

# Meiji Institute for Advanced Study of Mathematical Sciences

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## MIMS Ph.D. Program

A selected project for  
**Global COE (Centers of Excellence) Program :**  
Formation and Development of Mathematical Sciences  
Based on Modeling and Analysis

### **Application Guidelines**

(Type B : Special Admission for International Students)

Enrollment for April 2009

### **Summary Version**

This is only a "Summary Version."  
It is your responsibility to obtain the "Complete Version" to confirm the details and  
officially apply to this program.



## ●Mathematical Sciences Based on Modeling and Analysis

As seen in the evolution of life, complex systems are continuing to evolve, through uncertain fluctuations, with dynamic change and self-organization. Such systems are observed not only within the biological domain but also throughout developing societies and the natural world. A non-linearity, hidden within these domains, is gradually being revealed. Now that a huge amount of data can be collected, one of the most urgent challenges facing mathematical science is to obtain a clearer understanding of these systems. The key solution for this challenge resides in the innovation of **“Mathematical modeling and analysis”, the mission of which is to attain a clear-cut understanding of these phenomena through modeling and analysis**. The Global COE (Centers of Excellence) Program\* has been executed by the **Meiji Institute for Advanced Study of Mathematical Sciences (MIMS)** as a center for education and research, focusing on studies of complex phenomena in society, nature, and biological bodies. Although we value those realistic models, already widely utilized, which aim at the quantitative reproduction of phenomena, here we aspire rather to establish a new kind of mathematical modeling and analysis, based on the construction of an extraction model that can clarify and comprehend the nature of phenomena.

\* The **“Global COE (Centers of Excellence) Program”** provides funding support for establishing education and research centers that perform at the apex of global excellence to elevate the international competitiveness of Japanese universities.

(For more information, please visit the following website:

<http://www.jsps.go.jp/english/e-globalcoe/index.html>)

## ●Overview of MIMS Ph. D. Program

The key educational component in Doctoral Program of G-COE is the Ph.D. program provided by MIMS, an affiliated research institute of the Organization for the Strategic Coordination of Research and Intellectual Property, at Meiji University.

This program consists of (1) **“MIMS coursework”** in the Graduate School of Meiji University, (2) **“Project research for graduate students”** with the Department of Mathematical and Life Sciences at the Graduate School of Science in Hiroshima University, and (3) the **“MIMS Research Guidance Program”**.

(1) **“MIMS coursework”** is based mainly on the **“Project based analysis and research cluster”** and our **“Inter-Departmental courses”**. In the **“Project based analysis and research cluster”**, courses are available on the **“Formation and Development of Mathematical Sciences based on Modeling and Analysis”**, which are coordinated by MIMS research fellows. These courses are taught in both English and Japanese by native speakers, and are designed to

instruct students in **“Mathematical modeling and analysis” for nonlinear non-equilibrium systems and non-linear time-series**, which are central themes at MIMS. The aim is that students become able to consider complex phenomena in societies from various perspectives. In addition, the Inter-Departmental courses offer a number of **“International subjects”**, such as **“Fundamentals of English Communication Skills in Academic Setting”** and **“Fundamentals of Research Methodology in English Paper Writing”**. These courses, which are taught by English native speaking professors, specializing in academic English teaching, are aimed to cultivate highly skilled researchers able to be active internationally.

(2) **“Project research for graduate students”** allows students to participate in research programs for several months at the Graduate School of Hiroshima University, one of the partner universities of Meiji University. Students must plan their own research subject, and complete a report of their accomplishments.

(3) In the **“MIMS Research Guidance Program”**, one research fellow will be selected from each MIMS research group (Modeling, Mathematical Analysis, and Simulation Groups respectively) to form a research guidance team which will then provide comprehensive supervision to each individual student. The program mainly consists of two courses: the **“Non-linear non-equilibrium systems course”** which focuses mainly on vital and biological phenomena and the **“Non-linear time-series course”** which focuses mainly on economics, finance and the phenomena of natural science. Students will study Mathematical Science incrementally through our **“cross-educational programs”** and **“practical programs”**.

A Doctoral Degree will be awarded to those students who complete all of the courses mentioned above and submit a dissertation (Doctoral thesis).

