PERSONAL INFORMATION

Alessandro Zanotti

- Via Antonio Paolucci, 15 – 00151 (RM), Italy
- +39 0665742875 📱 +39 3335822027
- ✉ alessandro.zan14@gmail.com
- 💬 Facebook Alessandro Zanotti

Sex Male| Date of birth 14/04/1997 | Nationality Italy

EDUCATIONAL QUALIFICATION
Master's degree in Mechanical Engineering with the evaluation of 110/110 cum laude

EDUCATION AND TRAINING

November 2021-Today — **PhD Theoretical and Applied Mechanics** — EQF Level 8

University "La Sapienza", Piazzale Aldo Moro, 5, 00185 Rome (RM)

September 2019-July 2021 — **Master's Degree in Mechanical Engineering - Mechatronics** — Level EQF 7

University "La Sapienza", Piazzale Aldo Moro, 5, 00185 Rome (RM)

Mark of 110/110 cum laude

- Control Systems, Matlab, Simulink;
- Fluid machines;
- Industrial measurements and measurement chains;
- Diagnosis systems of machines and energy systems, basics of machine learning, graph theory, neural networks;
- Vibration mechanics, signal analysis and mechatronic systems, theory of optimal control, Kalman filter, LQR, LQG, Skyhook;
- Industrial microeconomics, investment theories and accounting;
- Industrial robots, group project on kinematics, dynamics and trajectories. Implementation of control systems and finite element models. Matlab, Simulink, Ansys;
- Study and analysis of vibrations through Matlab. Use of the main tools and techniques of approach to modal analysis, measurements, ANSYS simulations;
- Management of industrial plants;
- Machines' Construction and Finite Element Design. Theory and practical implementation on Ansys software both through Mechanical APDL and through Workbench;
- Electric machines, drive systems and regulation. Main problems and control techniques, vector control. DC machines, permanent magnet, induction machines;
- Electronic systems to be used in mechatronics, digital electronics and main components. Processors, RAM, ROM, Arduino and design of a measurement chain to measure vibration and distance;
- Vehicle dynamics and design of control systems for trajectory tracking through torque vectoring and variation of steering angles, use of Matlab, Simulink, Adams, SolidWorks;
- Path of excellence: study and construction of a robotic leg mainly in carbon fiber, topological and parametric constructive optimization through Ansys and SolidWorks software;
- Research of optimization methods applied to quadruped robots and implementation of control systems in the latter.

September 2016-July 2019 — **Degree in Mechanical Engineering** — Level EQF 6

University "La Sapienza", Piazzale Aldo Moro, 5, 00185 Rome (RM)

Mark of 110/110 cum laude

- Industrial Design with the help of CAD programs;
- Metallurgy;
- Technical Physics and Energy Systems;
- Rational Mechanics, Construction Science, applied Mechanics;
- Fluid Dynamics and Applied Hydraulics;
- Numerical Calculation;
- Programming in Python and MATLAB;
- Construction Elements of the Machines;
- Mechanical Technology;
- Industrial Plants;
- Thesis on the analysis of sensors, their methods of use and algorithms in the field of driving autonomous vehicles;
- Programming of the Arduino microcontroller;
- Technological design in group of different mechanical components.

September 2011-July 2016	**Scientific High School Diploma**	EQF Level 4

Liceo Ginnasio Statale "Virgilio", Via Giulia, 38, 00186 Roma (RM)

Scientific

Score of 85/100

PERSONAL SKILLS

Native language   Italian

Other languages

COMPREHENSION		SPOKEN		WRITTEN PRODUCTION
Listening	Reading	Interaction	Oral production	
B1.2	B1.2	B1.2	B1.2	B1.2
Trinity Grade 6; Diploma Liceo Scientifico				

English (row label)

Levels: A1/A2: Basic user - B1/B2: Intermediate user - C1/C2: Advanced user
Common European Framework of Reference for Languages

Communication skills   Good communication skills acquired during the course of study thanks to group works and projects

Organizational and management skills   Good organizational and management skills acquired during the course of study thanks to group works and projects

Professional skills   Excellent problem-solving skills typical of the industrial area thanks to the knowledge and mastery of all the subjects of mechanical engineering

