Curriculum Vitae

INFORMAZIONI PERSONALI

Nome   BIAGIO

Cognome   LENZITTI

Recapiti Facoltà di Scienze MM.FF.NN. Diaprtimento di Matematica e Informatica , stanza 201, telefono 09123891101

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ATTIVITA' DIDATTICA

A.A. 2012/2013

CdL Informatica

Reti di Calcolatori

Master BIOINFO

RETi e Database

A.A. 2011/2012

Master BIOINFO

RETi e Database

CdL Informatica

Sistemi Operativi (Modulo2)

A.A. 2010/2011

CdL Informatica

Reti di Calcolatori

Thesis

Internet e la didattica della matematica

A.A. 2009/2010

CdL Informatica

Linguaggi di Programmazione

Linguaggi per il WEB

Reti di Calcolatori

A.A. 2008/2009

CdL Informatica

Laboratorio di Sistemi operativi

Reti di Calcolatori

A.A. 2007/2008

CdL Informatica

Laboratorio di Sistemi operativi

Linguaggi per il web

AMBITI DI RICERCA

E-learning.

- Web Instruments for the development of course on line

    Creation of tools and techniques that help users in the research of e-learning materials and heir structuring. The work has started from the observation that Internet offers a huge amount of didactic materials that can be used in creating new online courses. However, those materials need a deep analysis to understand their context and contents before their potential use and this can be a tiring and time consuming activity. To facilitate this task, we have developed a system, called SAXEF (System for Automatic eXtraction of e-Learning object Features), that is capable to automatically extract the didactic indicators (a sort of DNA) of any web page (or group of pages) found on internet and allows users to easily evaluate whether that page (with its contents) is of interest to him/her. Moreover, we have built an e-learning search engine, SaxSearch, around SAXEF that allows users to make requests in terms of didactic indicators and automatically finds the web pages that best match the didactic needs. Finally, we have created an on-line application, called STRUCT (Structuring didactic materials on the web), that allows easy publishing of the found didactic materials by choosing the most appropriate graphical organizer among different alternatives (book, concept map, lattice and tree).

    The technological and architettural problematic inherent to the planning and the realization of an instrument web that concurs to realize of on line course with a multimedial (audio and teacher video) contens for not particularly expert. Therefore it has been planned and realized the Web tool "TutorSky" that answers in good part to the demanded requirements.

- Didactic On line

    The strategies have been studied and the methodologies of the formation at a distance and the didactic communication through the net and have applied in the planning and realization of the course on-linens of "Technologies of the information and the communication for the Didactics" (http://sissis.unipa.it/sito/levis/) for the S.I.S.S.I.S. (Sicialian Interuniversitaria School of Specialization for the Secondary Instruction), and of the course on linens of "Laboratory of Operating Systems" for the bachelor in Computer science.

- The Laboratories on-line

    The technological and architettural problematic inherent to the planning and the realization of a complex interface web for the realization of didactic activities in laboratories on linens, have been studied. The interface must allow the realization of practices on real laboratories whose resources are accessible in net, and on virtual laboratories.

- Didactic of the Mathematics

    In collaboration with the Prof. Brigaglia it has developed a software for the graphical construction of geometric elements. The software, developed in Pascal, allowed to visualize the Euclidean construction of complex geometric objects uses the axioms of Euclide (point, circumference, segment, ect.).

Image Analysis and Patern Recognition.

- ### Multiagent System and Particle Swarm Optimization

  The Multiagent System (MAS) is under field of the Distributed Artificial Intelligence (DAI) that study the behavior of complex systems in wich are involved various independent agents, and their mechanisms of coordination for the attainment of the same scope. The PSO is a methodology developed in origin in order to emulate the movement of the flocks of the birds or the swarms of bugs. With PSO and MAS approach has been studied a prey/predator system developing a software of simulation for the comparison of performance between cooperating or not cooperating agent

- ### Data Analysis in Astronomy

  In Project PLASTEX (Palermo Leeds Air Shower Track EXperiment) it has developed with Pattern Recognition techniques an algorithm for the acknowledgment automatic rifle of the composition of particle swarms produced from the cosmic beams. The algorithm allowed to reconstruct the trace of the particle and to second classify it its energy and type (muone, electron, photon), moreover allowed to calculate the medium direction of the swarm.

- ### Vision Computer

  In the project DAISY (Distributed Architecture for Inteligent System) it has collaborated to the planning and the realization of the software for the architecture of low level system; in particular it has cured the development of the software of management of the dedicated module Fines DSP A110;

  A programmabile robot system has been developed, equipped of television camera, that study of the models simulates the animal behavior of the search of the food (preda predator). The robot, constructed entire with elements of LEGO, by means of an acknowledgment of the shapes algorithm and a genetic algorithm, succeeds to characterize, to recognize and to catch up the food, being avoided the present obstacles

Distributed architectures for perception.

- ### Parallel Architecture

  In the project PAPIA (Pyramidal Architecture for Parallel Image Analisys) parallel PCL (Parallel C Language) has been taken care of the planning and the realization of the compiler of the language;
  It is developing to algorithms parallels for the analysis of images of low level in a based multiprocessore system on a carrier of Transputer in language OCCAM2;
  It is developing part of the base software on a shared memory multiprocessors prototype SMAE (Simd Mimd Architecture Emuletor). In particular it has been taken care of the realization of the monitoring of the processors in graphical interface;

- ### Parallel Language

  In the project HERMIA (HEterogenous and Riconfigurable Machine for Image Analysis) parallel PICL (PIctorial C Language) has been taken care of the planning and the realization of the compiler of the language

It has participated to the planning and the realization of an iconic interface development tool MIS (Macro Iconic System) on a multiprocessors systems and in distributed in heterogenous architecture (WINDOWS 95 NT HP-UX Linux) dedicated to the images analysis. The tool, developed in C++, concurs in iconic way, to realize just the algorithm of beginning analysis from a consistent number of algorithms parallels of bottom and mean level;