\*For further information on MIMS (Meiji Institute for Advanced Study of Mathematical Sciences), please visit the following website: <http://www.mims.meiji.ac.jp/index.html>

## I Enrollment Quota, Department, and Course

A part of the enrollment quota for the Department of Science and Technology of the Graduate School is allocated to the MIMS Ph.D. Program. Students admitted will receive education and research guidance under the MIMS Ph.D. Program.

<b><i>Enrollment Quota for the MIMS Ph.D. Program</i></b>	<b><i>Department</i></b>	<b><i>Course</i></b>	<b><i>Enrollment Quota for the Department</i></b>
<b>5 students</b>	Department of Science and Technology	Doctoral Course	33 Students

## II Examination type and Screening method

<b><i>Examination type</i></b>	<b><i>Applicants</i></b>	<b><i>Screening method</i></b>
<b>Type B Special Admission</b>	International Students (Please refer to III for Qualification)	Document Screening

\* For information on Type A admission (General Admission for Japanese nationals), please refer to the Application Guidelines in Japanese.

## III Qualification for Application (Type B)

Inquiries of the following Qualification for Application must be received by the Office of the Global Centers of Excellence Program, **TWO WEEKS (14 days) before the deadline of the application period.**

Applicants should be of non-Japanese nationality and fall into at least one of the following categories:

- (1) Persons who have completed their primary and secondary education abroad, have graduated from a foreign university with a Bachelor's Degree, and who have either already been awarded a Master's Degree or will have been awarded a Master's Degree by 31<sup>st</sup> March 2009.
- (2) Persons who have completed their primary and secondary education abroad, have graduated from a foreign university with a Bachelor's Degree, and who have either already been awarded a Master's Degree or will have been awarded a Master's Degree by 31<sup>st</sup> March 2009 as an international student of a Graduate School in Japan.
- (3) Persons who have completed a correspondence course given by an institution abroad while residing in Japan and have already been awarded a Master's Degree or will have been awarded a Master's Degree by 31<sup>st</sup> March 2009.

- (4) Persons who have been designated by the Ministry of Education, Culture, Sports, Science and Technology of Japan.
- (5) Persons who have been approved by MIMS of Meiji University, through an individual entrance screening process, as having scholastic abilities equivalent to or greater than those required to be awarded a Master's Degree and who will be at least 24 years of age by 31<sup>st</sup> March 2009.

## IV Application Procedure (Type B)

	<i><b>Application Period</b></i>	<i><b>Notice of results</b></i>	<i><b>Enrollment period</b></i>	<i><b>Enrollment</b></i>
<b>Period I</b>	13 <sup>th</sup> October 2008 – 24 <sup>th</sup> October 2008	24 <sup>th</sup> November 2008	24 <sup>th</sup> November 2008 – 12 <sup>th</sup> December 2008	April 2009
<b>Period II</b>	20 <sup>th</sup> January 2009 – 30 <sup>th</sup> January 2009	28 <sup>th</sup> February 2009	28 <sup>th</sup> February 2009 – 12 <sup>th</sup> March 2009	

### 1 Application Documents

All of the following documentation must be submitted:

- 1) Application Forms (Forms A, B and C)
- 2) 3 passport size photos of the applicant (4.5cm X 3.5cm)
- 3) Official transcripts of all colleges and universities attended
- 4) Certificate of (expected) graduation/degree from all universities attended
- 5) Research plan (using prescribed form)
- 6) TWO\* recommendations letters, written in Japanese or English, from university supervisors or individuals who are familiar with the applicant's academic or scientific work.
- 7) Photocopy of the following pages of the applicant's passport as applicable: 1) Page showing the applicant's name, date of birth, passport number and photograph (all applicants) 2). Page on which the landing permission stamp for Japan is affixed (applicants already resident in Japan only)
- 8) Certificate of Registered Items in the Foreign Resident Registration (applicants already resident in Japan only)
- 9) TOEFL® Examinee Score Record or IELTS Test Report Form (For applicants from non-English speaking countries)

### 2 Screening Fee

35,000 Japanese yen

### 3 Application Period

Applications can only be made during the application periods specified below.

