Master of Science
in
Signal Processing
(Full-time / Part-time Programme)

NANYANG
TECHNOLOGICAL
UNIVERSITY

Student Handbook
2006/2007

The softcopy of this handbook is available at
http://www.ntu.edu.sg/eee/academic/MSc/
## Contact Information

*(See also Appendix E: Telephone Directory)*

<table>
<thead>
<tr>
<th>Staff Name &amp; Telephone Number</th>
<th>Postal Address</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Head of Division</strong></td>
<td></td>
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<tr>
<td>Division of Information</td>
<td>Nanyang Technological University</td>
</tr>
<tr>
<td>Engineering</td>
<td>School of EEE, Block S1</td>
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<td>Assoc. Prof. Tan Yap Peng</td>
<td>50, Nanyang Avenue</td>
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<td>Secretary: Ms. Phebe Romina</td>
<td>Singapore 639798.</td>
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<td>Tel (65) 6790-4173 / 5872</td>
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<td>Email <a href="mailto:H-EEE3@ntu.edu.sg">H-EEE3@ntu.edu.sg</a></td>
<td></td>
</tr>
</tbody>
</table>

| **Programme Director**        |                |
| Prof. Ma Kai-Kuang            | Nanyang Technological University |
| Tel (65) 6790-6366            | School of EEE, Block S2 |
| Fax (65) 6792-0415            | 50, Nanyang Avenue |
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| **Graduate Studies Office (GSO)** |                |
| For Admission Matters:           | Nanyang Technological University |
| admission_coursework@ntu.edu.sg   | Graduate Studies Office |
| For Subject Registration:        | Student Services Centre, Level 3 |
| subjreg@ntu.edu.sg               | 42, Nanyang Avenue |
| For Exam Matters:                | Singapore 639815. |
| gradexam@ntu.edu.sg              | Tel: (65) 6790-4704 |
| For Leave of Absence:            |                |
| LeaveCoursework@ntu.edu.sg       |                |
| For All other matters:           |                |
| gradstudies@ntu.edu.sg           |                |
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1 INTRODUCTION

Welcome to the School of Electrical and Electronic Engineering (EEE) as part of the College of Engineering and the Programme of Master of Science in Signal Processing — MSc (SP).

The aim of the MSc (SP) programme is designed for hardware and software designers, R&D managers, practicing engineers, and industry planners who seek an understanding of current approaches and evolving directions for DSP technologies. It is also intended for engineers who anticipate future involvement in this area.

This handbook is also available at NTU school website: http://www.ntu.edu.sg/eee/academic/MSc/#msc3 under heading of Signal Processing (Full-Time/ Part-Time).

2 PROGRAMME STRUCTURE AND REQUIREMENTS

A candidate will be admitted to the programme either as a full-time or part-time candidate at the beginning of an academic year. All Classes are conducted in the evenings on weekdays (Monday – Friday). Each subject consists of 39 hours of lectures (3 academic units, i.e., 3 AUs). Classes for each subject are held once a week on weekday evening from 6.30pm to 9.30pm and examinations will be conducted during office hours at the end of each semester.

The number of AUs that are required for the MSc (SP) Program is 30. This can be achieved in two ways (i.e., two options of study):

- The Coursework + Dissertation Option
- The Coursework-only Option (i.e., coursework + Independent Study)

2.1 Coursework + Dissertation Option
For this option of study, the coursework component comprises a total of 8 subjects of 3 AUs each, of which, 4 are core subjects and 4 are elective subjects. Each candidate is also required to undertake a research project of 6 AU based on which a dissertation must be submitted.

2.2 Coursework-only (Coursework+Independent Study) Option
Starting from academic year 2004-2005, candidates have the option to replace the project dissertation module by an elective subject and
an independent study module EE6490\(^{(1)}\). The Independent Study (EE6490) can be taken in any semester.

