Simone Barbieri

Personal Data

Place and Date of Birth:	Cagliari, Italy | 9 September 1990
Address:	34 Westby Road, Bournemouth, United Kingdom
Phone:	+44 (0) 7492 314775
email:	simonebarbieri90@gmail.com
website:	http://barbierisimone.com

Work Experience

Current - September 2015	EngD Student at Bournemouth University, Bournemouth **Supervisors**: Dr. Xiasong Yang, Dr. Zhidong Xiao
December 2014 - March 2015	Research Fellow at University of Cagliari, Cagliari **Topic**: *Development of innovative Sematic Web algorithm and related documentation.* **Advisor**: Prof. Maurizio Atzori

Education

September 2014	Master Degree in Computer Science, **University of Cagliari**, Cagliari **Score**: 110/110 **Thesis**: *Skeleton Editing and Mesh Reconstruction from Skeleton* **Brief Description**: the thesis consists of a skeleton editor, capable of a number of useful feature which allow a simple editing for all users, and an inverse skeletonization algorithm which generate a three-dimensional quad-mesh from the created skeleton. **Advisor**: Prof. Riccardo Scateni
July 2012	Bachelor Degree in Computer Science, **University of Cagliari**, Cagliari **Score**: 110/110 **Thesis**: *Visual Engine for Reading On Network In Comprehensive Acceptation* **Brief Description**: V.E.R.O.N.I.C.A. system is a five people project which has as its primary goal the creation of automated support for reading for people suffering from the disorder of dyslexia, through a web-based application accessible from any platform. **Advisors**: Prof. Massimo Bartoletti, Prof.ssa Silvia Corso, Prof. Gianni Fenu, Prof.ssa Barbara Pes, Prof. Riccardo Scateni
July 2009	**Liceo Scientifico "Michelangelo"**, Cagliari

Certificates

March 2014	IELTS Certificate (5.5 Speaking - 5.0 Writing - 7.0 Listening - 7.5 Reading)
November 2012	CCNA Exploration: Network Fundamentals (by Cisco Networking Academy)
November 2012	CCNA Exploration: Routing Protocols and Concepts (by Cisco Networking Academy)

Publications

August 2016 An interactive editor for curve-skeletons: SkeletonLab
Website: http://dx.doi.org/10.1016/j.cag.2016.08.002
Abstract: Curve-skeletons are powerful shape descriptors able to provide higher level information on topology, structure and semantics of a given digital object. Their range of application is wide and encompasses computer animation, shape matching, modelling and remeshing. While a universally accepted definition of curve-skeleton is still lacking, there are currently many algorithms for the curve-skeleton computation (or skeletonization) as well as different techniques for building a mesh around a given curve-skeleton (inverse skeletonization). Despite their widespread use, automatically extracted skeletons usually need to be processed in order to be used in further stages of any pipeline, due to different requirements. We present here an advanced tool, named SkeletonLab, that provides simple interactive techniques to rapidly and automatically edit and repair curve skeletons generated using different techniques proposed in the literature, as well as handcrafting them. The aim of the tool is to allow trained practitioners to manipulate the curve-skeletons obtained with skeletonization algorithms in order to fit their specific pipelines or to explore the requirements of newly developed techniques.
Authors: Barbieri Simone, Meloni Pietro, Usai Francesco, Spano Lucio Davide, Scateni Riccardo

July 2016 Enhancing character posing by a sketch-based interaction
Website: http://dl.acm.org/citation.cfm?id=2945134
Abstract: Sketch as the most intuitive and powerful 2D design method has been used by artists for decades. However it is not fully integrated into current 3D animation pipeline as the difficulties of interpreting 2D line drawing into 3D. Several successful research for character posing from sketch has been presented in the past few years, such as the Line of Action [Guay et al. 2013] and Sketch Abstractions [Hahn et al. 2015]. However both of the methods require animators to manually give some initial setup to solve the corresponding problems. In this paper, we propose a new sketch based character posing system which is more flexible and efficient. It requires less input from the user than the system from [Hahn et al. 2015]. The character can be easily posed no matter the sketch represents a skeleton structure or shape contours.
Authors: Barbieri Simone, Garau Nicola, Hu Wenyu, Xiao Zhidong, Yang Xiaosong

September 2015 Skeleton Lab: an Interactive Tool to Create, Edit, and Repair Curve-Skeletons
Website: https://github.com/kekkooo/SkeletonLab
Abstract: Curve-skeletons are well known shape descriptors, able to encode topological and structural information of a shape. The range of applications in which they are used comprises, to name a few, computer animation, shape matching, modelling and remeshing. Different tools for automatically extracting the curve-skeleton for a given input mesh are currently available, as well as inverse skeletonization tools, where a user-defined skeleton is taken as input in order to build a mesh that reflects the encoded structure. Although their use is broad, an automatically extracted curve-skeleton is usually not well-suited for the next pipeline step in which they will be used. We present a tool for creating, editing and repairing curve-skeletons whose aim is to allow users to obtain, within minutes, curve-skeletons that are tailored for their specific task.
Authors: Barbieri Simone, Meloni Pietro, Usai Francesco, Scateni Riccardo

Projects

April 2014   **Voronoi Clarke & Wright Algorithm**
Website: https://github.com/simonebarbieri/Clark-Wright
Final Project for the unit *Operative Research* for the Master Degree in Computer Science at the University of Cagliari. A five people project which implements a modified version of Clarke and Wright Algorithm, for the vehicle routing problem, using the Voronoi tasselation.
Authors: Barbieri Simone, Loddo Andrea, Mameli Emanuele, Muntoni Alessandro, Pompianu Livio

September 2013   **Convex Hull 3D**
Website: https://github.com/simonebarbieri/ConvexHull3D
Final Project for the unit *Algorithms and Data Structures 2* for the Master Degree in Computer Science at the University of Cagliari. It implements a Convex Hull of a set of points in a 3D space.

February 2013   **BlueBlueRunning**
Final Project for the unit *Operating System 2* for the Master Degree in Computer Science at the University of Cagliari. A five people project which consists in an Android application which traks user's running trainings and it allows the users to save locally (in .GPX format) and share them with Google services such as Google Spreadsheet, Google Drive, Google Maps and Google Earth.
Authors: Barbieri Simone, Loddo Andrea, Mameli Emanuele, Muntoni Alessandro, Pompianu Livio

January 2011   **Shooter Pacman**
Website: https://github.com/simonebarbieri/ShooterPacman
Final Project for the unit *Operating System* for the Bachelor Degree in Computer Science at the University of Cagliari. A version of the famous videogame Pacman, in which Pacman and the ghost can shoot.

Languages

English: IELTS level 6.5 (5.5 Speaking - 5.0 Writing - 7.0 Listening - 7.5 Reading)
Italian: Mothertongue

Computer Skills

Basic Knowledge: LaTeX, OCaml, Assembly, Wordpress, Git, JQuery
Intermediate Knowledge: Linux, HTML, CSS, PHP, Android SDK, OpenGL, Javascript, PostgreSQL, MySQL
Advance Knowledge: C, C++, Qt, Java

Skills

- Experience in group working. Most of the university project I have worked on have been carried out in groups of five people.

- Experience in presenting projects carried out in Power Point presentations with different types of audiences.

- Expertise in project planning, including the ability in creating documents such as Requirements Analysis and Project Plan.

- Ability in coordinating small workgroups.

INTERESTS AND ACTIVITIES

Technology, Open-Source, Programming, Comics, Video games, Movies, TV Shows, Fencing (6 years), Basketball (2 years), Swimming (5 years), Travelling