

Time	Content	Lecturer	Classroom	Meeting ID
August 8 8:00-9:35	Introduction, course requirements and evaluation approach	N. ZHANG	J1-205	#VooV Meeting: 724-5127-7575
August 9 8:00-9:35	Ch1 Tire characteristics, terminology and dynamics	N. ZHANG	J1-205	#VooV Meeting: 724-5127-7575
August 10 14:00-15:35	Ch1 Tire parameters, modeling methods, linear model and Magic Formula tire model	N. ZHANG	J1-205	#VooV Meeting: 591-2482-8952
August 11 8:00-9:35	Ch2 Wheel characteristics, dynamics and modeling, fundamentals of braking	N. ZHANG	J1-205	#VooV Meeting: 724-5127-7575

August 15 8:00-9:35	Ch3 Vertical dynamics, quarter car model	N. ZHANG	J1-205	#VooV Meeting: 724- 5127-7575
August 16 8:00-9:35	Ch3 Vertical dynamics, comfort and fundamentals of NVH	N. ZHANG	J1-205	#VooV Meeting: 724- 5127-7575
August 17 14:00-15:35	Ch4 Vertical dynamics, suspension characteristics and modeling of suspension components	N. ZHANG	J1-205	#VooV Meeting: 591- 2482-8952
August 18 8:00-9:35	Ch5 Vertical dynamics, pitch motion, support angle for traction and braking	N. ZHANG	J1-205	#VooV Meeting: 724- 5127-7575
August 22 8:00-9:35	Ch5 Vertical dynamics, roll motion, stabilizer anti-roll bar and wheel load transfer	N. ZHANG	J1-205	#VooV Meeting: 724- 5127-7575
August 23 8:00-9:35	Ch6 Lateral dynamics, linearized single-track model	N. ZHANG	J1-205	#VooV Meeting: 724- 5127-7575
August 24 14:00-15:35	Ch6 Lateral dynamics, understeer gradient, handling and stability related to self-steering characteristics	N. ZHANG	J1-205	#VooV Meeting: 591- 2482-8952
August 25 8:00-9:35	Ch7 Longitudinal dynamics, engine characteristics, fuel consumption	N. ZHANG	J1-205	#VooV Meeting: 724- 5127-7575
August 29 8:00-9:35	Ch7 Longitudinal dynamics, modeling of drive train	N. ZHANG	J1-205	#VooV Meeting: 724- 5127-7575
August 30 8:00-9:35	Ch8 Aerodynamics, resistance forces and modeling	N. ZHANG	J1-205	#VooV Meeting: 724- 5127-7575
August 31 14:00-15:35	Final review, fundamentals of articulated vehicle dynamics	N. ZHANG	J1-205	#VooV Meeting: 591- 2482-8952
September 1 8:00-9:35	Final project	N. ZHANG	J1-205	#VooV Meeting: 724- 5127-7575

Ning Zhang

2015

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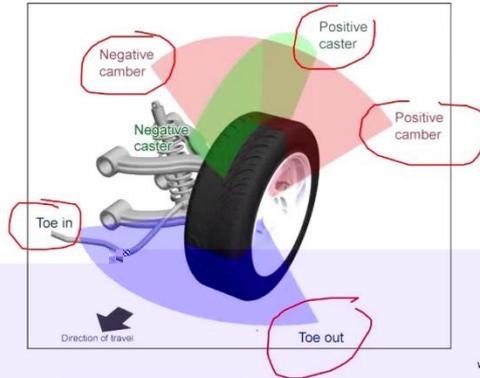
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Definitions



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Time	Content	Lecturer	Classroom
August 8 18:30-20:00	The Introduction of Product Design	Wenyu Wu	J1-201
August 10 14:00-16:30	Product Design Process	Wenyu Wu	J1-201
August 10 18:30-20:00	Design Thinking and Methods	Wenyu Wu	J1-201
August 11 18:30-20:00	Product Producing and Market	Wenyu Wu	J1-201
August 15 18:30-20:00	About the sketching	Xiaozhou Zhou	J1-201
August 17 14:00-16:30	Perspective drawing	Xiaozhou Zhou	J1-201
August 17 18:30-20:00	Sketching Skill	Xiaozhou Zhou	J1-201
August 18 18:30-20:00	Color Material and Finishing	Xiaozhou Zhou	J1-201
August 22 18:30-20:00	The definition of human factors	Haiyan Wang	J1-201
August 24 14:00-16:30	Good Products	Haiyan Wang	J1-201
August 24 18:30-20:00	Information representation	Haiyan Wang	J1-201
August 25 18:30-20:00	Find way out	Haiyan Wang	J1-201



