

佐賀大学大学院戦略的国際人材育成プログラム  
理工学研究科（外国人奨学生）  
学生募集要項

**Strategic International Postgraduate Program (SIPOP)  
at Saga University**

**2021**

**Guide for Application for Foreign Scholarship Students**

**Application Deadline: June 4, 2021.**

**Academic Year Start: October 1, 2021.**

**Graduate School of Science and Engineering  
SAGA UNIVERSITY**

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**Strategic International Postgraduate Program (SIPOP)  
at Saga University**

**2021**

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GUIDE FOR APPLICATION FOR  
THE SAGA UNIVERSITY SCHOLARSHIP  
FOR STRATEGIC INTERNATIONAL POSTGRADUATE PROGRAM (SIPOP)  
FOR FOREIGN STUDENTS IN SCIENCE AND TECHNOLOGY

**Admission Policy**

The aim of the Strategic International Postgraduate Program (SIPOP) for foreign students at the Graduate School of Science and Engineering, Saga University is to strengthen the collaboration of studies and education between Saga University and universities or institutes in Asian countries being based on applicants' mutual academic agreements and to develop more the international activities of Saga University in the world.

Nowadays, the science and technology progresses rapidly and we have received both benefits and negative influences. For the sound development of science and technology that contributes to human life, education and research should be performed from global points of view. The scope of this program is to research the advanced science and technology and to discuss about the effects of them and solve the problems raised from technologies and human activities for mankind and environments of the earth. The program is to educate creative students having the deepened insight and professional knowledge for the advanced sciences, technologies and environment and being able to work actively in the world.

The Strategic International Postgraduate Program (SIPOP) will be carried out at the all courses in the Department of Science and Advanced Technology. Those who have already co-worked and/or studied with professors of Saga University being involved professors of respective universities or institutes can apply for this program. Applicants are encouraged to decide the research fields and to designate relevant supervisors(s) given in the List of Academic Staffs, and have to get recommendations of the supervisor(s). The recommendations of the professors at applicant's own university are also required. Doctor's Degree (Doctor of Philosophy in Science or Doctor of Philosophy in Engineering) will be awarded to students on successful completion of the program.

The program started in October, 2007. Rewarded students will get scholarship and be exempted from the fees of entrance examination, entrance and tuition. All lectures and instructions will be given in English for the oversea students to make the studies and researches easier.

The month of entrance is October, and foreign students can enter the program immediately after completing applicants' Master's Degree without learning Japanese language.

This is a call for application to the Doctor Course for the academic year of 2021.

The guide is for oversea students.

**QUALIFICATIONS**

1. **Applicants:**
  - a. Those who have already co-worked and/or studied with professors of Saga University being involved professors of respective university or institutes can apply for this program.
  - b. Non-Japanese citizens arriving from foreign countries that are accepted as sovereign nations by the Japanese Government.
2. **Age:** Applicants younger than 35 years old are preferable, as of April 1, 2021.
3. **Academic career:** Student's record of applicants should belong to a highest class in the University from which the applicant graduated. The following candidates may apply for admission:
  - a. Those who have received Master's Degree from Japanese University, or will receive it as of September 30, 2021.

佐賀大学大学院戦略的国際人材育成プログラム  
佐賀大学奨学金留学生募集要項

佐賀大学大学院戦略的国際人材育成プログラム（SIPOP）はアジア諸国から優秀な外国人を受け入れ、佐賀大学とアジアの大学や研究所等と国際交流協定にもとづいて実施されている共同研究や共同教育を強化し、佐賀大学特有の実質的な国際活動を発展させようとするものです。

今日、科学技術は著しく進歩し、私たちはその恩恵と負の影響の両方を受けています。人類の幸せに資する科学技術の向上には、教育と研究は総合的かつグローバルな視点に立って取り組まなければなりません。本プログラムの目的は最先端科学技術の教育と研究を行い、その波及効果を議論し、科学技術や今日までの人類活動がもたらした地球環境の問題を解決し、より豊かな人類活動と地球環境を築くことであり、先端科学技術および環境に対して深い洞察力と専門力を有する学生を育て、世界で積極的に活躍できる創造的な学生を育てることです。

佐賀大学大学院戦略的国際人材育成プログラム（SIPOP）は佐賀大学大学院理工学研究科博士後期課程の全てのコースにおいて実施され、その教育と研究指導が行われます。国外から留学する者は佐賀大学の教授および所属する大学や研究所等を含む国際共同研究や国際共同教育（パートナーシッププログラムなど）の経験を有する学生、研究者などがこのプログラムに応募できます。志願者は、教員リストに記載されている研究分野と指導教員のうちから希望する研究分野を決定し、希望する指導教員を選んで、指導教員と申請大学（研究所）等の所属教員から推薦を受けなければなりません。

本プログラムの修了者には博士（理学，工学のいずれか）の学位が与えられます。

本プログラムは2007年10月から開始し、奨学金が支給され、且つ授業料等が不徴収です。すべての講義と指導は外国人のために英語で行われます。なお、入学は10月であり、外国で大学院修了後直ちに日本語の教育を受けることなく入学することができます。

ここに、佐賀大学奨学金による戦略的国際人材育成プログラム（SIPOP）の2021年入学を募集いたします。

本募集要項は外国人留学生枠のものであります。

### 応募資格

1. 国籍：日本国籍を有さず、日本政府と国交のある国の出身者で、原則として新たに日本国外から留学する者
2. 年齢：2021年4月1日現在で35歳未満の者が望ましい
3. 学歴等：下記のいずれかに該当し、学業成績が最終出身大学等において最上位クラスに属する者
  - a. 日本の大学から修士の学位を授与された者又は2021年9月30日までに授与される見込みの者
  - b. 外国において、修士の学位に相当する学位を授与された者又は2021年9月30日までに授与される見込みの者
  - c. 外国の学校が行う通信教育における授業科目を我が国において履修し、修士の学位に相当する学位を授与された者又は2021年9月30日までに授与される見込みの者
  - d. 我が国において、外国の大学院の課程を有するものとして当該外国の学校教育制度において位置付けられた教育施設であって、文部科学大臣が別に指定するものの当該課程を修了し、修士の学位に相当する学位を授与された者又は2021年9月30日までに授与される見込みの者