The minimum and maximum periods of candidature for a full-time candidate are one academic year (2 semesters) and three academic years (6 semesters), respectively. For a part-time candidate, the minimum and maximum periods of candidature are two academic years (4 semesters) and four academic years (8 semesters), respectively.

The maximum number of subjects that a student can take in any semester is 5 for full-time students and 3 for part-time students, including EE6490 Independent Study (if you have taken the Coursework-Only Option). However, the project is not counted as a subject for this purpose.

3. COURSE STRUCTURE: SUBJECTS ON OFFERED AND TIMETABLE

The subjects on offer for each semester are listed in Sections 3.1 and 3.2, while the syllabuses for all subjects are given in Appendix A.1. For more updated information, please visit our website: [http://www.ntu.edu.sg/eee/academic/MSc/sp/mscsp.html](http://www.ntu.edu.sg/eee/academic/MSc/sp/mscsp.html)

The subjects offered in 2006/2007 academic year are shown below, and the timetable is provided in Appendix A.2.

From the academic year 2006-2007 onwards, this programme allows you to take at maximum two subjects from other MSc programmes in the School of EEE as elective subjects, which will be counted for your entire MSc (SP) degree coursework part. These five courses are*:

- EE6101 Digital Communication Systems [Semester 1]
- EE6108 Computer Networks [Semester 1]
- EE6127 Wireless Networking [Semester 2]
- EE6222 Machine Vision [Semester 1]
- EE6224 Neural & Fuzzy Systems [Semester 1]

(* For the syllabus and timetable information of these five elective subjects, please refer to their associate programmes’ handbook and/or webpages.)

\(^{(1)}\) Details information on independent study module can be found at: [http://www.ntu.edu.sg/eee/academic/msc/isg.html](http://www.ntu.edu.sg/eee/academic/msc/isg.html)
3.1 Semester 1

Core Subjects

EE6401  Advanced Digital Signal Processing
EE6402  Real-Time DSP Design and Application

Independent Study

EE6490  Independent Study

Electives Subjects

EE6421  Statistical Signal Processing
EE6424  Digital Audio Signal Processing
EE6425  Speech Analysis and Processing
EE6426  Image Processing and Pattern Recognition

3.2 Semester 2

Core Subjects

EE6403  Distributed Multimedia Systems
EE6404  VLSI Digital Signal Processor

Independent Study

EE6490  Independent Study

Electives Subjects

EE6422  Adaptive Signal Processing
EE6423  Array Signal Processing
EE6427  Video Signal Processing
EE6429  Probability and Random Processes

4. SUBJECT REGISTRATION

All students are to register subjects of study for themselves. Normally, subject registration is conducted a few weeks before the beginning of each semester. However, MSc candidates are allowed to add or drop subjects during the add/drop periods.

We would like to emphasize that it is the responsibility of each student to register subjects for himself/herself. Should a student fail to register a subject and yet proceed to attend classes in that
subject, he/she will not be allowed to take the examination in the subject or no grade will be awarded if subject has no formal examination.

For more details on the Graduate Subject Registration System, please visit the Subject Registration website under the GSLink at http://www.ntu.edu.sg/GradStudies/Coursework+Programmes/GSLink/

5. CONTINUAL ASSESSMENTS

Continual assessments constitute part of the overall assessment for a subject; the rest comes from the written examination. Continual assessments can be conducted in various ways as determined by the professors teaching the subject. Normally, they are based on assignments given and/or any tests conducted. All candidates are urged to take any tests conducted by the professors seriously and to submit all the given assignments on time.

6. EXAMINATION

A candidate who has registered for any subject must sit for the written examination in that subject. Should the candidate be absent from the examination, he/she would be deemed to have sat and failed the examination.

Examinations are normally conducted from week 14th to week 17th of each semester. Several weeks before the examination, the candidates will be notified through their NTU email account to check and confirm the subjects registered for that semester. Normally, a reply is not expected unless a candidate wishes to contest his eligibility described therein.

