

**GUIDELINES**

**ROBOTICS PH.D. DISSERTATION  
PROPOSAL**

**(version 5, last Revised: December 2014)**

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## THE PROPOSAL PROCESS

This guidebook is to provide information on the Robotics Ph.D. proposal process. Students and faculty should refer to the information contained here during the process of completing the proposal portion of the Ph.D. degree requirements. For additional information, clarification or questions please contact the Chair of the Ph.D. Robotics program.

Outlined below are the basic steps involved in the Ph.D. proposal process. Both the faculty and students should be familiar with these steps. Details of the procedures involved are contained in the remaining pages of this guidebook.

### 1. Summary of Steps

1. Submit the following to the Chair, Robotics Ph.D. Program
  - a. One copy of the dissertation proposal;
  - b. If applicable, an up-to-date Program of Study showing all classes taken so far.
  - c. Ph.D. Proposal Review Request form – signed by both student and advisor;
  - d. Request for Admission to Ph.D. Candidacy cover sheet showing the names of the reading committee members as well as title of the proposal and an abstract describing the research – **no signatures should be on this form at the time of submission.**
2. Robotics Ph.D. Committee will ensure that the proposal meets the requirements as stated in the guidelines and approve. Final proposal materials can then be distributed to committee members.
3. The advisor coordinates the reading committee activities and seeks input on the proposal.
4. When the reading committee determines the student is ready for the examination, the advisor and student coordinate with the reading committee to schedule the exam.
5. The date, time and location of the proposal exam must be announced a minimum of two weeks (14 days) in advance.
6. Following a successful proposal examination, the student, advisor, and the reading committee members sign the Request for Admission to Ph.D. Candidacy form.
7. The signed form is submitted to the graduate office of the student's home school, and a copy is provided to the Chair of the Ph.D. Robotics program for tracking purposes.
8. Congratulations, you are now admitted to Ph.D. Candidacy!

## 2. Advisor Selection

- This is a mutually agreed upon relationship in which the student selects the advisor and the advisor agrees to invest the needed time for thesis supervision.
- Students must select an advisor who is a Robotics faculty member. A Robotics faculty member is one who has *opted-in* to the program via the appropriate mechanism.

## 3. Coursework Completion

- Before beginning the proposal process, the student **must** have the Ph.D. coursework requirements **completed** (excluding the minor).
- The Robotics Program of Study form must be updated to show **all classes** being used to fulfill the Ph.D. coursework requirement.
- Proposals from students who have not completed the coursework requirement will not be released to the reading committee until Robotics Ph.D. Committee has certified that all classes are completed.

## 4. Timing of the Proposal

- Students are expected to schedule the proposal examination within two years of passing the preliminary exam, and within three years of entering the Ph.D. program.
- There must be a **minimum of six months** between approval of the proposal and scheduling of the dissertation defense.
- Under no circumstances can the proposal and dissertation examinations take place in the same term.

## 5. Writing the Ph.D. Proposal

The objective of the Ph.D. Proposal is to allow an early assessment of your chosen topic of research for the satisfactory completion of the doctoral degree. The proposal should delineate your specific area of research by stating the purpose, scope, methodology, overall organization, and limitations of the proposed study area. The proposal should include a review of the relevant literature and indicate the expected contribution of the research.

### 5.1 Format

*Cover Sheet.* Attach the Request for Admission to Ph.D. Candidacy form as the cover sheet of the proposal. This form includes the dissertation advisor, sets forth the dissertation topic selected for the investigation, and enumerates a 200-word summary (or abstract) of the proposed dissertation research. The title of the proposed dissertation topic should be brief, scientifically and technically valid, understandable to a scientifically or technically literate reader, and suitable for use in the public press.

The 200-word summary of the proposed research should be a self-contained description of the activity. The summary should be written in the third person and include a statement of objectives, methods to be employed, and the significance of the proposed work to the advancement of knowledge. It should be informative to other persons working in the same or related fields and, insofar as possible, understandable to a scientifically literate reader.