- b. Those who have received Degree equivalent to Master's Degree of Japanese Universities in foreign country, or will receive it in foreign country as of September 30, 2021.
  - c. Those who have received a Degree equivalent to Master's Degree of Japanese Universities from a foreign school through correspondence education in Japan, or will receive the Degree as of September 30, 2021.
  - d. Those who have received a Degree equivalent to Master's Degree of Japanese Universities at educational institutions of the foreign country in Japan, which is designated by the Minister of Education, Culture, Sports, Science and Technology of the Japanese Government, or will receive the Degree as of September 30, 2021.
  - e. Those who have been designated by the Minister of Education, Culture, Sports, Science and Technology of the Japanese Government.
  - f. Those who are 24 years old or more as of September 30, 2021, and are admitted by the Graduate School of Saga University as that applicants' academic abilities are equivalent to or higher than Master's Degree of Japanese Universities upon reviewing the submitted materials.
4. **Health:** Applicants should be in good health both mentally and physically.
  5. **Language proficiency:** A good working level of English is required.
  6. **Arrival in Japan:** Applicants should arrive in Japan by September 30, 2021, if admitted.

**Remarks**

- 1) Military personnel and civilian employees of the armed forces are not eligible.
- 2) Admission shall be canceled if the applicant fails to arrive in Japan by the date mentioned above.
- 3) At our university, only one member of a married couple should apply. The scholarship cannot be applied for when one member of a married couple has received the Japanese government scholarship.
- 4) Neither applicants for other universities in Japan for the Japanese government scholarship, nor applicants nor the recipients of any other scholarships over 100,000 JPY are eligible for this program.
- 5) The scholarship shall be canceled if the applicant fails to receive the Master's Degree by September 30, 2021.
- 6) If the applicants are handicapped and hope the special care about the entrance examination or the study in Japan, please consult with the entrance examination office before the application.

**SCHOLARSHIP BENEFITS**

1. Monthly allowance: A monthly amount of 70,000 Yen for the first year grade, 40,000 Yen for the second and the third year grades, respectively, shall be paid from Saga University at longest for three years from October 2021. This allowance may not be paid for the period when the recipient withdraws from the school temporarily.
2. School fees: All school fees such as entrance examination, registration, and tuition costs, shall be waived. At the present moment, total waved amount for three years, that is equivalent of indirect support, reaches 1,919,400 Yen.

**Remarks**

- 1) Travel and accident insurance to/from Japan should be covered by recipient's own expense.

**SELECTION AND ADMISSION**

1. Applicants who have excellent records will take an interview or an internet interview by the desired Advisory Professor (Supervisor) after judgment of submitted papers and recommendation of the advisory supervisor. The interview or an Internet interview will confirm the experience of Partnership Program (an education program held between Saga University and applicant's university or institute) and or Collaboration Studies or Research Program between the two universities, and will confirm that applicant cannot apply for another university and will enter Saga University certainly when the applicant is selected as a candidate of the scholarship.

- e. 文部科学大臣の指定した者
  - f. 本学大学院において、個別の入学資格審査により、修士の学位を有する者と同等以上の学力があると認められた者で、2021年9月30日において満24歳に達したもの
4. 健康状態：心身ともに健全な者
  5. 語学力：英語の能力が十分な者
  6. 渡日：合格した場合、2021年9月30日までに渡日可能な者

#### 注

- 1) 現役軍人や軍属の資格の者は出願できません。
- 2) 上記に指定された期間に渡日できない者は採用を取り消されます。
- 3) 本学では、配偶者が既に国費外国人留学生である者は出願できません。また夫婦が同時に申請することはできません。
- 4) 他大学に併願している者、その他の月額10万円を超える奨学金に申請している者及び受給している者は出願できません。
- 5) 修士の学位を取得見込みの者で、奨学金受給候補者となったものは、2021年9月30日までに学位を取得できなければ、採用は取り消されます。
- 6) 障がい等を有する志願者で、受験上及び修学上の配慮を必要とする方は、出願前に入試課に相談してください。

#### 奨学金給付

1. 毎月の支給額：2021年10月からの最長3年間、1年次、70,000円；2年次、40,000円；3年次、40,000円が支給されます。休学期間は奨学金の支給はありません。
2. 諸経費：検定料、入学料、授業料などの諸経費は免除されます。2021年4月時点での積算によれば、在学3年間で総額1,919,400円の間接的支援を受けることになります。

#### 注

- 1) 渡日や帰国のための旅費と旅行保険代金は受給者負担になります。

#### 選考と入学許可

1. 志願者のうちで、提出された書類及び受け入れ側の推薦書を審査し、総合的に判断して成績が優秀な者については、指導を希望する教員等による面接又はインターネットインタビューが行われます。面接又はインターネットインタビューでは、パートナーシッププログラムの参加や佐賀大学との共同研究の有無、学力、他大学に併願をしていないこと及び奨学金受給者として決定した場合は、必ず本学へ入学すること等の確認が行われます。この面接又はインターネットインタビューの結果は、奨学金受給候補者の選考に当たり、重要な資料となります。
2. 志願者は、SIPOP選考委員会によって選考され、学業成績、研究能力、面接等の結果が優秀であり、かつ佐賀大学と出身大学等からの強い推薦がある者だけが奨学金受給者として選ばれます。奨学金受給候補者は2021年7月に通知され、必ず入学するという確約の返事をするように要求されます。
3. 2021年7月に本学の奨学金受給候補者として入学を確約する時に、他の月額10万円を超える奨学金に申請している場合は他の奨学金の申請を取り消さなくてはなりません。また、入学確約以降は月額10万円を超える奨学金への応募もできません。2021年7月に本学の奨学金受給候補者として入学を確約しない場合には、ただちに佐賀大学の希望教員と入試課にその旨を連絡ください。
4. 奨学金受給者数は4名です。

The academic ability of applicants will also be certified by the interview or an internet interview.