It is very important for a candidate to inform the Office of Academic Services (OAS) and the Programme Director about any changes in his/her postal address.

6.1 Registration of Calculators

All calculators used in any examination must have the approved seal of the School of EEE or another engineering school. The updated list of approved calculators for EEE candidates can be found at: http://www.ntu.edu.sg/eee/Students/
6.2 Regulations on Failed Subjects

Please take note of the following University regulations concerning failed subjects (Clause 3-5, Part II of Statute 14):

(1) A candidate will be dismissed from the programme if, within two academic years of his/her candidature, he/she has not obtained at least half of the total number of academic units required for the coursework component of the course.

(2) Transfer of credits and subject exemptions granted will not be counted for the purpose of computing the total number of academic units referred to in regulation 7(1).

(3) A candidate who fails an attempt in any subject is required to repeat the course of study in the subject before attempting the examination in that subject again.

Hence, a candidate who fails an attempt in any core subject is required to repeat the course of study in the subject before attempting the examination in that subject again.

7 PROJECT AND DISSERTATION

Each candidate is required to undertake a research project based on which a dissertation must be submitted.

7.1 Project Proposals and Selection

Full-time Programme

A Project Selection Form and a list of projects proposed by the academic staff of the School will be given to first-year candidates at the beginning of Semester 1. Each candidate is allowed to select a few projects in order of his/her preference. Alternatively, full-time candidates may contact individual professors (see Appendix E) and come up with desired research projects. Accordingly, the project supervisor should forward the final project proposal to the Programme Director by the end of the second week after the first semester starts. A list of the proposed MSC projects by EEE3 staff and details on how to register for a project will be distributed to students in the early semester 1.

Part-time Programme

A Project Selection Form and a list of projects proposed by the academic staff of the School will be given to candidates at the end of Semester 1 of Year 1. Each candidate is likely to be asked to select few
projects in order of his/her preference. The choice, however, is not restricted to the list given. Candidates are encouraged to propose their own projects. To do so, a candidate needs to submit one or more project proposals of 300 to 1000 words each. Academic staff who are familiar with the proposed research topic will be invited to evaluate the proposal and to supervise the project.

Apart from self-proposed projects, projects will be allocated based on the project proposer/supervisor’s recommendation and the candidates’ academic performance in Semester 1 of Year 1.

7.2 Submission of Dissertation for Examination

Two soft-bound copies of the dissertation are to be submitted by a candidate through the supervisor for examination. The supervisor is required to fill in the R/768/95 Supervisor’s Report on Submission Form and submit it together with the two copies of dissertation to Head, Information Engineering Division. The dissertation and form will subsequently be forwarded to the Graduate Studies Office (GSO) through Chair, EEE.

The title of the dissertation must be exactly the same as the approved project title. If not, a candidate is to submit a Request for Change in Title of Thesis/Dissertation Form (EEE/JAN/97) together with the dissertation. The form is attached in Appendix D.

Unless extension of candidature is granted, each candidate is required to submit the dissertation within the maximum period of candidature.

For a candidate to join the convocation held in July of each year, the dissertation has to be ready for examination, meaning that it is in a form that will be approved by the supervisor, Information Engineering Division Head and EEE Chair by early March in the same calendar year. This is based on the assumption that the dissertation examiners only require the candidate to make some minor changes to the dissertation and that the candidate promptly revises the dissertation in accordance with the examiners’ recommendation. The final hard-bound copies should reach GSO by the end of April in order to join the convocation of that particular year.

A candidate is liable to pay fee for the following semester should
he/she fail to obtain approval from the supervisor, Information Engineering Division Head and EEE Chair for his/her dissertation submission by the end of a semester (i.e., before the first day of the following semester). A candidate is also liable to pay fee for one or more subsequent semesters should the examiners recommend more work to be done for the project.

The standard dissertation format prescribed by the School is given in Appendix C. To avoid any delay in obtaining approvals for dissertation submission, a candidate is advised to adhere strictly to the sample provided, including the structure of Chapter 1.

