

531
L 99

Lyubchenko O. A.

MECHANICS

Навчально-методичний посібник

«

»

Lyubchenko . . .

MECHANICS

«

»

1 ,
03.02.2016 .

« »
2016

CONTENT

PREFACE	3
Chapter 1. KINEMATICS	4
1.1. Kinematics of the translational motion	4
1.2. Rotational kinematics.....	11
PROBLEMS.....	16
CONTROL PROBLEMS.....	70
Chapter 2. DYNAMICS.....	75
2.1. Newton's laws of motion	75
2.2. Forces in dynamics.....	77
2.3. The conservation of linear momentum	85
2.4. The conservation of energy.....	88
2.5. The conservation of angular momentum	100
2.6. Moment of inertia. Newton's 2nd law for rotation.....	105
PROBLEMS.....	113
CONTROL PROBLEMS.....	226
Chapter 3. OSCILLATIONS AND WAVES	239
3.1. Oscillations.....	239
3.2. Waves	255
PROBLEMS.....	272
CONTROL PROBLEMS.....	313
REFERENCE LIST.....	320
APPENDIX	322