
SYSTEM ARCHITECTURE
ADVANCED SYSTEM ARCHITECTURE
Graduate School of Engineering and Science,
Univ. of the Ryukyus

2014/Fall-Winter Term

Monday 12:50

Room# 1-322 or 5F Meeting Room

Instructor: Fire Tom Wada, Professor

Course Description

- This course focuses wireless communication system.

- Lecture Plan

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|---------------------------------------|----------------|
| 1. Background & Mathematics | Bateman Chap.1 |
| 2. Introduction of Data transmission | Bateman Chap.2 |
| 3. Doppler Shift & Wireless channel | Bateman Chap.4 |
| 4. Digital Modulation (1) | Bateman Chap.5 |
| 5. Digital Modulation (2) | Bateman Chap.6 |
| 6. Coding | Bateman Chap.7 |
| 7. Multi User Access | Bateman Chap.8 |
| 8. OFDM system | Luo Chap.18 |
| 9. Matlab Lab | |
| 10. Student project and presentations | |

Notes

- Two books copy will be distributed.
 1. Digital Communications –Designs for real World-,
Andy Bateman
 2. Digital Front-End in Wireless Communications and
Broadcasting, edited by Luo
Chapter 18 by Tomohisa Wada
 3. Other Materials (Under consideration)
- Grading:
 - Small Presentation (20%)+Midterm Lab report (40%)
+ Final project presentation (40%)
- Digital signal processing simulation tool
~~MATLAB will be used in course or home works.~~

Information

- Tomohisa Wada, (Fire Tom Wada)
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- Mobile Phone: 090-9785-5802
- Office: 1-605
- URL: <http://www.ie.u-ryukyu.ac.jp/~wada/lecture.html>
 - **MATERIALS WILL BE AVAILABLE ON THE WEB**
- Office hour: Monday 15-16, Friday 11-12PM
Please make reservation by email.

Self introduction -School-

- 1983/March
 - ❑ BS degree from Osaka Univ. Electronic Engineering, JAPAN
- 1992/January
 - ❑ MS degree from Stanford Univ. Electrical Engineering, USA
 - ❑ Major: COMPUTER HARDWARE
- 1994/December
 - ❑ PhD from Osaka University, JAPAN
 - ❑ High Speed SRAM design methodologies and It's application to Cache memory



Student Self-introduction in Speech

1. Name,
2. Where are you from?
3. Master or Doctor, Grade, or Bachelor
4. Who is your supervisor?
5. What is your major , research topic?
6. Free talk on (two minutes, Japanese OK!)
 - Your favorite food or
 - Your best friend or
 - Your hobby of
 - Your favorite color .

Registration of the course

- Web registration
- Physical registration

■ Code	Course	webcode
■ R0040900	システムアーキテクチャ論	
■ R0046400	System Architecture	
■ R0078800	システムアーキテクチャ特論	
■ R0085400	Advanced System Architecture	

Lecture Sedule

- 1) 10/6 (mon)
- 2) 10/16 (thur)
- 3) 10/20 (mon)
- 4) 11/10 (mon)
- 5) 11/17 (mon)
- 6) 11/27 (thur)
- 7) 12/1 (mon)
- **LAB) 12/6 (Saturday) Matlab Lab will be held on December 6th 1:00-6:00PM**
- 8) 12/8 (mon)
- 9) 12/15 (mon)
- 10) 12/22 (thur)
- 11) 1/5 (mon)
- 12) 1/19 (mon)
- 13) 1/26 (mon)