8 Independent Study

In lieu of the research project (6AUs), a candidate can opt for an elective subject (3 AUs) and an independent study module (EE6490, 3 AUs).

To provide the maximum flexibility for students as they can choose their Independent Study in any semester, there is no specific list of projects provided; instead, students can approach to any professor in our division for initiating such discussion. Once a specific project is identified, supervisor will fill in a form and email to me (with cc to you).

For those students who wish to switch from Dissertation option to Independent Study, he/she should get approval from the supervisor — either continue to work with the same supervisor or find a new supervisor by him/herself. In either case, acknowledgement and the Independent Study form are required and sent to the MSc (SP) Programme Director, Prof. Ma Kai-Kuang (ekkma@ntu.edu.sg). The form is shown in Appendix , which all supervisors have this softcopy.

9. GRADE POINT AVERAGE (GPA) SYSTEM

Please refer to http://www.ntu.edu.sg/gso/Coursework/GPA.pdf

10. TUITION FEES & FINANCIAL ASSISTANCE

Please refer to http://www.ntu.edu.sg/GradStudies/Coursework+Programmes/Fees+and+Financial+Assistance/

(2) Convocation is ceremonial. As soon as a candidate fulfils all the requirements of the MSc programme, the degree will be conferred by the Chancellor and the candidate will be informed in writing.
11. INTERACTIVE CAMPUS MAP

Please refer to
http://www.streetdirectory.com/ntu/


Please refer to
http://www.ntu.edu.sg/gso/coursework/otherprogcalendar05-06.pdf
Appendix A.1: Subject Syllabus

MSc (Signal Processing) Courses:

- **4 core subjects (denoted by “*”)**
- **8 elective subjects**

For time table and subject registration, please visit GSLink at [https://sso.wis.ntu.edu.sg/gslink/nonpers/gslink.asp](https://sso.wis.ntu.edu.sg/gslink/nonpers/gslink.asp),

or go directly to the webpage: [http://www.ntu.edu.sg/gradstudies/home/subjregoracle.htm](http://www.ntu.edu.sg/gradstudies/home/subjregoracle.htm)

For new students, the two core subjects (EE6401 and EE6402) will be registered automatically for you in Semester 1; likewise, EE6403 and EE 6404 in Semester 2. If you wish to take additional elective subjects, you can do so during the Add/Drop period (the first 2 weeks of each semester).

---

**E6401** * ADVANCED DIGITAL SIGNAL PROCESSING


**TEXTBOOK**


**REFERENCE**


**E6402** * REAL-TIME DSP DESIGN AND APPLICATIONS


**TEXTBOOK**

REFERENCE


**E6403* DISTRIBUTED MULTIMEDIA SYSTEMS**


**TEXTBOOK**


**REFERENCES**


**E6404* VLSI DIGITAL SIGNAL PROCESSORS**


**TEXTBOOK**


**REFERENCES**

E6421 STATISTICAL SIGNAL PROCESSING


TEXTBOOK


REFERENCES


E6422 ADAPTIVE SIGNAL PROCESSING


TEXTBOOK


REFERENCES


E6423 ARRAY SIGNAL PROCESSING

TEXTBOOK


REFERENCES


E6424 DIGITAL AUDIO SIGNAL PROCESSING


TEXTBOOKS


REFERENCES


E6425 SPEECH ANALYSIS AND PROCESSING


TEXTBOOK


REFERENCES

E6426     IMAGE PROCESSING AND PATTERN RECOGNITION


TEXTBOOK


REFERENCES


E6427     VIDEO SIGNAL PROCESSING


TEXTBOOKS


REFERENCE


EE7401     PROBABILITY AND RANDOM PROCESSES


TEXTBOOK


REFERENCES


ACADEMIC YEAR 2006/2007  
(Full-time/Part-time)  

Semester 1:

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PS: The time tables are subject to change (especially on dates and venue), while the courses being offered in each semester have been quite steadily as shown here.
**Master of Sc. (SP) Dissertation Project Proposal**