Xiaozhou Zhou

2018

2015-2016

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Haiyan Wang

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Wenyu Wu

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Alex Brezing

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Alex

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你正在觀看 02020214 黃治黔 的螢幕

Aeroplane Seating

Speaker: 02020214 黃治黔

Participants: 周小荷, wuwenyu, Alex Brezina, 02020309-方永輝

Buttons: 停止拍攝 (ON/OFF), 解除静音, 静音, 聊天, 共享螢幕, 录像, 关闭, 离开

Participants: 周小荷, Alex Brezina, 02020309-方永輝, Heermans, Cathy Wang, 02020108 周潤

Buttons: 静音, 解除静音, 聊天, 共享螢幕, 录像, 关闭, 离开

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MATLAB

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August 8 20:30-22:00	Introduction	Chin-an Tan	#VooV Meeting: 532-7926-2248
August 10 20:30-22:00	Kinematics	Chin-an Tan	#VooV Meeting: 315-6214-0467
August 13 9:30-12:00	Tutorial on Matlab/Simulink	Chin-an Tan	#VooV Meeting: 555-8949-3299
August 15 20:30-22:00	Bicycle Model	Chin-an Tan	#VooV Meeting: 532-7926-2248
August 17 20:30-22:00	Three-dimension Dynamics	Chin-an Tan	#VooV Meeting: 315-6214-0467
August 20 9:30-12:00	Stability Analysis	Chin-an Tan	#VooV Meeting: 555-8949-3299
August 22 20:30-22:00	How to control a dynamic system	Chin-an Tan	#VooV Meeting: 532-7926-2248
August 24 20:30-22:00	Controllability and Observability	Chin-an Tan	#VooV Meeting: 315-6214-0467
August 27 9:30-12:00	Discussion on	Chin-an Tan	#VooV Meeting: 555-8949-3299
August 29 20:30-22:00	Discussion on ACC	Chin-an Tan	#VooV Meeting: 532-7926-2248
August 31 20:30-22:00	Project Update	Chin-an Tan	#VooV Meeting: 315-6214-0467
September 3 9:30-12:00	Discussion on LKA	Chin-an Tan	#VooV Meeting: 555-8949-3299



Chin-an Tan

Tan Chin-An
(University of California at
Berkeley)
Institute of Technology)

(University of California at
California

NVH

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(General Motors

Research Laboratory)

AutoSave VehicleDynamicsMobility_00_Simulink... Search (Alt+Q) Chin-An Tan

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1.2 Examples

Example: outline

- The material of the example (MATLAB Codes & SIMULINK GUI)
- Example 1: Pendulum around equilibrium point
- Example 2: Three masses building structural vibration
- Example 3: Taper beam and pendulum (two mass element)
- Example 4: Stabilizing an inverted pendulum using a sliding gain

Example: Overview of the examples

4 Examples

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1.2.1 Example 1 - Simple pendulum

Example 1: Pendulum around equilibrium point

Pendulum

Modeling: To obtain the governing equation of motion, the pendulum is modeled as a single degree-of-freedom system. The mass of the pendulum bob is m and the length of the string is l . The angle of the pendulum from the vertical is θ . The governing equation of motion is:

$$m l^2 \ddot{\theta} + m g l \sin \theta = 0$$

where the term g is constant to be at the ceiling. Then, the equilibrium position $\theta = 0$ is the stable equilibrium position of the pendulum.

where $g = 9.81 \text{ m/s}^2$

Example 1: Pendulum around equilibrium point

State space equation: To obtain the state space equation, the governing equation of motion is converted to a second-order system. The state variables are chosen as $x_1 = \theta$ and $x_2 = \dot{\theta}$. The state space equation can be written as:

$$\dot{x} = Ax + Bu$$

where $A = \begin{bmatrix} 0 & 1 \\ -\frac{g}{l} \sin \theta & 0 \end{bmatrix}$, $B = \begin{bmatrix} 0 \\ 1 \end{bmatrix}$, and $u = \ddot{\theta}$.

Example 1: Pendulum around equilibrium point

Pendulum

Linearization of the nonlinear system: To obtain a set of three linear equations of motion, the nonlinear system is linearized about the equilibrium point $\theta = 0$. The linearized system is:

$$\ddot{\theta} + \frac{g}{l} \theta = 0$$

where g is the gravitational constant and l is the length of the string. The linearized system is valid for small angles θ .

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(1) 学院国际暑期课程-组织管理 (针对学院组织方面)

选项	小计	比例
很不满意	1	2.17%
不满意	0	0%
一般	5	10.87%
满意	18	39.13%
很满意	22	47.83%
本题有效填写人次	46	

选项	小计	比例
很不满意	5	10.87%
不满意	4	8.7%
一般	10	21.74%
满意	11	23.91%
很满意	16	34.78%
本题有效填写人次	46	

第3题: 国际暑期课程对我英语交流能力锻炼是否有帮忙 [单选题]

选项	小计	比例
非常有	10	21.74%
有	29	63.04%
一般	7	15.22%
没有	0	0%
本题有效填写人次	46	

第4题: 国际暑期学校的英语课程是否能够帮我建立国际视野? [单选题]

选项	小计	比例
非常有	12	26.09%
有	27	58.7%
一般	6	13.04%
没有	1	2.17%
本题有效填写人次	46	

第5题: 如果学院允许多选修几门国际暑期学校课程, 我会选择几门课程? [单选题]

	选项	小计	比例
1%	1	34	73.9
9%	2	12	26.0
	3	0	0%
	本题有效填写人次	46	

第6题: 针对学院组织国际暑期学校的建议 [填空题]

详细作答情况 观点分析 隐藏词云图



第7题: 针对所选修课程的建议 [填空题]

隐藏词云图

详细作答情况 观点分析