2. Applicants shall be examined by the Screening Committee of the SIPOP. Only those who have a solid academic background, research capability and recommendation from the professors of both Saga University and applicant's university will be selected. The selected scholarship candidates will be informed and asked to reply the acceptance of the selection immediately in mid-July, 2021.
3. When the applicants accept the scholarship candidacy in July, 2021, applicants should turn down the applications for other scholarships with monthly payment over 100,000 JPY if applicants already applied. After the acceptance of the scholarship candidacy, applicants are not allowed to apply the other scholarships over 100,000 JPY. If the applicants do not accept the scholarship candidacy in July, 2021, applicants should let it know to the desired supervisor and admission office of Saga University as soon as possible.
4. The total number of scholarship recipients is 4.

#### **Remarks**

- 1) Applicants selected as the scholarship student must enroll in the program. Refusal to enter the course after acceptance is not allowed.
- 2) Those who apply for Saga University are not allowed to apply for any other universities.
- 3) Those who have applied for the scholarships at Saga University and other university simultaneously will be cancelled applicants' scholarship candidate and Saga University will not accept any scholarship students from the university recommending the applicant at least for three years.
- 4) Those who were selected as a candidate of Saga University Scholarship applicants cannot apply for the other scholarships over 100,000 JPY.

#### **ENROLLMENT**

1. Date of enrollment is scheduled on the beginning of October, 2021. The exact date will be informed to a successful candidate.
2. Scholarship grantees shall be enrolled as regular graduate students of Saga University.

#### **APPLICATION PROCEDURE**

1. Applicants will download the form from the internet and should prepare the following documents to be addressed to the Dean of the Graduate School of Science and Engineering, Saga University, through the head of the universities or the institutions with which the applicants are affiliated. Applicants who presently have no formal affiliation should send the prepared documents through the Dean of the University from where applicants graduated.
  - ① **Application Form** (Form A).
  - ② **Application for the Scholarship** (Form B).
  - ③ **Field of Study and Study Plan along with the applicant's experience on Partnership Program and/or Collaboration Studies with Saga University** (Form C).
  - ④ **Health Certificate** in the prescribed form completed by a registered medical doctor within six months before the date of application (Form D).
  - ⑤ Official transcripts of **Bachelor's degree**, and **Master's degree or a certificate** stating that the applicant will be conferred Master's degree by September 30, 2021. In the case that the applicant will be qualified by the criterion 3-e of **QUALIFICATIONS** described above, an official transcript of Bachelor's degree is required. The transcript or certificate must be sealed by the authority or sent directly from the university.
  - ⑥ Transcripts of **Academic Record** issued by the university authorities and its English translation.
  - ⑦ Certificate of a student's record of highest class in the University from which the applicant graduated. (GPA, ranking at the class, classification of ABC, or another corresponding numerical index)
  - ⑧ English summary of **Master Thesis** or its equivalent if available, not exceeding four sheets of A4 size paper typed in double space. When a "master thesis" is not required



## 注

- 1) 奨学金受給者として選ばれた志願者は、このプログラムに入学しなければなりません。入学辞退は許可されません。
- 2) 本学へ申請している者は、その他の大学へ申請することは認められません。
- 3) 志願者が、本学の奨学金受給者として入学を許可されていても、他大学と併願していることが判明した場合は、奨学金受給者としての入学許可が取り消されます。さらに、応募大学の推薦資格が3年間取り消されます。
- 4) 本プログラムの奨学金受給者として選ばれた志願者はその他の月額10万円を超える奨学金への申請はできません。

## 入学

1. 入学日は2021年10月初旬を予定しており、合格者に対し別途通知します。
2. 奨学金受給者は、本学の正規大学院生として登録されます。

## 申請

1. 志願者は、在籍している大学や機関の長を通じ、下記の出願書類を本学大学院理工学研究科長名あて作成してください。現在、大学や機関に所属していない場合は、修了した大学の長を通じて送付してください。

- ① 申請書(様式A)
- ② 奨学金申請書(様式B)
- ③ パートナーシッププログラムや共同研究の実績を踏まえた研究分野と研究計画(様式C)
- ④ 申請日前6ヶ月以内に、公認の医者によって記入された指定の様式による健康診断書(様式D)
- ⑤ 学士及び修士の学位記の写し(原本と相違ないことが証明されたもの)。現在学生の者は、2021年9月30日までに修士の学位を取得予定であるという証明書。応募資格3.学歴等のeに該当する志願者は学士の学位証明書を提出してください。
- ⑥ 大学から出される成績証明書とその英語訳
- ⑦ 最終出身大学において最上位クラスに属することが証明されたもの(GPA, ABCのクラス分け, 具体的な順位等)
- ⑧ 修士論文の概要又は研究報告書など修士論文の概要と同等のもので、A4用紙4枚以内、英文のダブルスペースでタイプしたもの。志願者が修了した大学で修士論文が必要とされなかった場合は、その趣旨の申告書を提出してください。
- ⑨ 本国の戸籍謄本又は市民権等の証明書
- ⑩ 推薦書及び証明書
  - a. 申請者が属する機関の長の推薦書(様式E)
  - b. 理工学研究科長あてに、志願者の研究/学力を知る者による証明書を提出してください。

推薦書と証明書は志願者の英語能力が記されていないと認められません。もし志願者が佐賀大学奨学金受給者となった場合は、推薦書は本学へ必ず入学するということを証明する確約書のひとつとなります。

- ⑪ 英語能力を客観的に示す証明書(例えばTOEFL, TOEICなど)
- ⑫ 6cm×4cmサイズで申請日前6ヶ月以内に撮られた写真3枚(上半身, 脱帽, 正面向き)。そのうち2枚は申請書に貼付してください。他の1枚の写真は、その裏に申請者名と国名を記入し、出願書類に同封してください。

2. すべての書類は書留の航空便で送付してください。2021年6月4日までに佐賀大学学務部入試課必着とします。

- by the University from which the applicant graduated, prepare a statement to that effect.
- ⑨ Certificate of **Citizenship** issued by the appropriate authorities.
  - ⑩ **Recommendation and Reference**
    - a. A letter of **Recommendation** (Form E) from the head of the applicant's affiliated institution.
    - b. Letter(s) of **Reference** from those who know the applicant's research/study capability addressed to the Dean of the Graduate School of Science and Engineering.
- The letters of recommendation and reference(s) should indicate the English proficiency of the applicant. The recommendation letter should refer to certify that the applicant will surely enter Saga University, if the applicant will be selected as a Grantee of Saga University scholarship.
- ⑪ Certificate of English ability (for example, TOEFL, TOEIC).
  - ⑫ **Three Photographs** (hatless portrait), 6 cm × 4 cm in size, taken within six months of application date. One copy should be attached to the application form. Two extra copies should be enclosed therein, with the applicant's name and the nationality on the reverse side of the copies.
2. All documents should be sent by registered air mail and must arrive at the Entrance Examination Office by **June 4, 2021**.

