Establish Good Relationships between 廈門理工學院 & 群馬大學 中国 & 日本

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Contents

- Introduction to Gunma University
- Introduction to Science & Engineering
- Introduction to Kobayashi Lab.
  - Collaboration with Industries
  - Globalization
  - Fun and Human Relationship
- Summary
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Gunma University has 4 Campuses

Maebashi 1: Education, Social and Information Studies
Maebashi 2: Medicine
Kiryu: Science & Engineering
Ota: Science & Engineering

Gunma’s Yuru-chara
Gunma chan
<table>
<thead>
<tr>
<th>Faculty of Education</th>
<th>220 students / year</th>
<th>to be teachers in junior, junior high-schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty of Social and Information Studies</td>
<td>100 students / year</td>
<td>to lead information society</td>
</tr>
<tr>
<td>Faculty of Medicine</td>
<td>medical doctor course 108 students / year</td>
<td>nursing science course 160 students/year</td>
</tr>
<tr>
<td>Faculty of Science &amp; Engineering</td>
<td></td>
<td>510 students/year</td>
</tr>
</tbody>
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Many Hot Springs in Gunma

We, Japanese love bathing In hot springs.
Beautiful Nature in Gunma

Insect Zoo
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Science & Engineering: 5 Departments

- Chemistry and Chemical Biology
  （化学・生物化学科）
- Mechanical System Engineering
  （機械知能理工学科）
- Civil and Environmental Engineering
  （環境創生理工学科）
- Electronics and Informatics
  （電子情報理工学科）
- General Science & Engineering
  （総合理工学科）
Electronic Engineering Research Fields

Kiryu Campus

8 professors
12 associate professors
5 assistant professors

3 major areas
- Electronic Devices
- Measurement, Control and Power Electronics
- Information, Communication and System
Manufacturing Industry in Gunma

Many manufacturing companies in Gunma

Electronics, semiconductor, automotive, machinery....

Historical Factory in Meiji Era
Founded as an engineering college for silk long time ago.
Kiryu: Capital of Silk in Japan

絹織物  Silk
Silk Industry was Popular

Historical house
Summer Festival in Kiryu
Ancient, Modern Aspects in Kiryu

Kinopy
Full of Greenery in Kiryu

Cherry Blossoms

Kiryu City View from a Neighbor Mountain
The Oldest University in Japan

足利学校 “Ashikaga Gakkou” School is close to Kiryu City.

孔子廟
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Research & Education Area

Analog & Mixed-Signal Integrated Circuit Design

Our research result examples:

TV tuner application IC & evaluation board (collaboration with Sanyo Semiconductor)

Communication application analog-to-digital converter (collaboration with STARC)
Research Result Examples

Low-Power Successive Approximation Analog-to-Digital Converter IC (collaboration with STARC)

Charge Pump Circuit (with Sanyo Electric)
Active Research

Journal Publication: 4-6 papers/year
  Trans. of Institute of Electronics, Information and Communication Engineers (IEICE)

International Conference Publication: 5-8 papers/year
  IEEE International Test Conference
  IEEE Asia Pacific Conference on Circuits & Systems
  IEEE Asian Solid-State Circuits Conference

Domestic Conference Publication: ~20 papers/year
  Several conferences in Japan

Patent Applications (with industry):
  3-7 applications/year

Publish or Perish!
Each member is 一騎当千.

Female members might be like 大喬、小喬, 孫夫人, or 貂蟬, 。。。
Lab. Members
Laboratory’s Policy

Open, Fair, Independent

● Open, fair to anyone regardless of his/her nationality, affiliation, ethnics, belief/religion, gender or age.

● All of research / education contents are open.

● We are independent in all aspects.

A lot of excellent people are coming.

曹操 pursued to obtain many talented people.
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Merits of Industry Collaboration

- Aggressive collaborations with industries in semiconductor, electronics fields pushes our lab. to higher level.
- Advanced technologies are developed.
- Job/Internship opportunities for students
- Research funds are supported.

I learned importance of industrial collaboration when studying at UCLA.
Current Joint Research Projects

Semiconductor Technology
Academic Research Center (STARC)
Mixed-Signal LSI Testing Technology

Sanken Electric    Power Supply Circuit
Dialog Semiconductor
Asahi Kasei Electronics

Sanyo Semiconductor
Wideband Low Noise Amplifier
Past Joint Research Projects

Agilent Technologies
  Electronic Measurement Technologies
Sumitomo Electric
  Envelope-Tracking Power Amplifier for Base-Station
Sharp
  Direct-RF Sampling ADC
Renesas Electronics
  Digital Calibration Algorithm for ADC
Toshiba Microelectronics
  High-precision ADC for Power-Meter Applications
Nichicon  Power Supply Circuit
Adjunct Professors from Industry

Prof. 青木 均 (Semiconductor Device Modeling, former in Hewlett Packard Lab.)