Digital skills

SELF-EVALUATION				
Information Processing	Communication	Content Creation	Safety	Troubleshooting
Intermediate User	Intermediate User	Intermediate User	Intermediate User	Intermediate User

Levels: Basic User - Intermediate User - Superuser
Digital Skills - Self-Assessment Sheet

- Good user of the tools of the office suite (word, excel, PowerPoint…);
- Good user of the programs for the digital processing of images acquired during the bachelor's thesis (on MATLAB);

- Good programming skills of simple microcontrollers (Arduino), their electronics and their computer operation;
- Excellent knowledge of MATLAB, Simulink, Simscape, ANSYS;
- Good knowledge of Python;
- Excellent knowledge of LaTex
- Discrete knowledge of the C language acquired independently;
- Excellent knowledge of cad industrial design programs acquired during the course of study and during the group technological design of different mechanicalcomponents.

Driver's license   B

FURTHER INFORMATION

Presentations
Projects
Honors and awards
References

Presentations:

- Thesis in front of the supervisor and with the help of Slides produced through PowerPoint (2019);
- Master's degree thesis;
- Torque vectoring project.

Projects:

- Master's degree thesis on quadruped robots. Complete mechanical analysis and research of innovative approaches to general optimization of the robotic system. Control and electrical analysis of implementation. Extensive use of MATLAB, Simulink, Simscape, CAD, Ansys. (2021)
- Path of excellence carried out on ANSYS software, study of the characteristics of carbon fibers and modeling techniques. Study of topological and parametric-constructive optimizations and implementation of all this in the construction of a leg of a quadruped robot. (2021)
- Design of control systems on vehicles for the tracking of trajectories through torque vectoring and variations of steering angles. Simulation and classification of results, using MATLAB, Simulink, CAD. (2021)
- Design of the Puma 560 robot. Group project in which the mechanics of the robot were studied and control systems and finite element models were implemented to support the study. (2020)
- Study of mechanical vibrations inside special components (such as vehicle engines). Extraction of the main characteristics and classification of the results through measurements, theoretical results and numerical simulations with ANSYS software. (2020)
- Thesis on the main sensors and their methods of use in the driving of autonomous vehicles (2019), a topic chosen together with the supervisor connected to the parallel development of the autonomous vehicle of "Sapienza Corse", a group that participates in the "Formula SAE" competition.
- Technological design of several mechanical components (2019).

Workactivity :

- Winner of a scholarship and assignment of a Tutoring assignment at the University of Rome "La Sapienza" concerning supplementary teaching for basic mathematics, Analysis I and Geometry in the period from November 2020 until February 2021;

Honors and awards:

- Discounts and benefits for having always ranked among the best students of the degree course. In three of the five years I was the first classified.
- Winner of the call for the development of the Path of Excellence and its development in accordance with the work of the master's thesis.

References:

- References are available on request.

ATTACHMENTS

- Copy of the Master's Degree certificate with thesis:

SAPIENZA
UNIVERSITÀ DI ROMA

CERTIFICATO DI LAUREA CON TESI

Certificato rilasciato il 31/07/2021 09:46:54.

Si certifica che ALESSANDRO ZANOTTI

Matricola: 1753120, nato a: ROMA (RM), ITALIA, il 14/04/1997

Codice fiscale: ZNTLSN97D14H501V

ha conseguito, in questa Università, in data 27/07/2021 la laurea magistrale in INGEGNERIA MECCANICA [LM - Ordin. 2015] (classe LM-33), Facoltà di INGEGNERIA CIVILE E INDUSTRIALE

La votazione conseguita è 110 e lode /110.

La durata legale del corso è di 2 anni accademici

Lo stesso ALESSANDRO ZANOTTI ha discusso la tesi sul seguente argomento: OTTIMIZZAZIONE DELL'ANDATURA E DELLA TRAIETTORIA DEI ROBOT QUADRUPEDI

Relatore: Prof. PEPE GIANLUCA

Materia: VEHICLE SYSTEM DYNAMICS

Il relativo diploma è stato RICHIESTO

Il presente certificato, composto da pagine 1:

a.   contiene informazioni desunte dall'archivio elettronico dell'Università degli studi di Roma "La Sapienza";

b.   è valido solo con marca da bollo per gli usi consentiti dalla legge.

