GIAN MARIA SANTI

CURRICULUM VITAE

Born / **21/02/1991** Age / **30**
Place of birth / **MIRANDOLA (MO)**
Nationality/ citizenship / **Italy**
Via San Giovanni 48, 46020 SAN GIOVANNI DEL DOSSO (MN)
Via senzanome 9/3, 40123 BOLOGNA (BO)
Driving licence / **B** / **Car available**
ID / **3278065** updated on **09/07/21**

gianmaria.santi2@gmail.com
3409491137

SOFT SKILL

Autonomy 10/10
Self confidence 10/10
Flexibility/Adaptability 10/10
Resistance to stress 10/10
Ability to plan and organize 10/10
Managing information 10/10
Precision/Attention to details 10/10
Learn continuously 10/10
Achievement of objectives 10/10
Entrepreneurial spirit and initiative 8/10
Communication 9/10
Problem Solving 10/10
Team work 9/10
Leadership 8/10

FOREIGN LANGUAGE SKILLS

MOTHER TONGUE(S): **Italian**

ENGLISH	B2	B2	B2	B2	B2
GOOD					

DIGITAL COMPETENCES

Self-assessment grid
Information processing Independent user
Communication Independent user
Content creation Proficient user
Safety Basic user
Problem solving Proficient user

EXPECTATIONS AND FEATURES OF THE DESIRED JOB

ECONOMIC SECTOR: **1.** education, training, research and development / **2.** mechanical engineering and precision engineering / **3.** computer science, data processing and acquisition

WORK EXPERIENCES

Research Assistant - University of Bologna
UNIVERSITY OF BOLOGNA
BOLOGNA (BO)
11/2020 - TODAY

Main activities and responsibilities: Research of FEM methodologies and industry 4.0:
- Finite element analysis
- Programming of prototype solvers using MATLAB
- 3D modeling
- FDM 3D printing of polymeric materials
- Application of Reverse Engineerign techniques (3D scanning and reconstruction)
- Development of augmented / virtual reality applications
Employed as: other - fixed-length contract | Company sector: Engineering and design

Collaboration with Istituto Ortopedico Rizzoli (IOR)
ALMA MATER STUDIORUM - UNIVERSITÀ DI BOLOGNA
Biomedicale
BOLOGNA (BO)
11/2017 - TODAY

Main activities and responsibilities: 3D printing of CT scan for preoperative stage of orthopedic surgery
Employed as: other - fixed-length contract | Company sector: Engineering and design

Research Assistant - University of Oxford
DEPARTMENT OF ENGINEERING SCIENCE - UNIVERSITY OF OXFORD
Education, training, research and development
OXFORD (UK) (UNITED KINGDOM)
10/2019 - 04/2020

Main activities and responsibilities: - Familiarised with the literature on NURBS and FEM
- Evaluate the capabilities of commercial FEM software on material models
- Design and implement benchmarks for software validation
- Derived the math of a new numerical method: NEFEM that links CAD with analysis in a way nobody
achieved before.
- Implemented a 2D prototype solver in Matlab.
- Explored NEFEM implementation for 3D contact problems in our in-house solver written in C/C++.
- Produced and update regularly the documentation of the software developed
- Written a paper and create a presentation about the finding of this study
Employed as: other - fixed-length contract | Company sector: Engineering and design

Research Assistant - University of Bologna
CIRI-MAM
Education, training, research and development
BOLOGNA (BO)
11/2016 - 10/2017

Main activities and responsibilities: Design of LNG systems for naval applications - CLEAN PORT - [J62F16000100005] (http://www.cleanportravenna.it/)
Employed as: other - fixed-length contract | Company sector: Engineering and design

other information

Currently employed: Yes

ACADEMIC STUDIES

PH.D.

Alma Mater Studiorum - Università di Bologna

CAREER FIELD: **1**. Engineering and design / **2**. R&D and patents / **3**. Management

DESIRED JOB:
Mechanical / Aerospace Engineer - R&D - Software Engineer

PREFERRED DISTRICT TO WORK IN: **1. BOLOGNA**

AVAILABILITY FOR BUSINESS TRAVELS: **Yes, even frequently**

AVAILABILITY TO RELOCATE ABROAD: **No**

2017 - 2021

Phd in mechanics and advanced engineering sciences
PhD cycle: 33

Dissertation/thesis title: Mesh Morphing Methods for Virtual Prototyping and Mechanical Component Optimization | Thesis supervisor: Prof. Alfredo Liverani

Age at graduation: 30 | Official duration: 3 years
Graduation date: 16/03/2021

MASTER'S DEGREE
2013 - 2016
CERTIFIED TITLE

Alma Mater Studiorum - Università di Bologna
Scuola di Ingegneria e Architettura
Mechanical engineering
LM-33 - 2nd level degree in Mechanical engineering

Dissertation/thesis title: The aerodynamics of sails in the VPP performance prediction system in monohull sailboats | Dissertation/thesis subject: LABORATORIO DI DISEGNO ASSISTITO DAL CALCOLATORE M | Thesis supervisor: LIVERANI ALFREDO

