



上海交通大学

SHANGHAI JIAO TONG UNIVERSITY



1896

1920

1987

2006

研究生院英语教改试点

研究生学位课

# 航空航天学术英语

*Academic English for Aerospace Graduates*

## Lecture I

Xingqun ZHAN (战兴群)

航空航天学院A405室

[xqzhan@sjtu.edu.cn](mailto:xqzhan@sjtu.edu.cn)



# QUESTIONS before Class

- ① Why we **desire to publish** Paper?
- ① Why we **desire to attend** conference?
- ① Which kind of paper Readers **deserve to follow**?
- ① How Journals/ Conferences organizers **earn profits**?
  
- ① Who has ever **published** a paper in English/others?
- ① What is your favorite/assigned **research topic**?



# Motivation



## Requirement Analysis

- Academic paper drafting, submitting and publishing
- Academic conference participating and presenting
- Career planning after graduation



# Motivation

## Vision Prospected

- To share personal experiences and understandings of professors on writing and presenting
- To assist students to transit from an English Learner to an English User
- To balance between Professional English and **E**nglish for **G**eneral **A**cademic **P**urposes (EGAP)
- To consolidate a foundation to publish journal/conference paper in the following 1 year
- To improve the abilities on literature review and academic discussion



# References

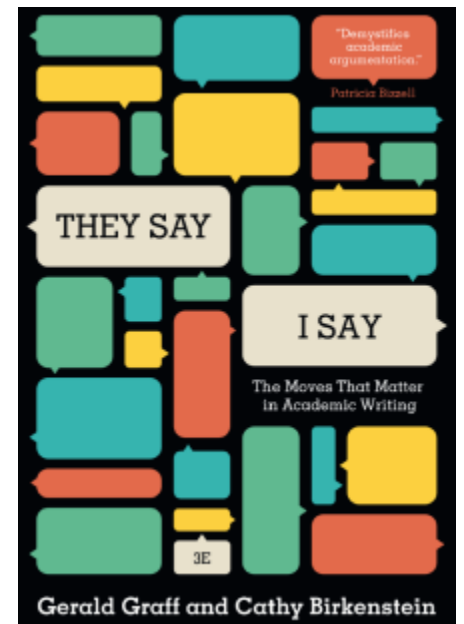
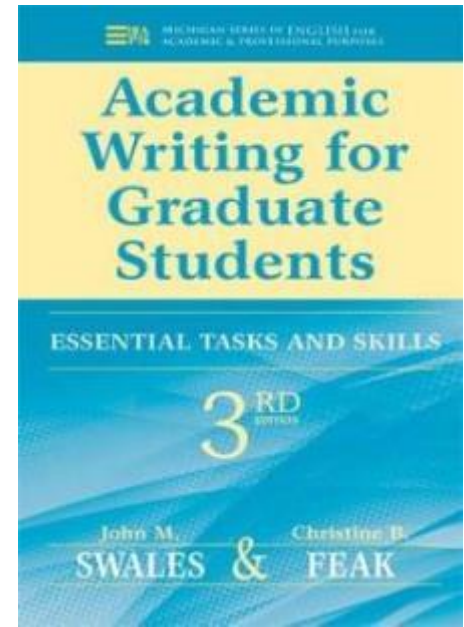
## Teaching materials from Professors



<http://www.academicenglishuk.com/>



<http://aeap.sjtu.edu.cn/>



Text books



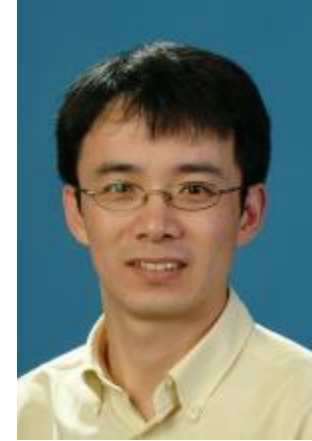
# Course Team



**Xingqun ZHAN**  
Navigation,  
Harbin Institute of  
Technology



**Yongsheng YANG**  
Guidance,  
National University of  
Singapore



**Dan HUANG**  
Control,  
University of Auckland

- ⊙ Rich overseas experiences
- ⊙ Solid scientific research backgrounds
- ⊙ Long term lecture experiences in English
- ⊙ Multi-disciplines covering aerospace science & technology