MARCA DA BOLLO   La Direttrice dell'Area Servizi agli Studenti
€ 16,00

                                      Dott.ssa Raffaela Iovane

Firma autografa omessa ai sensi dell'art. 3 del D. Lgs. n. 39/1993.
Ai sensi delle modifiche introdotte dalla Legge 183/2011 al D.P.R. 445/2000 si precisa che il presente certificato non può essere prodotto agli organi della pubblica amministrazione o ai privati gestori di pubblici servizi.

Timbro Digitale Università degli Studi di Roma "La Sapienza".
Per la verifica del timbro digitale utilizzare il software Decoder2DPlus disponibile su http://www.uniroma1.it/didattica/regolamenti/timbro-digitale
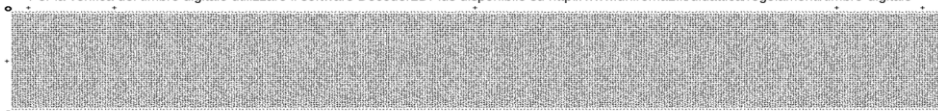
Id Certificato: 3536083   matricola :1753120   31/07/2021 09:46:54   Pag. 1 / 1

▪ Copy of the degree certificate with thesis:

SAPIENZA
UNIVERSITÀ DI ROMA

CERTIFICATO DI LAUREA CON TESI

Certificato rilasciato il 25/09/2019 18:24:35.

Si certifica che ALESSANDRO ZANOTTI

Matricola: 1753120, nato a: ROMA (RM), ITALIA, il 14/04/1997
Codice fiscale: ZNTLSN97D14H501V

ha conseguito, in questa Università, in data 25/07/2019 la laurea e il titolo di dottore in INGEGNERIA MECCANICA [L-270 - Ordin. 2015] - sede di ROMA (classe L-9), Facoltà di INGEGNERIA CIVILE E INDUSTRIALE

La votazione conseguita è 110 e lode /110.

La durata legale del corso è di 3 anni accademici

Lo stesso ALESSANDRO ZANOTTI ha discusso la tesi sul seguente argomento: ANALISI DEI SENSORI E DELLE LORO METODOLOGIE DI IMPIEGO NELLA GUIDA AUTONOMA DEI VEICOLI
Relatore: Prof. BROGGIATO GIOVANNI BATTISTA
Materia: ELEMENTI COSTRUTTIVI DELLE MACCHINE
Il relativo diploma è stato STAMPATO

Il presente certificato, composto da pagine 1:
a. contiene informazioni desunte dall'archivio elettronico dell'Università degli studi di Roma "La Sapienza";
b. è valido solo con marca da bollo per gli usi consentiti dalla legge.
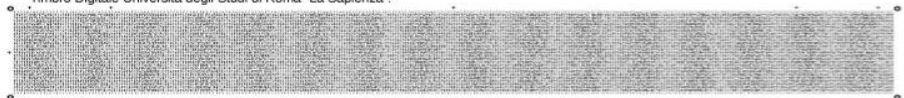
MARCA DA BOLLO
€ 16,00

Il Direttore dell'Area Servizi agli Studenti

Dott.ssa Laura Leone

Firma autografa omessa ai sensi dell'art. 3 del D. Lgs. n. 39/1993.

Ai sensi delle modifiche introdotte dalla Legge 183/2011 al D.P.R. 445/2000 si precisa che il presente certificato non può essere prodotto agli organi della pubblica amministrazione o ai privati gestori di pubblici servizi.

Timbro Digitale Università degli Studi di Roma "La Sapienza".

Per la verifica del timbro digitale utilizzare il software Decoder2DPlus disponibile su
http://www.uniroma1.it/didattica/regolamenti/timbro-digitale

- Copy Trinity Grade 6 certificate:

Trinity College London

Alessandro Zanotti

is awarded

Grade 6
Graded Examination in Spoken English

Entry Level Certificate in ESOL International
(Speaking and Listening) (Entry 3)

B1.2 of the CEFR

with Merit

ATC International - University of York - July 2013
Certificate issued September 2013

Sarah Kemp
Chief Executive, Trinity College London

Patron HRH The Duke of Kent KG

TRINITY
COLLEGE LONDON

National Qualifications
Framework accreditation
number: 500/1934/X
045331:10921610