*Table of Contents.* A table of contents is required and should show the location of each section as well as the major subdivisions of the project description, such as a summary of previous work, and the methods and procedures to be used.

*Project Description.* The main body of the proposal should be a clear statement of the work to be undertaken. It should be limited to 15 pages (or 30 double-spaced pages) and should include:

- Objectives of the proposed research and its expected significance;
- Relation to longer-term goals of the student's project;
- Relation to the present state of knowledge in the field and to work-in-progress elsewhere;
- Plan of work, including the broad design of activities to be undertaken, an adequate description of experimental methods and procedures, and, if appropriate, plans for preservation, documentation, and sharing of data, samples, physical collections, and other related research products.

*Bibliography.* Citations must be complete (including the full name of the authors, title, year and location in the literature). There is no page limit for this section of the proposal. Refer to the Manual for Graduate Theses at <http://www.gradadmiss.gatech.edu/thesis/ThesisManual-March2007.pdf> for the accepted format for presenting bibliographic citations. Once a format is chosen, you should maintain consistency in the presentation of your sources.

*Style and Format.* Brevity will assist your Ph.D. Dissertation Reading Committee in reviewing the Ph.D. proposal. The project description should not exceed 15 pages (or 30 double-spaced pages), including the related work section and graphical elements such as charts, graphs, maps, photographs, and other pictorial presentations. Pages should be of standard size (8½" x 11"; 21.6 cm x 27.9 cm) with 1" or 2.5 cm margins at the top, bottom, and on each side. The type font size must be clear and readily legible and in standard size, which is 10 to 12 points. (No fonts smaller than 10 points!). Your proposal should include use of the metric system of weights and measures, unless impractical or inefficient.

## **6. Proposal Review Process**

The Ph.D. Dissertation is a comprehensive, scholarly, and independent investigation within your chosen research field. The process includes the submission of a Ph.D. Proposal, the preparation of the dissertation document, and the final dissertation examination (i.e. the defense).

Prior to admission to Ph.D. candidacy, you must submit a formal Ph.D. Proposal for approval by the Robotics Ph.D. Committee, your Reading Committee, and the outcome needs to be recorded and sent to the Georgia Tech Graduate Thesis Office.

### **6.1 Composition of the Committee**

In conjunction with your advisor, identify the members of your Ph.D. Reading Committee, which approves your dissertation research topic, provides advice and guidance during the research process, is charged with approving the dissertation when the research is completed and presented as the doctoral dissertation, and participates in and approves the oral defense of the dissertation research. The Ph.D. Reading Committee shall consist of at least five faculty members including the dissertation advisor, who serves as the chairperson. If the student is co-advised by two advisors, it is **not** necessary to get six committee-members. Committee members must have an earned doctorate or equivalent degree.

- Three of the committee member shall be tenure-track academic faculty members that are Robotics faculty OR in your home school
- Two of the committee members must be from outside of the home school.

Once identified, submit the Ph.D. Proposal Review Request form to the Chair of the Robotics Ph.D. committee.

### ***6.2 Submitting the Ph.D. Proposal Review Request and Request for Admission to Ph.D. Candidacy***

Before you present your Ph.D. proposal, your reading committee must first be identified and formed by contacting each proposed member of your committee. Once your committee members have agreed, please list them on the Ph.D. Proposal Review Request form, which must be turned in along with an unsigned copy of the Request for Admission to Ph.D. Candidacy form to the Chair of the Robotics PhD committee for committee approval. The graduate committee's role is to ensure that the proposal meets the requirements as stated in the guidelines. One copy of the Ph.D. proposal should be included with this submission. Committee member signatures on the Request for Admission to Ph.D. Candidacy form should NOT be obtained until the Robotics Ph.D. Committee gives its approval.