# Class Hour

- ⊙ Total 32h = Lecturing 24h  
+ Oral Defense 6h  
+ Farewell 2h



# Lecture Contents

## 1. Curriculum Introduction

## 2. Title (nature summary)

- Academic Word List
- Key words collection

## 3. Abstract

- Importance, Method, and Wording
- Abstract Appreciation (Good/Bad)
- Notification of Applied/Practical Research, Applied Basic Research, & Basic Research

## 4. Conference Culture

- Preparation – Invitation, Registration, Visa
- Travel – Accommodation, Venue, Transportation



**ZXQ**

*Wk 2~5*





# Lecture Contents

## 5. Academic Presentation

- PowerPoint Skills
- Presenting and Q&A Skills

## 6. Literature Review

- Basic sentence patterns
- Survey Appreciation
- Intensive reading and Extensive reading
- Reference importance (avoiding plagiarism)



**YYS**

***Wk6~9***



# Lecture Contents

## 7. Essay Writing

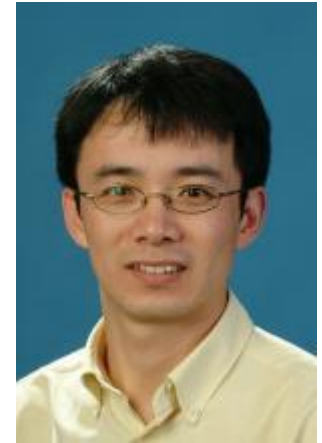
- Organizational structures/patterns
- Chart, Pictures & Equation description
- English Writing

## 8. Submission

- Submission letter
- Argumentative writing

## 9. Annex/Attachment

- Resume/CV
- Recommendation letter/Personal statement



**HD**

***Wk 10~13***



# Lecture Contents

- Simulating Intl' Academic Conference
- Farewell Seminar

→ *All  
Wk15, 17*

Two overarching patterns:

*Movement from general to specific*

*Movement from problem to solution*



# Homework Allocation

## Homework Requirements

- A **comprehensive** academic paper
  - Full Paper Online Submission by **Week 13 Sunday 23:30**
    - Naming rule: ID+Name+Title
  - Only **Research paper** is acceptable rather than a Survey
  - Be sure no plagiarism
- A **playable** PowerPoint file aligned to your paper
  - Online Submission by the **second day** of your Oral Exam (Week 15 Sunday 23:30)



# Homework Allocation

## Homework Requirements

- Homework in Class and after Class
  - As **a reference** to Final Result
  - Professors will reply the submitted homework with suggestions/ comments when available
  - Interactions between Professors and Students are highly appreciated
- Peer Review
  - As **a reference** to Final Result
  - A good opportunity to understand Paper Review Procedure and to learn from classmates



# Oral Examination

## Model-Conference:

- Simulating an Intl' Academic Conference
- Including Plenary, Chair Opening Remarks, Presentations, Questions & Answers, Panel Discussions
- **6 Tracks (3 Sessions each):** Aerodynamics, Structure & Material, Propulsion, Navigation & Vision, Control, System Engineering

## Arrangement

- Every student will be appointed a time to present **by Week 13.**
- Venue: 6 meeting rooms in Aerospace Building
- Date: Saturday, Week 15
  - Session 1: 09:30 ~ 11:30
  - Session 2: 13:00 ~ 15:00
  - Session 3: 15:30 ~ 17:30



# Oral Examination

## Regulations

- All students shall go through Oral Defense with absence as fail.
- Abstract Online Submit due is **Week 9 Sunday 23:30** with a preferred Track selection
- **Dress Code** of Session Chairs and ALL Presenters shall be Formal or Business Casual.
- Each presenter has a **10 min limitation** to present.



