

Summer 2000 NSF/Monbusho Program

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NSF SUMMER PROGRAMS IN JAPAN, KOREA AND TAIWAN For U.S. Graduate Students in Science and Engineering

- Summer Institute in Japan
- Monbusho Summer Program in Japan
- Summer Institute in Korea
- Summer Institute in Taiwan

Summer Institute in Japan: Host institutions: government, university, and corporate laboratories (e.g. *Sony, Hitachi, Mitsubishi, chem. and pharm. companies*). Intensive language training. (~60 participants, all from US)

Monbusho Summer Program in Japan: “*Research Experience Fellowships for Young Foreign Researchers*”, Japanese Ministry of Education, Science, Sports, and Culture (Monbusho). 80 participants from the US (31), France (16), Germany (16) and the UK (17). Host institutions: national universities or inter-university research institutes.

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Summer Program Eligibility

- U.S. citizens or permanent residents;
- Enrolled at a U.S. institution in a science or engineering Ph.D. program, enrolled in a M.D. program and have an interest in biomedical research, or enrolled and completed one full year in an M.S. or M.A. program, and;
- Pursuing studies in fields of science (including social science) or engineering which are supported by NSF, NIH, or the Agricultural Research Service, among others.

Monbusho Participant Fields (this year): (not a complete list)
Engineering, Chemistry, Biology, Anthropology, Psychology, Physics, Economics, Computer Science, and *Statistics*.

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Monbusho Program Outline

8 week program (6/27/00 — 8/26/00)

Week 1: Language and Cultural Training (*Sokendai*)

- Short language classes (3 days)
- Sightseeing
- Homestay (2 days) – *Ramen Museum*

Weeks 2 – 8: Host Institution

- Research with host advisor
- Opportunity to visit other universities, companies, research institutions (*be prepared to give a talk*)
- Ample free time (weekends, en route to other institutions)

Weeks 8+: Free time (On Your Own)

- Sightseeing, tour the countryside, and enjoy some time off!

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Main Objectives of the Program:

- Exposure to your field of research in a foreign setting
- Building contacts with foreign researchers for possible future collaboration
- Broadening cultural awareness

Notes About the Program:

- Language Barrier? (Should not interfere with your research)
- NSF Funding for Participants (Plane Tickets, Stipend, Summer Allowance)
- Cost of Living in Japan
- Time Frame (late June → late August – *basic/prelim exams*)

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Research Activity

Research Subject: The \hat{q} values and its Application to the Determination of the No-Observed-Adverse-Effect Levels (NOAEL) in Dichotomous Response

Research Adviser: Dr. Takashi Yanagawa, Kyushu University

Brief Set Up: In cases such as toxicology studies, with the usual set of hypotheses $H : p_1 = p_2$ versus $K : p_1 < p_2$, the problem of controlling the Type-II error rate is of main concern. Yanagawa et al. have proposed a statistic called the \hat{q} -value, an analogue to the p -value.

- Assess the properties of \hat{q} .
- Is \hat{q} -value valid? (presence of nuisance parameter)
- Use the Confidence Interval p -value Method proposed by Berger and Boos (1994).
- Extend the idea to address the Smallest Change Point (SCP) problem for binomial proportions.

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Visits

- Seinan University, Dr. K. Anraku (former NCSU visiting professor)
- Kyushu University, Dr. H. Tachida (former postdoc with Dr. Weir), Dr. Y. Iwasa (former visitor to biomath program, under Dr. Ellner)
- Hiroshima University & The Radiation Effects Research Foundation (RERF) (many opportunities here)
- Institute of Statistical Mathematics (Tokyo)
 - Department of Fundamental Statistical Theory
 - Department of Statistical Methodology
 - Department of Prediction and Control
 - Department of Interdisciplinary Statistics

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Statistics Atmosphere and Comparisons

- No department of statistics
- Smaller statistics community
- Comparisons

Personal Time

- Trips with Graduate Students at Kyushu Univ.
- Annual Festival Season
- Sightseeing in Hiroshima, Nagasaki, Tokyo
- After the program was complete, made visits to relatives and friends.

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Overall Impressions/Other Notes

- One of the most positive experiences of my life.
- NSF/Monbuscho support is outstanding.
- Probably one of the last opportunities for a graduate student to participate in such a program before entering the job market.
- Annual Deadline for Application Submission: **December 1st**.
- Feel free to contact me — see website (www.stat.ncsu.edu/~jadoi) for some related links.