade no corpus multidocumentoCSTNews Jackson Souza (UFSCar), Ariani Di Felippo (UFSCar)
14:40–15:05 - Importância dos falsoshomógrafospara a correçãoautomática de errosortográficosemPortuguês Magali Duran (USP/ICMC), Maria das GraçasNunes (USP/ICMC), Lucas Avanço (USP)
15:05–15:30 - A classificação de atos de diálogopertinentesparasistemas de diálogoparadispositivosmóveis Tiago Cunha (UFC)