### Remarks

- 1) The above documents should be typewritten in English on A4 size paper.
- 2) Incomplete documents are not acceptable.
- 3) Applicants are advised to choose applicants' desired Advisory Professor (Supervisor), and to indicate the supervisor's name on the application form (Form A).
- 4) None of the documents submitted is returned to the applicant in any case.

### NOTES

- 1. Applicants should ask a recommendation letter to a relevant supervisor at Saga University and submission it to the Entrance Examination Office.
- 2. The rights of a grantee of the scholarship and tuition fee waive as well as studentship shall be deprived under the following cases:
  - a) False statements on the documents.
  - b) Violation of the pledge.
  - c) Leaving and/or transferring from the Graduate school of Saga University.
  - d) Violation of school regulations, and no satisfactory academic achievement.
- 3. Grantees are recommended to be well acquainted with the Japanese language, culture, customs, etc. A skill of the Japanese language is necessary in daily life.
- 4. Grantees are expected to complete applicants' Doctor Course Program within three years.

### CORRESPONDENCE

The application form of the SIPOP should be sent by air mail to the address shown below. Note that the application forms must not be submitted in any kinds of electronic form. Forms sent by facsimile and attached files on e-mail are not accepted in any occasion.

**Entrance Examination Office Saga University**

**1 Honjo-machi Saga 840-8502, Japan**

**Fax: (+81)-952-28-8944**

**E-mail: sipop@mail.admin.saga-u.ac.jp**

## 注

- 1) 上記の書類は A4 用紙に英語でタイプしてください。
- 2) 不備書類は受付不可とします。
- 3) 志願者は教員リストから希望する教員を選び、その教員名を申請書（様式 A）に必ず記入してください。
- 4) 提出された書類は、志願者へ返却することはありません。

## 注意事項

1. 志願者は受け入れ予定教員に推薦書を佐賀大学学務部入試課に提出するよう依頼してください。
2. 下記の場合には、志願者は奨学金の受給資格と在学資格を失います。
  - a) 書類上の不正申告
  - b) 誓約書違反
  - c) 佐賀大学大学院を退学した場合
  - d) 学則違反や成績不良
3. 奨学金受給者は、日本語、文化、習慣などをよく身につけるように勧められます。日々の生活に日本語の知識は必要です。
4. 奨学金受給者は、3年以内に博士後期課程を修了しなければなりません。

## 問合せ先

SIPOP への申請書等は、下記宛に航空便で送ってください。ファックスや E メールでの出願は受理できません。

〒840-8502

日本国佐賀県佐賀市本庄町 1 番地

佐賀大学学務部入試課

Fax: (+81)-952-28-8944

E-mail: sipop@mail.admin.saga-u.ac.jp

# ORGANIZING ACADEMIC STAFFS IN THE DEPARTMENT OF SCIENCE AND ADVANCED TECHNOLOGY

## Graduate School of Science and Engineering [Doctor course]

### *Mathematical and Information Science Course*

#### **Chair of Mathematical Science**

*Pure and Applied Mathematics*..... Mashiko, Y.  
Advanced Global geometry

*Mathematical Analysis*.....Handa, K. and Hibino, Y.  
Advanced Study of Partial Differential Equations  
Advanced Probability  
Advanced Applied Mathematical Analysis

#### **Chair of Information Science**

*Information Science*.....Okazaki, Y., Okumura, H.,  
Matsumae, S., Nakayama,  
K and Otani, M.

Advanced Intelligent Educational Systems  
Advanced Information Processing Systems for Human and Machine Perception  
Advanced Parallel and Distributed Systems  
Advanced Emergent System  
Advanced Technology in Ubiquitous Computing

*Information Systems*.....Yamashita, Y., Tadaki, S., Hanada, E.,  
Fukuda, O., Kakeshita, T., Minamoto, T. and Hiroto, M.  
Code Optimization Techniques Advanced Probability  
Complex Systems  
Medical/Healthcare Information Systems  
Biological information Engineering  
Information Engineering  
Numerical Functional Analysis  
Algebraic Coding Theory and Information Theory

### *Mechanical and Electrical Energy Engineering Course*

#### **Thermo-Fluid Energy Engineering**

*Thermal Engineering*..... Miyara, A., Mitsutake, Y.,  
Kariya, K. and Ishida, K.

Thermodynamics, energy conversion, power plant systems  
Heat exchanger, condensation, evaporation, absorption

*Fluid Engineering*..... Kinoue, Y. and Shiomi, N.  
Turbomachinery, compressible fluid flow, effective utilization of fluid energy,  
multiphase flow

*Fluid Engineering*..... Matsuo, S.  
Compressible fluid flow, effective utilization of fluid energy, multiphase flow

#### **Material and Design Engineering**

*Mechanics of Materials, Solid and Structures* ..... Hagihara, S., Hattori, N.,  
Tadano, Y., Taketomi, S. and Morita, S.

Strength of materials  
Advanced solid mechanics  
Computational mechanics  
Numerical analysis for structures  
Fatigue strength of metals and advanced materials

*Design and Production Engineering* .....Zhang, B., Hasegawa, H.,Mawatari, T.  
and Ohshima, F.

Design of machinery and machine elements  
Tribology of machine elements  
Surface engineering

*Control Engineering*..... Sato, K.  
Control theory, robust control, adaptive control

### **Ocean Energy Engineering**

*Ocean Engineering* .....Imai, Y. and Murakami, T.