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<tr>
<td>Supervisor:</td>
<td>ABC (phone extension)</td>
</tr>
<tr>
<td>E-mail:</td>
<td>E-=@ntu.edu.sg</td>
</tr>
<tr>
<td>Student:</td>
<td>(Mr./Ms.) xxxx</td>
</tr>
<tr>
<td>E-mail:</td>
<td>(in case it is not in the form of #name#)</td>
</tr>
<tr>
<td>Project Summary:</td>
<td>Watermarking involves adding hidden information to a media like document image. Some objectives of watermarking are authentication and restoration, such that if the watermarked document is tampered then it will be detected and the tampered part will be approximately restored to its original content. In this project such watermarking techniques will be investigated.</td>
</tr>
<tr>
<td>Pre-requisite of Student (if any):</td>
<td>Since the project involves image processing algorithms and Matlab based simulations, exposure to image processing and to Matlab programming is desirable.</td>
</tr>
</tbody>
</table>
Appendix B.2: MSc (SP) Independent Study Module (ISM) Project Form

(Your supervisor has this form in softcopy. Please ask your supervisor furnish this form, email it to me and with cc to you.)

Master of Science (Signal Processing) ISM Project

Note: there is no need to submitting proposals for ISM projects. The “Research Topic” here simply indicates that the project is related to Signal Processing. The information provided in this form will be sufficient for me, it is an official record.

- Supervisor Information:

<table>
<thead>
<tr>
<th>Name</th>
<th>Extension</th>
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<th>Research Topic</th>
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<td>6382</td>
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- Student Profile:

<table>
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<th>Name</th>
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<th>Started semester registered into this program</th>
<th>Targeted semester to take the ISM officially</th>
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<td>Sem 2, 2006</td>
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</tbody>
</table>
Appendix B.3: Standard Format for MSc Dissertation

Optimising Connectionist Models and Attributed
Relational Graph Matching for Object Recognition

P N Suganathan

School of Electrical & Electronic Engineering

A dissertation submitted to the Nanyang Technological University in partial fulfillment of the requirement for the degree of Master of Science in Computer Control & Automation

2005
Statement of Originality

I hereby certify that content of this dissertation is the result of work done by me and has not been submitted for a higher degree to any other University or Institution.

__________________________  ________________________
Date                        P N Sukanathan
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   1.3 Major contribution of the Thesis .................

2. Actual work done and contribution, including literature survey
   (It will normally contain 4 to 5 chapters)

N. Conclusion and Recommendations
   N.1 Conclusion
   N.2 Recommendations for further research

Bibliography

Appendices (if any)
NANYANG TECHNOLOGICAL UNIVERSITY
MASTER PROGRAMMES BY COURSEWORK & DISSERTATION
SUBMISSION OF DISSERTATION

Notes to Candidate(s):
1. A candidate is no longer liable for the payment of tuition fees when he satisfies both the following conditions:-
   (a) he must have completed the entire coursework component of the programme of study, and
   (b) he has submitted his dissertation in the form ready and approved (by the Chair concerned) for examination not later than the end of the second week of any semester.

2. Two soft-bound copies of the dissertation must be attached to this form, Section I of which must be completed and signed by the candidate(s). Unsigned forms may delay processing of the submitted dissertation for examination. After completing Section I, please hand this form to your supervisor for his attention.

3. The final dissertation, after examination and amendments (if any), must be submitted in the form given below:
   (a) Each copy must be cyclostyled or printed and bound with hard covers in international size A4 (210mm x 297mm);
   (b) Each page must have a margin of 3.7cm to allow for binding;
   (c) The dissertation must be preceded by the following in the order given: title page, declaration (for joint submissions only), acknowledgements, table of contents and summary, all of which must be bound with the dissertation;
   (d) The title and author's name must be given in block letters on the cover of the dissertation;
   (e) The title or an abbreviation thereof and the author's name must be given on the spine of the dissertation;
   (f) The dissertation must be bound in dark blue with gold lettering not exceeding 16pts;
   (g) Pages must be numbered in one continuous sequence in arabic numerals. Where a dissertation consists of more than one volume, one numbering sequence must be used.