Age at graduation: 25 | Official duration: 2 years
Final degree mark: **102/110**
Graduation date: 07/10/2016

BACHELOR'S DEGREE
2010 - 2013
CERTIFIED TITLE

Alma Mater Studiorum - Università di Bologna
Scuola di Ingegneria e Architettura
Mechanical engineering
L-9 - 1st level degree in Ingegneria industriale

Dissertation/thesis title: Analysis of non-Newtonian rheological behaviors and industrial applications | Dissertation/thesis subject: FISICA TECNICA E MECCANICA DEI FLUIDI T C.I. | Thesis supervisor: BARLETTA ANTONIO | Dissertation/thesis keywords: ricerca studio

Age at graduation: 22 | Official duration: 3 years
Final degree mark: **95/110**
Graduation date: 18/12/2013

SCIENTIFIC CERTIFICATE
MIRANDOLA
2010

Scientific High School
GALILEO GALILEI , MIRANDOLA (MO)
School-leaving examination mark: **84/100**
Kind of secondary school diploma: Italian secondary school diploma

INFORMATION TECHNOLOGY SKILLS

OFFICE AUTOMATION
Office Suite: (Advanced) | **Spreadsheets:** (Advanced) | **Web Browser:** (Highly Specialised) | **Word Processors:** (Advanced)

APPLICATION SOFTWARE
CAD - Assisted Design: PTC Creo, NX (Highly Specialised) , SALOME (Advanced) | **Numerical analisys:** code_aster, Ansys (Advanced)

COMPUTER PROGRAMMING
Programming languages: C (Intermediate) , MATLAB (Advanced) , Python (Intermediate)

SYSTEMS AND NETWORKS MANAGEMENT
Network architecture: (Foundation) | **Operating systems:** Linux, Windows (Advanced)

DATA MANAGEMENT
DBMS: (Intermediate)

GRAPHICS AND MULTIMEDIA
Blender, Unity (Advanced)

CONFERENCES AND SEMINARS

WORKSHOPS
04/02/2019

Introduction to intellectual property protection and valorization , Alma Mater Studiorum - Università di Bologna , Bologna
Character: partecipante

WORKSHOPS
25/01/2019

Linear programming and process integration for energy systems optimization , Alma Mater Studiorum - Università di Bologna ,

Bologna
Character: partecipante

WORKSHOPS
09/01/2019

An Overview of Design of Experiments , Alma Mater Studiorum - Università di Bologna , Bologna
Character: partecipante

WORKSHOPS
19/12/2018

Design of Controls and Verification of Mechatronic Systems in real-time , Alma Mater Studiorum - Università di Bologna , Bologna
Character: partecipante

WORKSHOPS
22/06/2018

MATLAB/Simulink , Alma Mater Studiorum - Università di Bologna , Bologna
Character: partecipante

WORKSHOPS
07/03/2018

Uncertanty analysis for engineers , Alma Mater Studiorum - Università di Bologna , Forlì
Character: partecipante

PUBLICATIONS

JOURNAL ARTICLES
2021

Frizziero, L.; Santi, G. M.; Leon-Cardenas, C.; Donnici, G.; Liverani, A.; Napolitano, F.; Papaleo, P.;
Pagliari, C.; Antonioli, D.; Stallone, S.; Di Gennaro, G. L.; Trisolino, G.; Zarantonello, P., An Innovative and Cost-Advantage Cad Solution for Cubitus Varus Surgical Planning in Children.
Review: Applied Science
doi.org/10.3390/app11094057

JOURNAL ARTICLES
2021

Santi, G. M.; Ceruti, A.; Liverani, A.; Osti, F., Augmented Reality in Industry 4.0 and Future Innovation Programs.
Review: Technologies
doi.org/10.3390/technologies9020033

JOURNAL ARTICLES
2021

Frizziero, L.; Pagliari, C.; Donnici, G.; Liverani, A.; Santi, G. M.; Papaleo, P.; Napolitano, F.; LeonCardenas, C.; Trisolino, G.; Zarantonello, P.; Di Gennaro, G. L.; Stilli, S.; Stallone, S., Effectiveness Assessment of CAD Simulation in Complex Orthopedic Surgery Practices.
Review: Symmetry
doi.org/10.3390/sym13050850

JOURNAL ARTICLES
2021

Santi, G.M., Francia, D., Cesari, F., Effect of coriolis force on vibration of annulus pipe
Review: APPLIED SCIENCES
Publisher: Basel: Molecular Diversity Preservation International
www.mdpi.com/2076-3417/11/3/1058