Prof. 落合 政司 (Power Electronics, Sanken Electric)

Prof. 小堀 康功 (Power Electronics, former in Hitachi)

Prof. 恩田 謙一 (Power Electronics, Hitachi)

Prof. 松田 順一 (Semiconductor Process, former in Sanyo)

Prof. 植田 慶一 (Semiconductor Process, Sanyo)

Prof. 馬場 清一 (High Frequency Circuit, Sanyo)

Prof. 三木隆博 (Analog IC Design, Renesas)

Prof. 松浦 達治 (Analog IC Design, former in Renesas)

Prof. 畠山 一実 (LSI Testing Algorithm, former in Hitachi)

Prof. 山口 隆弘 (LSI Testing Technology, Advantest Lab)

劉備玄徳 invited 諸葛孔明 with 三顧 礼
Industry-Oriented Education

- Adjunct professors provide industry-oriented lectures in electronics and LSI technology fields.
- Students can learn advanced and practical technology.
Summer Internship Program

2-4 weeks in summer vacation

The following companies have kindly accepted our students for internship:
Sanyo, Hitachi, Renesas, Sharp, Advantest, Asahi Kasei Electronics, Toko, Seiko Instru, ZHine Electronics, Sony, Nichicon Analog Devices, Toshiba, Yamaha, Verigy, Texas Instruments, and many.
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My Experiences of Study in the USA

- University of California, Los Angeles (UCLA) Electrical Engineering Department
  Integrated Circuits and Systems Laboratory
  Master course 1987-1989
  Prof. KI Wing-Hung at Hong-Kong University of Science and Technology was a classmate there.

- Also 1-year work experiences in Silicon-Valley in the US.
We have presented 6 papers and 23 members attended to IEEE Asia Pacific Conference on Circuits & Systems Kuala Lumpur, Malaysia, Nov. 2010.
International Conference (2)

Presentations by three Chinese students

IEEE Conferences in Taiwan in 2012.
Student Short Stay in the USA

- Visit to Prof. Fred Lee Lab, Virginia Tech in 2008.

- 5 graduate students stayed at UCLA in Sept. 2011.
Chinese Students in Kobayashi Lab.

Currently 13 Chinese students

Ph. D. Course
呉澍, 李从兵

Master Course
呉明輝 from 廈門理工學院
靳 光磊, 李 慕容、朱 秋霖, 権 力, 李 恩思, 杨 志翔, 趙 峰, 李恩思

Bachelor Course (4th grade)
王俊善、王銳

There is a China town in my lab!
傘昊，林海軍，康剣，張挺，趙楠，韓将星，叶佳霓，孫清波，劉愛燕(福永順子)，徐峰(福永裕平)，邢林，高虹，劉羽，高川，易茹，陳昊，張傳鵬，白平平
Students from Various Countries

Zachary NOSKER: from the US
  5-year working experience in silicon valley.
Santhos Ario WIBOWO: from Indonesia
  Working for Texas Instruments, Japan
Shaiful Nizam Mohyar: from Malaysia
Also students from Bangladesh, Iran, Peru...

International students have achieved
good research results,
which contribute to academia and industry.
Job Employment after Graduation

Chinese graduates of my lab are working for

Sanyo Electric
Renesas Electronics
Texas Instruments, Japan
Analog Devices Inc. Japan
Fujitsu Laboratories
New Japan Radio Co., Ltd.
Tokyo City University
Alps Electric, and many.
I was invited by 濮陽化工大學 in Sept. 2011. Two graduate students from 濮陽化工大學 are currently in my lab.
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Local Society Support

● Kind Local community occasionally takes care of international students.

● Rotary-Yoneyama scholarship (米山奨学金) recipients from my lab:
  Mr. 林 海軍
  Ms. 髙 虹
  Mr. SANTHOS ARIO WIBOWO
  Mr. Khatami Ramin
Lab & Marriage Party
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All of you are welcome to Gunma U.

- Kiryu is an attractive city.
- We have been accepting many international students.
- You can learn advanced and practical technologies in electronics and LSI fields.
- There are plenty of chances for conference presentations and paper publications.
- You can have many good friends.
Lesson from 三国志

● We have very good potential like 諸葛孔明 at his young age, but have not been fully exploited yet.
Internationalization is important

Good relationships between 廈門理工学院 and 群馬大学 will make us to be at the top-level worldwide.
I would like to thank Prof. 林海軍 先生 and all people of 廈門理工学院 for invitation and transferring a very good student Mr. 吳明輝 to Gunma Univ.

Slide-preparation was supported by Engineer, Mr. 石川信宣 and a graduate student, Mr. 荒川雄太.
日本語での補足説明

中国での伝説の動物 龍

臥龍、伏龍:
湖底の奥に潜み、身を縮め、爪・牙を隠し、息を殺し、存在の気配さえ感じさせない。

昇龍:
機が熟すと、嵐をよび雷を興し、大きな叫び声を上げ、爪・牙を露わにして、全身を躍動させ、一気に天に駆け昇る。
福建省

廈門（アモイ、Xiamen）
光电信息科学与工程
光电与通信工程学院

欢迎小林春夫到我校访问和讲座
内容：模数转换电路，信号检测，信息处理等集成电路，系统的前沿研究
时间：9月23日 14:30
地点：信息中心报告厅