4. All hard-bound copies of dissertations will be displayed in the University Library.

Section I: To be Completed by Candidate(s)

To Registrar
Through Supervisor

Degree Registered for: ________________________________
Title of Dissertation: ________________________________

I/We submit 2 soft-bound copies of my/our dissertation in partial fulfilment of the above degree for examination. I/We have read and understood the Notes to Candidate(s) above.

<table>
<thead>
<tr>
<th>Name of Candidate</th>
<th>Registration No.</th>
<th>Signature</th>
<th>Date (dd/mm/yy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
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</tr>
</tbody>
</table>
Section II: To be Completed by Supervisor(s)

1. The candidate(s) named on Page 1 has/have* completed the writing up of his/their* dissertation to my satisfaction. In my opinion the dissertation is ready for examination.

2. Remarks (attach separate sheet if necessary):

   _______________________________________________________________
   _______________________________________________________________
   _______________________________________________________________
   _______________________________________________________________

Name of Supervisor(s): (1) __________________________ Signature & Date: __________________________

(2) __________________________ Signature & Date: __________________________

Section III: To be Completed by Head of Division

Recommended/Not recommended* for examination. Comments (if any).

__________________________________________ _______________________
Signature Date

Section IV: To be Completed by Chair

Approved/Not approved* for examination.

__________________________________________ _______________________
Signature Date

* Delete accordingly
### PART I: TO BE COMPLETED BY CANDIDATE

<table>
<thead>
<tr>
<th>Name</th>
<th>Matric No.</th>
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<tbody>
<tr>
<td>Programme</td>
<td>Supervisor</td>
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| Approved Title of Dissertation | |
|-------------------------------| |

| Proposed New Title | |
|--------------------| |

| Reason(s) for Change of Title | |
|-------------------------------| |

<table>
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### PART II: TO BE COMPLETED BY SUPERVISOR

Recommended / Not Recommended *

| Reason(s) | |
|-----------| |

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### PART III: TO BE COMPLETED BY HEAD OF DIVISION FOR CHAIR OF SCHOOL

- [ ] Supported and Approved *
- [ ] Not Supported nor Approved *

| Comment (s) | |
|-------------| |

<table>
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<tr>
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<th>Division</th>
<th>Date</th>
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* Please tick accordingly
## Appendix E: Student Data Form

### School of Electrical & Electronic Engineering

**STUDENT DATA FORM**  
Doctor of Philosophy/Master of Engineering/Master of Science/Master of Philosophy

---

**INSTRUCTIONS**

1. There are three parts to this form: SECTION A: PERSONAL INFORMATION  
SECTION B: EMPLOYER’S INFORMATION  
SECTION C: E\(^{\text{G}}\) GRADUATION YEARBOOK

2. The dissertation/thesis after the examination will be returned to you through your supervisor to make any amendments and/or hard-bound the thesis. For this purpose, please indicate accurately your postal address below.

---

### SECTION A: PERSONAL INFORMATION

<table>
<thead>
<tr>
<th>Full Name in BLOCK LETTERS (Underline family name)</th>
<th>Home Address</th>
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<tbody>
<tr>
<td>Mr / Miss / Mdm *</td>
<td>Postal Address (if different from above)</td>
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**Please paste a recent passport-sized photograph here.**