Wave energy conversion system, Marine hydrodynamics, Floating system

*Thermal Engineering* ..... Arima, H.

Boiling heat transfer, two-phase flow, effective utilization of thermal energy

*Thermal Energy Conversion Systems* .....Ikegami, Y.

Ocean thermal energy conversion plant, development of thermal energy  
conversion system

### **Electronics, Information and Communication**

*Advanced Microwave Engineering*.....Toyoda, I., Tanaka, Takayuki. and Nishiyama, E.

*Advanced Computational Engineering* .....Itoh, H and Fukumoto, H.

*Advanced Optoelectronics* .....Guo, Q.

*Optoelectronic Materials and Devices*.....Tanaka, Tooru.

*Bionic and Cybernetic Engineering* .....Wakuya, H.

*Photovoltaic System* .....Hara, S.

*Advanced Electronics Packaging Technology* .....Sasaki, S.

### **Advanced Power Electronics**

*Power Electronic Devices and Materials*..... Kasu, M.

*Microwave Electronic Devices and Circuits*.....Oishi, T.

*Plasma Energy Engineering*..... Ohtsu, Y. and Ihara, S.

*Surface and Interface Dynamics*.....Takahashi, K.

## ***Civil Engineering and Architectural Design Course***

### **Civil Engineering**

*Geotechnical Engineering* .....Hino, T.

Theory and practice of geotechnical engineering prediction and prevention of  
ground disaster

Advanced geotechnical engineering

Advanced geo-environmental engineering

Geomechanics and rock engineering

Advanced soil mechanics

*Structural Engineering* .....Obiya, H.

Advanced earthquake engineering  
Theory of basic and application of large scale structure systems  
Advanced structural analysis  
System analysis of structures  
Advanced structural design  
Advanced computational mechanics

*Construction Materials* .....Ito, Y.

Improvement of mechanical properties of construction materials  
Utilization of waste materials  
Advanced concrete engineering  
Maintenance management of concrete structures  
Development of inspection technique for concrete structure  
Advanced geotechnical materials  
Geotechnical materials engineering

### **Environmental System Engineering**

*Water Management System*.....Ohgushi, K., Yamanishi, H. Narumol, V.  
and Oshikawa, H.

Water resources engineering  
Wastewater treatment systems  
Computational hydraulics and remote sensing engineering for water environment  
Water resources management  
Water environmental systems engineering  
Environmental systems engineering  
Water pollution control systems  
Advanced hydraulic network system planning  
Planning theory on water environment

*Urban System and Environment* ..... Li, H., and Inohae, T.

Transportation system and planning.  
Urban development and urban systems.  
Residential environment evaluation.  
Prevention for urban disaster.  
Urban energy management.  
Urban environmental evaluation.

### **Architecture and Urban Design**

*Urban Design and Architecture* ..... Mishima, N., Goto, R., Hirase, Y.  
and Miyahara, M.

Basic principle and application of urban planning and transportation planning  
Advanced urban space design  
Advanced transportation planning  
Advanced environmental evaluation

*Environmental Design for Architecture* .....Kojima, S. and Nakaohkubo, K.

Town space design  
Advanced Architectural environmental control  
Urban and Building Environment

## ***Biological and Material Engineering Course***

### **Chair of Physics**

*Particle Physics and Cosmology*..... Aoki, H., Tachibana, M., Kouno, H. and Takahashi, T.

String Theory  
Quantum Chromodynamics in hadron  
Hadron Physics  
Particle Physics Cosmology

*Condensed Matter Physics Imaging and Sensing*..... Zheng, XG., Maki, M., Ishiwata, Y. and Azuma, J.

Condensed Matter Physics, in special, Quantum Magnetism and Multiferroics, Nano Science  
Strongly correlated electron system  
Physics of nanostructure  
Optical processes in condensed matter

### **Biomedical Engineering**

*Intelligent Control Engineering*..... Goto, S. and Sugi, T.

Compensation of hand movement by additional force  
Power system control; Reliability analysis of equipments in power stations,  
Modeling and analysis of geothermal power station  
Plant system control; Modeling and control of Ocean/Spring Thermal Energy Conversion(OTEC/STEC), Modeling and control of chemical plant  
Mechatronic system control; Simulator for articulated robot arm,  
Cooperative control of plural robots, Forcefree control

*Bioimaging and Sensing*..... Kimoto, A. and Yamaoka, Y.

Biosensors; Intelligent-composite multisensors  
Biosensors; Tactile sensors mimicking human perceptions  
Biosensors; Non-invasive imaging with composite sensors  
Biomedical imaging; Photoacoustic imaging  
Biomedical imaging; Nonlinear optics

*Applied Computing*..... Muramatsu, K. and Dozono, H

Numerical analysis of electromagnetic field  
Optimal design of electromagnetic apparatus  
Modelling of magnetic materials  
Soft computing  
Self-organizing maps

*Fluid Engineering*..... Hashimoto, T. and Sumi, T.

Compressible fluid flow, effective utilization of fluid energy, multiphase flow

*Sensing Systems*..... Teramoto, K.

Non-destructive testing.  
Inverse problems in multidimensional sensing.  
Wave-field analysis  
Biomedical sensing by ultrasound  
Photonic Sensing.  
Nano-scale Sensing.  
Signal processing

*Interface Devices*..... Ueno, N.

