**ALMA MATER STUDIORUM - UNIVERSITA’ DI BOLOGNA**

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**TITOLO DELLA RELAZIONE**

Relazione di tirocinio curriculare in

Meccanica del Volo

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**Indice**

[Elenco delle Figure 4](#_Toc193710590)

[Elenco delle Tabelle 6](#_Toc193710591)

[Acronimi 8](#_Toc193710592)

[Introduzione 11](#_Toc193710593)

[Conclusioni 13](#_Toc193710594)

[Appendice A: codice Matlab 14](#_Toc193710595)

[Bibliografia 15](#_Toc193710596)

# Elenco delle Figure

[**Fig. 1: esempio di didascalia.** 11](#_Toc191566333)

# Elenco delle Tabelle

[**Tab. 1: esempio di tabella** 12](#_Toc191566413)

# Acronimi

**ASI** Italian Space Agency

**DART** Double Asteroid Redirection Test

**DCO** Data Cut-Off

**DSN** Deep Space Network **EME2000** Earth Mean Equator at J2000 **EMO2000** Earth Mean Orbit at J2000 **ESA** European Space Agency

**FOV** Field of View

**FPC** Flight Path Control

**GNC** Guidance, Navigation and Control

**G/S** Ground Station

**INAF** Istituto Nazionale di Astrofisica

**I/O** Input and Output

**ISL** Inter-Satellite Link

**JPL** Jet Propulsion Laboratory

**LIDAR** LIght Detection And Ranging

**MA** Mission Analysis

**MCC** Mission Control Center

**MOC** Mission Operations Center

**MONTE** Mission-analysis and Operations Navigation Toolkit Environment

**NASA** National Aeronautics and Space Administration

**NAV** Navigation

**NEA** Near Earth Asteroid

**NEO** Near Earth Object

**OD** Orbit Determination

**OM** Orbital Maneuver

**OPNAV** Optical Navigation

**PHA** Potentially Hazardous Asteroid

**PL** Payload

**PS** Propulsion System

**RCS** Reaction Control System

**RMS** Root Mean Square

**RW** Reaction Wheel

**S/C** spacecraft

**SEP** Sun-Earth-Probe

**SOC** Science Operations Center

**SPA** Sun Phase Angle

**SRP** Solar Radiation Pressure

**SSB** Solar System Barycenter

**SSDC** Space Science Data Center

**STM** State Transition Matrix

**TCA** Time of Closest Approach **UNIBO** University of Bologna **USO** Ultra Stable Oscillator

**WVR** Water Vapour Radiometer

# Introduzione

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$$\begin{array}{c}(a+b)^{2}=a^{2}+2ab+b^{2}\#\left(1\right)\end{array}$$

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**Fig. 1: Esempio di figura (nota: i dati numerici vanno caratterizzati con le rispettive unità di misura)**

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$$\begin{array}{c}F=ma\#\left(2\right)\end{array}$$

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**Tab. 1: Esempio di tabella (nota: i dati numerici vanno sempre caratterizzati con le rispettive unità di misura)**

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# Conclusioni

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# Appendice A: codice Matlab

Esempio di come si riporta un codice.

1

clc , clear

A = 1; % Max . amplitude

omega = 5; % Angular frequency ( rad / s) phi\_ o = 10; % Initial phase ( rad )

delta = 1/ sqrt (2) ; % Damping coefficient (1/ s)

t = linspace (0 ,10 ,1000) ;

y = A\* exp (- delta \* t).\* cos ( omega \* t + phi\_ o );

plot ( t, y,’ Line Width ’ ,1.5) grid on

xlabel (’ time ( s)’) ylabel (’ system response ’)

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