<table>
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<tr>
<th>NRIC/Passport No.</th>
<th>Telephone (Home)</th>
<th>Handphone/Pager No.</th>
<th>Date of Admission</th>
<th>NTU Supervisor’s Name</th>
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<tr>
<th>Current Postgraduate Degree *</th>
<th>Master of Engineering (MEng)</th>
<th>Master of Philosophy (MPhil)</th>
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<td>Philosophy of Doctor (PhD)</td>
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<td>Master of Science</td>
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<td>Communication Engineering</td>
<td>Integrated Circuits Design</td>
<td></td>
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<td>Computer Control &amp; Automation</td>
<td>Microelectronics</td>
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<td>Computer Software and Network</td>
<td>Photonics</td>
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<td>Consumer Electronics</td>
<td>Signal Processing</td>
<td></td>
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<tr>
<td>Graduate Diploma in ICD</td>
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### SECTION B: EMPLOYER’S INFORMATION (if applicable)

<table>
<thead>
<tr>
<th>Company</th>
<th>Department</th>
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<th>Fax No.</th>
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### SECTION C: E\(^{\text{G}}\) GRADUATION YEARBOOK

<table>
<thead>
<tr>
<th>Email Address to be reflected on the yearbook</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Personal Interest/Hobbies</th>
</tr>
</thead>
</table>

---

**Important:** Please inform the undermentioned if there are any changes to your postal address/particulars. Otherwise, the thesis delivery to you may be delayed and you will be liable to pay all expenses incurred as a result of inaccurate/obsolete postal address indicated.

---

<table>
<thead>
<tr>
<th>Address</th>
<th>Contact Person</th>
<th>Fax No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration Office (Block S1)</td>
<td>Ms/Ms Maizat Binti Ismail, Section for Graduate Programmes</td>
<td>67943067</td>
</tr>
<tr>
<td>School of Electrical &amp; Electronic Engineering Nanyang Technological University Nanyang Avenue, Singapore 639798</td>
<td>Ms Evelyn Toh, Secretary to Vice-Chair (Research)</td>
<td>67943067</td>
</tr>
</tbody>
</table>

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24
Nanyang Technological University  
School of Electrical & Electronic Engineering 
Alumni Association

Application for Membership

- Please complete this Application Form in full.

Full Name (Underline Surname) Mr/Mdm/Dr/Mrs/Miss

I/C or Passport No.: __________________________ Nationality: __________________________

Date of Birth: __________________________ Sex: __________________________

Home Address: __________________________________________________________ Postal code: __________________________

Home Tel: __________________________ Pager: __________________________

Occupation: __________________________ Email Address: __________________________

Please tick any one of the following and fill in the appropriate blank:

☐ Ordinary Membership Application for all who have graduated from NTU/NTU: 
   Entrance Fee = $10, Annual Subscription Fee = $12.
   Year of Graduation/Degree: __________________________

☐ Life Membership Application for all who have graduated from NTU/NTU: 
   Entrance Fee = $10, Life Membership Fee = $100.
   Year of Graduation/Degree: __________________________

☐ Associate Membership Application for academic staff of NTU/NTU: 
   Entrance Fee = $10, Annual Subscription Fee = $12.
   Association with the School of EEE, NTU: __________________________

☐ Student Membership Application for all current students of NTU Sch of EEE: 
   Entrance Fee = $5, Annual Subscription Fee = $0.
   Matric Number/Degree working for: __________________________

Please enclose payment for the entrance and annual subscription fees for 1 year. Cheques should be made payable to “NTU EEE Alumni Association”.

I, the applicant, hereby declare that the above particulars are correct to the best of my knowledge. I agree to abide by the Constitution of the Nanyang Technological University School of Electrical & Electronic Engineering Alumni Association.

Applicant’s Signature __________________________ Date __________________________

Send to: NTU EEE Alumni Association c/o School of Electrical & Electronic Engineering, 
Nanyang Technological University, Nanyang Avenue, Singapore 639798. 
For enquiries: Please email “eeeealumni@ntu.edu.sg”.

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Appendix G.4: North Spine Floor Plan (Level 4)

PLAN OF NORTH SPINE (Level 4)

Seating Capacity of Lecture Theatres
LT 9 - LT 18 : 110 seats
Appendix G.5: School of Biological Sciences