Mechanoluminescence Sensor  
Dynamic Imaging Analysis

## Human Interface

- Biomedical Sensing*..... Md. T. I. Khan  
Sensing systems of biomedical engineering dynamics
- Robotics and Computational Intelligence*..... Izumi, K.  
Robotics, Mechatronics, Computational Intelligence, Machine learning

## Advanced Material Chemistry

- Functional Ceramics* ..... Yada, M.  
Education and studies on structural and functional ceramics  
Advanced inorganic materials  
Preparation of ceramics: solid state reaction, sol-gel process, reactive infiltration  
Eco-friendly ceramics: luminescence materials for energy-saving, ceramic recycle and porous ceramics for environmental cleanup  
Nano-size functional ceramics: nano-fiber, nano-tube, nano-composites  
Ceramic composite
- Advanced Organic Materials* ..... Takeshita, M.  
Advanced supramolecular chemistry  
Molecular design of advanced materials
- Environmental Chemical Engineering* ..... Kawakita, H.  
Separation and removal material preparation of metals  
Modified saccharides and polysaccharides synthesis using enzymatic reaction
- Photoreceptor proteins*.....Fujisawa, T.  
Photosensing, energy production, and luminescence of proteins  
Vibrational spectroscopy  
Vibrational optical activity

## Chair of Chemistry and Applied Chemistry

### Inorganic Materials Chemistry

- Coordination Chemistry* ..... Koikawa, M. and Yamada, Y.  
Education and studies on synthesis, structure, and physical properties of metal complexes  
Structural aspects of metal complexes  
Basic coordination chemistry

### Organic Materials Chemistry

- Advanced Organic Materials* ..... Narita, T.  
Education and studies on syntheses, structures and properties of polymers and functional organic materials  
Polymeric material sciences  
Structure of organic thin films

- Advanced Biological Materials* ..... Hanamoto, T. and Osada . S.  
Organic fluorine chemistry.  
Synthesis and structure of biologically active peptides.  
Chemistry of ion channel forming peptides.  
Mechanism-based design and synthesis of enzyme or receptor inhibitors.

### Environmental Physical Chemistry

- Physical Chemistry for Photonic and Optoelectronic Materials* ..... Era, M.  
Optoelectronic materials  
Advanced Solid State Chemical Physics
- Physical Chemistry for Biological Molecules* ..... Unno, M.



Molecular Spectroscopy	
Biophysics of Photoreceptor Proteins	
<i>Physical Chemistry of functionalized materials</i> .....	Sakaguchi, K.
Functionalized carbon materials	
Fabrication and evaluation of organic devices	
<i>Physical Chemistry for bioelectrochemistry</i> .....	Tominaga, M.
Bioelectrochemistry	
Bio-fuel cell	

### **Environmental Chemistry and Engineering**

<i>Environmental Chemical Engineering</i> .....	Ohto, K. and Morisada, S.
Advanced environmental chemistry	
<i>Solution Chemistry</i> .....	Takamuku, T.
Education and studies on structure and dynamics of liquids and solutions	
Mixing state of binary solutions on nano-scale	
Solvation structure of biomolecules in binary solutions	
Physicochemical properties of room-temperature ionic liquids	
Structure and dynamics of liquids confined in nano-space	

**STRATEGIC INTERNATIONAL POSTGRADUATE PROGRAM**  
**(SIPOP)**  
**AT THE GRADUATE SCHOOL OF SCIENCE AND ENGINEERING**  
**SAGA UNIVERSITY**

**APPLICATION FORM**

**INSTRUCTION (記入上の注意)**

1. Application should be typewritten or written in Roman letters.  
(記入は楷書又はローマ字体を用いること。)
2. Numbers should be written in Arabic figures.  
(数字は算用数字を用いること。)
3. Year should be written in the Anno Domini system.  
(年号はすべて西暦とすること。)
4. Proper nouns should be written in full and not be abbreviated.  
(固有名詞はすべて正式な名称とし、一切省略しないこと。)
5. Enter the address below for notifying the result of the selection.  
(合格通知書等の送付先を下記欄に記入のこと。)

<p>To :</p> <p>Name : _____</p> <p>Present : _____</p> <p>Address _____</p> <p>_____</p> <p>_____</p> <p>Tel/Fax</p>
--

**STRATEGIC INTERNATIONAL POSTGRADUATE PROGRAM (SIPOP)  
AT THE GRADUATE SCHOOL OF SCIENCE AND ENGINEERING  
SAGA UNIVERSITY**

(GRADUATE SCHOOL OF SCIENCE AND ENGINEERING)

2021 年度佐賀大学大学院戦略的国際人材育成プログラム (理工学研究科博士後期課程) 入学志願票

Department of Science and Advanced Technology

Courses:

- Mathematical and Information Science  
 Mechanical and Electrical Energy Engineering  
 Civil Engineering and Architectural Design  
 Biological and Material Engineering

Chair \_\_\_\_\_

Field \_\_\_\_\_

Name of the desired supervisor (指導を希望する主指導教員名をかならず記入すること。)

\_\_\_\_\_

Paste your passport  
photograph taken  
within the past 6 months.  
Write your name and  
nationality in  
block letters on the  
back of the photo.  
  
(Size (6×4cm) )

1. Name in full, in native language (姓名(自国語))

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_  
 (Family name) (First name) (Middle name) (Sex)  
 Male (男)  
 Female (女)

In Roman letters (ローマ字)

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_  
 (Family name) (First name) (Middle name) (Marital Status)  
 Single (未婚)  
 Married (既婚)

2. Nationality  
(国籍) \_\_\_\_\_

3. Date of birth (生年月日) Year 19 \_\_\_\_\_, Month \_\_\_\_\_, Date \_\_\_\_\_, Age \_\_\_\_\_ (As of April 1st, 2021)  
 (年) (月) (日) (年齢)

4. Present status; with the name of the university attended or of the employer.  
(現職:在学大学名又は勤務先名まで記入すること)

\_\_\_\_\_

5. Present address and telephone number, facsimile number or E-mail address  
(現住所、電話及びファクシミリ番号又は電子メールアドレス)

(Office) : Telephone number \_\_\_\_\_  
 Facsimile number \_\_\_\_\_  
 E-mail address \_\_\_\_\_

(Home) : Telephone number \_\_\_\_\_  
 Facsimile number \_\_\_\_\_  
 E-mail address \_\_\_\_\_

6. Permanent address (本籍)

\_\_\_\_\_

7. Field of study specialized in the past (Please describe in detail as concrete as possible.)

(過去に専攻した専門分野(できるだけ具体的に詳細に書くこと))