Ofqual

Llywodraeth Cynulliad Cymru
Welsh Assembly Government

cea
Rewarding Learning

Accredited in England, Wales and Northern Ireland

• Copy of the Scientific High School Diploma:

REPUBBLICA ITALIANA
MINISTERO DELL'ISTRUZIONE, DELL'UNIVERSITÀ E DELLA RICERCA

MINISTRY OF EDUCATION, UNIVERSITY AND RESEARCH
MINISTÈRE DE L'INSTRUCTION, DE L'UNIVERSITÉ ET DE LA RECHERCHE
MINISTERIUM FÜR UNTERRICHT, WISSENSCHAFT UND FORSCHUNG
MINISTERIO DE EDUCACIÓN, UNIVERSIDAD E INVESTIGACIÓN

ANNO SCOLASTICO 2015/2016
SCHOOL YEAR - ANNÉE SCOLAIRE - SCHULJAHR – CURSO ACADÉMICO

Il Presidente della Commissione n. RMLI02003
The President of Board of Examiners no.
Le Président du Jury n.
Die Präsidentin/Der Präsident der Kommission Nr.
El Presidente del Tribunal n.

operante nel Liceo/Istituto LICEO GINNASIO STATALE
based at Lyceum/Vocational Institute/Technical Institute
auprès du Lycée/de l'Institut
eingesetzt an der Oberschule
con sede en el Liceo/Instituto

VIRGILIO

CERTIFICA
CERTIFIES
ATTESTE
BESCHEINIGT
CERTIFICA

che (nome e cognome del candidato)   **Alessandro Zanotti**
that (candidate's name and surname)
que (prénom et nom du candidat)
daf (Vor-und Nachname der Kandidatin/des Kandidaten)
que (nombre y apellidos del candidato)

nato a ROMA
born in
né(e) à
geboren in
nacido/a eo

Provincia RM
District
Province de
Prov.
Provincia de

il 14/04/1997
on
le
am
el dia

ha superato l'esame di Stato conclusivo degli studi secondari superiori nell'indirizzo:
has passed the State Exam at the conclusion of secondary school studies in the course:
a obtenu l'examen d'État de fin d'études secondaires, série:
die staatliche Abschlussprüfung der Oberschule mit Fachrichtung:
ha superado el Examen de Estado tras finalizar los estudios de secundaria superior en la modalidad de:

SCIENTIFICO

con la votazione complessiva di 85/100 (*), derivante dalla somma dei seguenti punteggi parziali:
(il punteggio minimo complessivo per superare l'esame è di 60/100)
With an overall mark of 85/100 (*)correspondig to the sum of the following partial scores:
(minimum overall mark 60/100)
avec la note globale de 85/100 (*)résultant de la somme des points partiels suivants:
(la note globale pour réussir à l'examen est d'au moins 60/100)
mit der Gesamtpunktezahl von 85/100 (*)bestanden hat, wobei folgende Teilergebnisse erzielt wurden:
(die Mindestpunktezahl, um die Prüfung zu bestehen, beträgt 60/100)
con la calificación global de 85/100 (*)obtenida a partir de la suma de las siguientes puntuaciones parciales:
(la puntuación mínima global para superar el examen es de 60/100)
(*) – Menzionare la lode, qualora attribuita dalla Commissione.
(*) – Cite commendation if awared by Board of Examiners.
(*) – Ajouter la mention éventuelle attribuée par le Jury.
(*) – Die Auszeichnung angeben, sofern sie von der Kommission vergeben wurde.
(*) – Anotar la Mención, en caso de ser concedida por la Comisión

TIMBRO DELLA SCUOLA E FIRMA ....
SCHOOL STAMP AND SIGNATURE...................................
CACHET DE L'ETABLISSEMENT SCOLAIRE ET SIGNATURE.................
STEMPEL DER SCHULE UND UNTERSCHRIFT..........................
SELLO DEL CENTRO Y FIRMA..

Allegato del diploma N. ....
Diploma attachment no....................................
Pièce jointe au diplôme nº................................
Anlage zum Dipolm Nr....................................
Anexo al diploma nº.......................................

Personal data   I authorize the processing of my personal data pursuant to Legislative Decree 30 June 2003, n. 196 "Code regarding the protection of personal data".