\*Application Period I: From 13<sup>th</sup> October 2008 to 6<sup>th</sup> November 2008

\*Application Period II: From 20<sup>th</sup> January 2009 to 10<sup>th</sup> February 2009

**Note:** Applications must arrive no later than the final dates shown above.

#### 4 Application Mailing Address

All of the documents mentioned above should be enclosed in the official envelope and sent by registered mail to the following address:

Office of the Global Centers of Excellence Program Meiji University 1-1-1 Higashimita, Tama-ku, Kawasaki, Kanagawa 214-8571 JAPAN
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### V Notice of Results & Enrollment Registration

#### 1 Notice of Results (Type B)

Results will be posted on the university website. Successful applicants will also receive a letter of acceptance, to be sent out directly.

\* Date of results for Application Period I: 24<sup>th</sup> November 2008

\* Date of results for Application Period II: 28<sup>th</sup> February 2009

#### 2 Enrollment Period

Documents required for the enrollment period will be sent with the letter of acceptance.

\* The deadlines for the enrollment periods are as follows :

Application Period I: 12<sup>th</sup> December 2008

Application Period II: 12<sup>th</sup> March 2009

**Note:** For detailed information on the enrollment periods, please refer to the "Enrollment Guidelines"

### VI Fellowships & Financial Support

#### 1 Fellowships

##### (1) Japan Society for the Promotion of Science (JSPS) Research Fellowships for Young Scientists in Doctoral Course (DC) :

One highly qualified student will be offered the following fellowship from among those who passed the Ph.D. program entrance examination, and enrolled in Meiji University.

<b>Maximum Number of Fellows</b>	1 fellow
<b>Tenure</b>	3 years (from April 2009 to March 2012)
<b>Monthly stipend</b>	200,000 yen
<b>Grants-in-Aid for Scientific Research</b>	Up to 1,500,000 yen per year

(2) **Global COE Program Research Fellowships for Doctoral course students:**

The following fellowship will be provided to those applicants who pass the Ph.D. Program entrance examination, enroll in Meiji University and show an intent to receive a research fellowship. This fellowship will not be provided to the student who is offered the JSPS Research Fellowships.

<b>Maximum Number of Fellows</b>	4 fellows
<b>Tenure</b>	3 years (from April 2009 to March 2012)
<b>Monthly stipend</b>	The amount of the stipend will be basically equivalent to that of the JSPS Research Fellowship.
<b>Note:</b> The fellowship will be cancelled at the point when the student is conferred a Doctoral Degree or if the student should withdraw from Meiji University before completing the 3 year tenure.	

## 2 Financial Support

### **Waiver of Tuition Fees:**

All tuition fees, including entrance fee, annual tuition and lab experiments fees, will be waived for three academic years, for all students who pass this MIMS Ph.D. Program entrance examination and enroll in Meiji University

*Tuition Fees for Doctoral students in Department of Science and Technology, Graduate School of Meiji University*

FY 2009	Entrance fee	280,000yen
	Annual tuition	780,000yen
	Lab experiment fee	70,000yen
FY 2010 & FY 2011	Annual tuition	780,000yen/year
	Lab experiment fee	70,000yen/year

**Note:** Students of this Ph. D. Program must pay the Meiji University Health Insurance Fee (2,500yen/year), as it will not be included in the financial support mentioned above.

## VII How to obtain MIMS Ph. D. Program application forms

Applicants **must send an e-mail** to the Office of the Global Centers of Excellence Program at [gcoe@mics.meiji.ac.jp](mailto:gcoe@mics.meiji.ac.jp), including the following information:

- E-mail Subject: "Request for MIMS Ph.D. Program application forms"
- Applicant's full name
- Present address
- E-mail address
- Telephone number

Application forms will be sent by post to the present address as indicated on the e-mail received after 5<sup>th</sup> September 2008.

## VIII Contact Information

### Meiji University

Office of the Global Centers of Excellence Program

1-1-1 Higashimita, Tama-ku, Kawasaki,

Kanagawa 214-8571

JAPAN

Tel : +81-44-934-7661, Fax : +81-44-934-7660

E-mail: [gcoe@mics.meiji.ac.jp](mailto:gcoe@mics.meiji.ac.jp)