8. Educational background (学歴)

		Name and address of school (学校名及び所在地)	Officially required years of schooling	Year and month of entrance and completion (入学及び卒業年月)	Major subject (専攻科目)	Diploma or degree awarded (学位・資格)
Elementary Education (初等教育)	Elementary School (小学校)	Name (学校名)	years (年)	From (入学)		
		Location (所在地)		To (卒業)		
Secondary Education (中等教育)	Lower (中学)	Name (学校名)	years (年)	From (入学)		
		Location (所在地)		To (卒業)		
Secondary School (中学及び高校)	Upper (高校)	Name (学校名)	years (年)	From (入学)		
		Location (所在地)		To (卒業)		
Higher Education (高等教育)	Undergraduate Level (大学)	Name (学校名)	years (年)	From (入学)		
		Location (所在地)		To (卒業)		
Graduate Level (大学院)		Name (学校名)	years (年)	From (入学)		
		Location (所在地)		To (卒業)		
Total years of schooling mentioned above (以上を通算した全学校教育修学年数)			years (年)			

\* In the case, the blank spaces above are not sufficient for information required, please accompany this form by an attached sheet. ((注)上欄に書ききれない場合には、適当に別紙に記入して添付すること。)

9. State the titles or subjects of books or papers (including graduation thesis authored by applicant), if any, with the name and address of publisher and the date of publication.

(著書、論文、(卒業論文を含む)があればその題名、出版社名、出版年月日、出版場所を記入すること。)

\* Accompany this form with a summary of the papers mentioned above.((注)論文の概要を添付のこと)

10. Employment Record; Begin with the most recent employment, if applicable. (職歴)

Name and address of organization (勤務先及び所在地)	Period of employment (勤務期間)	Position (役職名)	Type of work (職務内容)
	from to		
	from to		
	from to		

11. Japanese language background, if any (日本語の学習歴)

i) Name and address of institution (学習機関及びその住所)

ii) Period of study: from \_\_\_\_\_ to \_\_\_\_\_  
(学習期間) Year (年) Month (月) Year (年) Month (月) Years (年間)

iii) Name of teacher (教師名)

iv) Japanese language proficiency: Evaluate your level and mark with a × where appropriate in the following categories. (日本語能力を自己評価のうえ、該当欄に×印を記入すること。)

	Excellent(優)	Good(良)	Poor(不可)
Reading (読む能力)			
Writing (書く能力)			
Speaking (話す能力)			

12. Foreign language proficiency: Evaluate your level and mark with a × where appropriate in the following categories. (外国語能力を自己評価のうえ、該当欄に×印を記入すること。)

	Excellent(優)	Good(良)	Poor(不可)
English(英語)			
French(仏語)			
German(独語)			
Spanish(西語)			

13. Family background (家族状況)

Name(氏名)	Relationship (続柄)	Age (年齢)	Occupation (職業)	Address (住所)	Living or Deceased (生死)	* Check your accompanying dependents to Japan. (注) 渡日する場合、同伴予定の家族には該当欄に×印を記入すること。
	Father(父)					
	Mother(母)					
	Spouse(配偶者)					

\* All expenses incurred by the presence of dependents must be borne by the grantee. He/She is advised to take into consideration the various difficulties and great expense that will be involved in finding living quarters for them.

(注) 同伴者に必要な経費はすべて留学生の負担であり、また家族用の宿舎を見つけることは相当困難であり、賃貸料も非常に割高になるため、あらかじめ承知されたい。

14. Is there anyone in your family who has been awarded or is applying for the Japanese Government Scholarship? If yes, please give his/her name.

(家族の中に国費留学生に採用されている者または申請中の者がいればその者の氏名を記入すること。)

15. Have you been awarded the Japanese Government Scholarship in the past? If so, please give the period, the name of the university, etc.

(過去に国費留学生に採用されたことがあれば、その期間、受入れ大学名等を記入すること。)

1) Yes, I have. (ある。) Period(期間); \_\_\_\_\_

University(大学名等); \_\_\_\_\_

2) No, I have not. (ない。)

16. Are you applying for other universities as monbukagakusho scholarship or other universities except Japan? If so, give the name(s) of university(ies), month, year, amount, etc.

(他の大学に応募している場合は、その名前、期間、金額等を記入すること。)(See! p.2-3, "Selection and Admission" and "Remarks")

\_\_\_\_\_

17. Person to be notified in applicant's home country, in case of emergency: (緊急の際の母国の連絡先)

i) Name in full(氏名)

ii) Address ; with telephone number, facsimile number or E-mail address:

(住所:電話番号,ファクシミリ番号又は電子メールアドレスも記入すること。)

Address

Telephone

Facsimile

iii) Occupation(職 業):

E-mail address

iv) Relationship(本人との関係):

18. Immigration Records to Japan. (日本への渡航記録)

Date (日付)	Purpose (渡航目的)
From To	
From To	

Date of application(申請年月日):

Applicant's signature(申請者署名):

Applicant's name in

Roman block capitals(申請者氏名):

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# Form B

\*受験番号  
第 号

## APPLICATION FOR SAGA UNIVERSITY SCHOLARSHIP

佐賀大学奨学金留学生申請書 (別紙)

1. Name in full, in Roman block capitals (姓名を記入, ローマ字で表記)

\_\_\_\_\_, \_\_\_\_\_ (Sex)  
(Family name) (First name) (Middle name)  Male (男)  
 Female (女)

2. Date of birth (生年月日)

19 \_\_\_\_\_  
Year (年) Month (月) Date (日) Age (年齢) As of April 1, 2021  
(2021年4月1日現在の年齢)

3. Nationality (国籍)

\_\_\_\_\_

4. Present address, telephone and facsimile number, E-mail address

(現住所及び電話, ファクシミリ番号, Eメールアドレス)

Paste your passport  
photograph taken  
within the past 6 months.  
Write your name and  
nationality in  
block letters on the  
back of the photo.