# Paper Evaluation Sheet

NUM	1	2	3	4	5	6
<b>Item</b>						
<b>Topic Selection</b>	20	20	15	20	15	20
<b>Novelty</b>	12	14	14	12	10	16
<b>Technical Correctness</b>	15	16	14	12	12	20
<b>Experimental Validation</b>	18	20	12	15	18	20
<b>Language</b>	12	12	12	16	16	20
<b>Total score</b>	77	84	67	75	71	95

Full mark of each item is 20





# Oral Examination Assessment

Name	Technical content	PPT format	Oral presentation	Q & A	Overall score
	No reference was given for cited content; Problem formation not very clear	Clear, some graphs need zoom-in; Conclusions given, along with expectations	Can state clearly the content of presentation More explanation	Many research in the literature	
	Background need more explanation Focus on efficiency? Hard to differentiate others; work and the work of yourself	Flow of logic improvements necessary	With some eye to eye contact, hard to understand		
	No literature review or related work No problem is identified to solve	Relatively clear, but lack of explanations on the results	No eye to eye contact with audience		
	Problem not very clearly identified	Lack of research focus	Good eye to eye contact Body movement		

Full mark of each item is 25



# Performance Assessment

- **Raw score** = Paper 50% + Presentation 50%
  - Paper is graded by the chief reviewer
  - Presentation is graded by the session chair(s)
- **Final score** is recorded by percentage
  - The mean and variance are harmonized among all 6 Tracks, and
  - Adjusted to meet the requirements on score distribution

## 2017年春季学期《土木工程英语》成绩汇总

学号	姓名	学术论文同行评议成绩			论文平均分	答辩成绩			答辩平均分	综合成绩	最终成绩
<b>一、气动方向</b>											
		65	60		62.5	80		75	77.5	70	74
		85	94		89.5	75		75	75	82.25	86
<b>二、结构方向</b>											
		60	84		72	75		60	67.5	69.75	74
		83	80		81.5	83		85	84	82.75	86
<b>三、材料方向</b>											
		60	85		72.5	60		70	65	68.75	74
		80	95		87.5	72		70	71	79.25	86
<b>四、推进方向</b>											
		65	70		67.5	75		80	77.5	72.5	74
		85	95		90	85		90	87.5	88.75	86
<b>五、导航方向</b>											
		60	70		65	88		80	84	74.5	86
		70	65		67.5	85		70	77.5	72.5	74
<b>六、图像方向</b>											
		85	60		72.5	88		80	84	78.25	86
		65	60		62.5	75		85	80	71.25	74
<b>七、控制方向</b>											
		60	80		70	83		68	75.5	72.75	74
		85	70		77.5	78		70	78	77.75	86
<b>八、系统综合方向</b>											
		85	70		77.5	83		82	82.5	80	86
		60	85		72.5	70		60	65	68.75	74

### 分数统计与加权

方向	原始最高分	原始最低分	平均分	标准差	人数	平均分均值	目标均值	标准差均值	目标标准差	最高分	最低分	平均分	标准差
气动	82	70	76.13	8.662	2					86	74	80	8.485281
结构	83	70	76.25	9.192	2					86	74	80	8.485281
材料	79	69	74	7.425	2					86	74	80	8.485281
推进	89	73	80.63	11.49	2					86	74	80	8.485281
导航	75	73	73.5	1.414	2					86	74	80	8.485281
图像	78	71	74.75	4.95	2					86	74	80	8.485281
控制	78	73	75.25	3.536	2					86	74	80	8.485281
系统综合	80	69	74.38	7.955	2	75.609375	80	6.828	9	86	74	80	8.485281