JOURNAL ARTICLES
2021

Leonardo Frizziero, Gian Maria Santi, Christian Leon-Cardenas, Giampiero Donnici, Alfredo Liverani,Paola Papaleo, Francesca Napolitano, Curzio Pagliari, Giovanni Luigi Di Gennaro, Stefano Stallone, Stefano Stilli, Giovanni Trisolino, Paola Zarantonello, In-House, Fast FDM Prototyping of a Custom Cutting Guide for a Lower-Risk Pediatric Femoral Osteotomy
Review: Bioengineering
Publisher: MDPI
doi.org/10.3390/bioengineering8060071

CONFERENCE PROCEEDINGS
2020

Napolitano, F. ; Frizziero, L. ; Santi, G.M. ; Donnici, G. ; Liverani A. ; Papaleo, P. ; Giuseppetti, V., Description of the cad-am process for 3d bone printing: The case study of a flat foot
Organization: IEOM Society International
www.ieomsociety.org/detroit2020/papers/472.pdf

CONFERENCE PROCEEDINGS
2020

Frizziero, L. ; Donnici, G. ; Liverani, A. ; Santi, G. M. ; Neri, M. ; Papaleo, P. ; Napolitano, F., Description of the cad-am process for 3d bone printing: The case study of a femur
Organization: IEOM Society International
www.ieomsociety.org/detroit2020/papers/471.pdf

JOURNAL ARTICLES

Leonardo F., GIAN MARIA SANTI., Alfredo L., Francesca N. et al.,

2020

Computer-Aided Surgical Simulation for Correcting Complex Limb Deformities in Children
Review: APPLIED SCIENCES
Publisher: Basel : MDPI
doi.org/10.3390/app10155181

JOURNAL ARTICLES
2020

Francia D.; Donnici G.; Ricciardelli G. M.; SANTI GIAN MARIA, Design for six sigma (DFSS) applied to a new E-segment sedan
Review: SUSTAINABILITY
Publisher: Basel : MDPI
dx.doi.org/10.3390/su12030787

JOURNAL ARTICLES
2020

Paolo Caligiana, Alfredo Liverani , Alessandro Ceruti, GIAN MARIA SANTI , et al., An Interactive Real-Time Cutting Technique for 3D Models in Mixed Reality
Review: TECHNOLOGIES
Publisher: Basel : MDPI
dx.doi.org/10.3390/technologies8020023

JOURNAL ARTICLES
2019

Osti F.; SANTI, GIAN MARIA; Caligiana G., Real Time Shadow Mapping for Augmented Reality Photorealistic Rendering
Review: APPLIED SCIENCES
Publisher: Basel: Molecular Diversity Preservation International
dx.doi.org/10.3390/app9112225

JOURNAL ARTICLES
2019

Frizziero L.; SANTI GIAN MARIA.; Liverani A.; Giuseppetti V.; et al., Paediatric orthopaedic surgery with 3D printing: Improvements and cost reduction
Review: SYMMETRY
Publisher: Basel : Molecular Diversity Preservation International
dx.doi.org/10.3390/sym11101317

JOURNAL ARTICLES
2019

Osti, Francesco; SANTI, GIAN MARIA; Neri, Marco; Liverani, Alfredo; et al., CT Conversion Workflow for Intraoperative Usage of Bony Models: From DICOM Data to 3D Printed Models
Review: APPLIED SCIENCES
Publisher: Basel: Molecular Diversity Preservation International
dx.doi.org/10.3390/app9040708

TEACHING ACTIVITIES

LESSONS/LECTURES
2021

ECIPAR BOLOGNA Soc. Cons. a r.l., , Bologna
ECIPAR BOLOGNA Soc. Cons. a r.l., Bologna
Character: Docenza

LESSONS/LECTURES
2020

ADECCO FORMAZIONE S.R.L. , Bologna
ADECCO FORMAZIONE S.R.L. Bologna
Character: Docenza

LESSONS/LECTURES
2019

ADECCO FORMAZIONE S.R.L. , Bologna
Progettista meccanico specializzato in Additive manufacturing
Character: Docenza

LESSONS/LECTURES
2019

Alma Mater Studiorum - Università di Bologna , Bologna
APPLICAZIONI DI DISEGNO MECCANICO T
Main Professor: Alessandro Ceruti
Character: Tutor Didattico

LESSONS/LECTURES
2017

Alma Mater Studiorum - Università di Bologna , Bologna
DISEGNO DI MACCHINE M
Main Professor: Francesco Cesari
Character: Tutor Didattico

LESSONS/LECTURES
2017

FAV - Fondazione Aldini Valeriani , Bologna
TIC - TECNICHE PER L'INTERNAZIONALIZZAZIONE E LA COMPETITIVITA'
Character: Docente

LESSONS/LECTURES
2017

Alma Mater Studiorum - Università di Bologna , Bologna
DISEGNO MECCANICO E AUTOMATICO T

Main Professor: Luca Piancastelli
Character: Tutor Didattico

LESSONS/LECTURES
2016

Alma Mater Studiorum - Università di Bologna , Bologna
APPLICAZIONI DI DISEGNO MECCANICO T
Main Professor: Daniela Francia
Character: Tutor Didattico

ADDITIONAL INFORMATION

I like to play guitar and chess