(Size (6×4cm))

5. The institution you have graduated/will graduate. (卒業した,あるいは卒業予定の機関)

\_\_\_\_\_  
Institution (機関) Year (年) Month (月)

Conferred Degree : a) Bachelor Degree b) Master's Degree c) Doctoral Degree  
(取得学位) (学士) (修士) (博士)

6. Field of study in Japan (日本での専攻希望)

\_\_\_\_\_

7. If you are applying for other scholarships, state the name of sponsor, duration, amount, etc.

(他の奨学金に応募している場合は, その名前, 期間, 金額等を記入すること。)

8. Have you ever joined the partnership program of Saga University and/or the collaboration studies with professors of Saga University? If so, please give the period, the name of the program and/or the research projects, etc.

(今までに佐賀大学の教授とのパートナーシッププログラムや共同研究に参加したことがあれば, その期間・プログラム名やプロジェクト名を記入すること。)

i) Yes, I have. Period: \_\_\_\_\_ Program and/or Project name:  
(ある) Professor's name: \_\_\_\_\_

ii) No, I have not.  
(ない)

専攻分野及び研究計画  
Field of Study and Study Program

Name in full, in native language \_\_\_\_\_ , \_\_\_\_\_ , \_\_\_\_\_  
(姓名 (自国語)) (Family name) (First name) (Middle name)

Nationality \_\_\_\_\_  
(国籍)

Proposed study program in Japan; State, in more than 600 words, the details of your major field of study and study program based on your experiences of the partnership program or the collaboration studies with Saga University. This item will be used as one of the most important references for selection. Statement must be typewritten in block letters. Additional sheets of paper may be attached if necessary.

日本での研究計画(この研究計画は、選考の重要な参考となるので、専攻分野、研究計画をパートナーシッププログラムや共同研究の経験に基づいて、600字以上で詳細に記入すること。記入は、タイプ又はワープロによるものとし、必要な場合は別紙に追加してもよい)

1. Field of study (専攻分野)

2. Study Program in detail . (研究計画;詳細に記入すること。)



3. Describe the experience of the partnership program and/or collaboration studies with the professors of Saga University in detail. (佐賀大学の教授とのパートナーシッププログラムや共同研究の経験を詳細に記入すること。)

## 健康診断書

### CERTIFICATE OF HEALTH (to be completed by examining physician)

日本語又は英語により明瞭に記載すること。  
Please fill out (PRINT/TYPE) in Japanese or English.

氏名 Name: \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_  
 Family name, First name Middle name  
男 Male 生年月日 Date of Birth: \_\_\_\_\_ 年齢 Age: \_\_\_\_\_  
女 Female

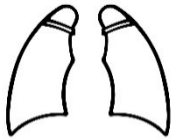
1. 身体検査  
Physical Examinations

- (1) 身長 \_\_\_\_\_ cm 体重 \_\_\_\_\_ kg  
 Height Weight
- (2) 血圧 \_\_\_\_\_ mm/Hg ~ \_\_\_\_\_ mm/Hg 血液型 Blood Type 

A B O	RH + -
-------	--------

 脈拍 \_\_\_\_\_ 整 regular  
 Blood pressure Pulse 不整 irregular
- (3) 視力 Eyesight: (R) \_\_\_\_\_ (L) \_\_\_\_\_ (R) \_\_\_\_\_ (L) \_\_\_\_\_  
 裸眼 without glasses 矯正 with glasses or contact lenses
- (4) 聴力 正常 normal 低下 impaired 言語 正常 normal 低下 impaired  
 Hearing: speech:

2. 申請者の胸部について、聴診と X 線検査の結果を記入してください。X 線検査の日付も記入すること。(6 ヶ月以上前の検査は無効。)  
 Please describe the results of physical and X-ray examinations of applicant's chest X-ray (X-ray taken more than 6 months prior to the certification is NOT valid).



肺 正常 normal 異常 impaired  
 lung:   
 ←Date \_\_\_\_\_  
 Film No. \_\_\_\_\_

心臓 正常 normal 異常 impaired  
 Cardiomegaly:

↓  
 異常がある場合  
 心電図 Electrocardiograph: 正常 normal 異常 impaired

Describe the condition of applicant's lung.

3. 現在治療中の病気 Yes (Disease: \_\_\_\_\_) No  
 Disease Treated at Present

4. 既往症  
 Past history: Please indicate with + or - and fill in the date of recovery

Tuberculosis..... ( . . . ) Malaria..... ( . . . ) Other communicable disease..... ( . . . )  
 Epilepsy..... ( . . . ) Kidney Disease..... ( . . . ) Heart Diseases..... ( . . . )  
 Diabetes..... ( . . . ) Drug Allergy..... ( . . . ) Psychosis..... ( . . . )  
 Functional Disorder in extremities..... ( . . . )

5. 検査 Laboratory tests  
 検尿 Urinalysis: glucose ( ), protein ( ), occult blood( )  
 赤沈 ESR: \_\_\_\_\_ mm/Hr, WBC count: \_\_\_\_\_ /cmm 貧血   
 Hemoglobin: \_\_\_\_\_ gm/dl, GPT: \_\_\_\_\_ anemia

6. 診断医の印象を述べて下さい。  
 Please describe your impression.

7. 志願者の既往歴、診察・検査の結果から判断して、現在の健康の状況は十分に留学に耐えうるものと思われますか？  
 In view of the applicant's history and the above findings, is it your observation his/her health status is adequate to pursue studies in Japan? Yes  no

日付 \_\_\_\_\_ 署名 \_\_\_\_\_  
 Date: Signature:

医師氏名  
 Physician's Name in Print: \_\_\_\_\_

検査施設名  
 Office/Institution: \_\_\_\_\_

所在地  
 Address: \_\_\_\_\_

**RECOMMENDATION AND CERTIFICATION**

**By the Head of Applicant's University or Institute**

**TO: President of Saga University**

This is to recommend Mr./Ms. \_\_\_\_\_

as a candidate for a Scholarship Winner in your University.

Mr./Ms. \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

I certify that Mr./Ms. \_\_\_\_\_ will enter  
your university in October 2021 if he/she is awarded the Saga University Scholarship.

Date: \_\_\_\_\_

Recommender's name: \_\_\_\_\_

in Roman block letters: \_\_\_\_\_

Signature: \_\_\_\_\_

Title \_\_\_\_\_

Institution:  
(or Company) \_\_\_\_\_

Present Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_