# Recommended Journals/Conferences

## Journals

- System Engineering
- Aircraft Design
- Propulsion
- Avionics

## Conferences

- Top Level
- A Level
- **Funding** applicable from SGS / Foundations



# Journals Recommended by SAA

No	Abbreviated Journal Title	Full Journal Title	Rank	ISSN
1	COMPOS SCI TECHNOL	COMPOSITES SCIENCE AND TECHNOLOGY	A	0266-3538
2	PROG AEROSP SCI	PROGRESS IN AEROSPACE SCIENCES	A	0376-0421
3	COMPOS PART A-APPL S	COMPOSITES PART A-APPLIED SCIENCE AND MANUFACTURING	A	1359-835X
4	MEAS SCI TECHNOL	MEASUREMENT SCIENCE & TECHNOLOGY	A	0957-0233
5	AIAA J	AIAA JOURNAL	A	0001-1452
6	ADV SPACE RES	ADVANCES IN SPACE RESEARCH	A	0273-1177
7	J GUID CONTROL DYNAM	JOURNAL OF GUIDANCE CONTROL AND DYNAMICS	A	0731-5090
8	COMPOS PART B-ENG	COMPOSITES PART B-ENGINEERING	B	1359-8368
9	GPS SOLUT	GPS SOLUTIONS	B	1080-5370
10	IET RADAR SONAR NAV	IET RADAR SONAR AND NAVIGATION	B	1751-8784
11	AEROSP SCI TECHNOL	AEROSPACE SCIENCE AND TECHNOLOGY	B	1270-9638
12	J COMPOS MATER	JOURNAL OF COMPOSITE MATERIALS	B	0021-9983
13	COMBUST SCI TECHNOL	COMBUSTION SCIENCE AND TECHNOLOGY	B	0010-2202
14	J NAVIGATION	JOURNAL OF NAVIGATION	B	0373-4633
15	AEROSP SCI TECHNOL	AEROSPACE SCIENCE AND TECHNOLOGY	B	1270-9638
16	ACTA ASTRONAUT	ACTA ASTRONAUTICA	B	0094-5765
17	J PROPUL POWER	JOURNAL OF PROPULSION POWER	B	0748-4658



# Conferences Recommended by SAA

No	Rank	Full Conference Title	Abbreviated Journal Title	会议中文名称
1	A0825001	AIAA Guidance, Navigation, and Control Conference	GNCC	美国航空航天制导、导航与控制年会
2	A0825002	Institute of Navigation	ION GNSS	国际导航学会年会
3	A0825003	AIAA Lighter-Than-Air Systems Technology Conference	AIAA LTA	美国航空航天学会浮空器大会
4	A0825004	Digital Avionics Systems Conference	DASC	数字航电系统会议
5	A0825005	The Global Power and Propulsion Society	GPPS	国际动力推进学会
6	A0825006	AIAA Science and Technology Forum	AIAA SciTech	美国航空航天学会科技论坛
7	B0825003	AIAA Aviation and Aeronautics Forum and Exhibition	AIAA Aviation	AIAA航空技术会议
8	B0825004	IEEE International Geoscience and Remote Sensing Symposium	GRSS	国际遥感论坛
9	B0825005	International Symposium on Systems and Control in Aeronautics and Astronautics	SSCAA	国际航空航天系统与amp;控制
10	B0825006	International Symposium of GNSS	ISGNSS	国际GNSS大会
11	B0825007	Munich Summit		慕尼黑导航峰会
12	B0825008	International Conference on Information Fusion	ICIF	国际信息融合会议
13	B0825009	Institute of Navigation International Technical Meeting	ION ITM	国际导航学会国际技术会议
14	B0825010	American Helicopter Society International's Annual Forum and Technology Display	AHS Forum	美国直升机年会
15	B0825011	European Rotorcraft Forum	ERF	欧洲直升机年会
16	C0825012	AIAA Aerospace Science Meeting	AIAA ASM	AIAA航空航天会议
17	C0825013	Advanced Aerospace Materials and Processes Conference and Exposition	AeroMat	国际先进航空航天材料大会



# Questionnaire after Class

- With a goal to keep improving lecture's effect
- An anonymous survey after releasing the final scores
- An investigation on paper submission in half year
- Additional investigation on paper submission in one year



# Questionnaire after Class

	非常满意	满意	一般	不满意	非常不满意
课程安排					
PPT质量					
课上效果					
作业安排					
成绩分布					

具体建议	请填写对课程改进的具体建议。
课程安排	
PPT课件	
课堂教学	
作业安排	
成绩评定	





# Teaching Assistant's Duty

- ① 建立班级微信群和公共邮箱
- ① 课上录像、播放，作课堂记录
- ① 收集作业，汇总给指定教授
- ① 制订文章同行评议分配表，发送/收集/汇总
- ① 答辩时间抽签，排序
- ① 答辩材料准备
- ① 收集教授打分，汇总填成绩表
- ① 分发并收集问卷调查表，意见汇总



# Homework

- ① Introduce your favorite subject in 5 min in your domain on next class
  - Assign 4 students to present and 6 students to question
  - A video camera will record everyone's presentation and replay it on class with a Q & A process.
- ② Catalogue your own journals and conferences from SJTU-SAA suggested
  - Sequence them in priority and explain the reasons
  - Search their Impact Factors
- ③ Kick-off preparation on a draft manuscript asap
  - Increase English material reading from now