### ***6.3 Scheduling the Ph.D. Proposal Presentation***

After your Request for Admission to Ph.D. Candidacy form receives Graduate Committee approval, it remains in your file until the date that you formally present your Ph.D. proposal. You must now contact members of your Ph.D. Reading Committee to ask if they are willing to serve and to give them a copy of your proposal. The Committee Chair must then coordinate reading committee activities and seek input on the proposal. When the committee determines the proposal is ready for examination, the committee chair must poll the members of the reading committee and establish a date and time for the proposal presentation. Committee members must receive a final version of the Ph.D. proposal at least **two weeks** (14 days) before the proposal examination date.

At least **two weeks** (14 days) advance notice of the examination date must also be given to the Robotics Ph.D. Committee. The reading committee chair must request an announcement of the exam by sending an email message to the Robotics Ph.D. Committee Chair including the student's name, the day, date and time of the exam, and the room and building in which the exam will be held. A public announcement is made of the date, time, and location for the oral exam, which will be posted on the Calendar of Events on the RIM home page.

### ***6.4 Reporting Results***

Take the Request for Admission to Ph.D. Candidacy form to your proposal presentation. The members of the Ph.D. Reading Committee must sign the form to show approval of your Ph.D. proposal and presentation. The signed form should be submitted to the graduate office of the student's home school, and a copy should be provided to the Chair of the Ph.D. Robotics program for tracking purposes.

### ***6.5 Changes in Dissertation Title and Abstract***

Complete an updated Request for Admission for Ph.D. Candidacy Form. Indicate on the form that this is a change in title, abstract, or both. You and your advisor must sign the form and submit it to the Chair of the Robotics Committee. Changes to a title or abstract are handled administratively and need not go to the Robotics Committee for approval.

### ***6.6 Changes in the Ph.D. Reading Committee***

Changes to your Ph.D. Reading Committee must be on an updated Request for Admission for Ph.D. Candidacy Form and submitted to the Chair of the Robotics Ph.D. program. Your advisor must provide a short justification for the change in Reading Committee. (This justification can be provided by email.) Upon approval by the Robotics Committee, the modified form will be returned to you so that you can secure the signatures of the members of your reading committee.

**Ph.D. Proposal Review Request**

**An original, signed, form is to be submitted to the Robotics PhD Committee along with one copy of the PhD dissertation proposal, and the prepared Request for Admission to PhD Candidacy form. Please note: the Request for Admission to PhD Candidacy form should not be signed by anyone at this time.**

Date submitted \_\_\_\_\_ GT ID# \_\_\_\_\_

\_\_\_\_\_  
Student Name \_\_\_\_\_ Advisor's Name \_\_\_\_\_

\_\_\_\_\_  
Campus PO Box \_\_\_\_\_ Email Address \_\_\_\_\_

Proposed Dissertation Title \_\_\_\_\_  
\_\_\_\_\_

**Term/Yr Qualifying Exam Passed \_\_\_\_\_ Term/Yr Coursework Completed \_\_\_\_\_**

**Committee Nomination:** Below, please list the names and departments of the faculty members that have agreed to serve on the Reading Committee for the PhD dissertation. The faculty selection should be made with the understanding that the committee must consist of the advisor and four other faculty members; three of whom are Robotics faculty, three of whom are in the home school, and two of whom are outside of the home school.

**IMPORTANT: by signing below, both the student and his/her advisor assert that this requirement has been met, and that all committee members listed have agreed to serve.**

**Committee Members (in addition to Advisor)**

\_\_\_\_\_  
(Print Name) \_\_\_\_\_ (Department)

\_\_\_\_\_  
(Print Name) \_\_\_\_\_ (Department)

\_\_\_\_\_  
(Print Name) \_\_\_\_\_ (Department)

\_\_\_\_\_  
(Print Name) \_\_\_\_\_ (Department)

\_\_\_\_\_  
Student Signature

\_\_\_\_\_  
Advisor Signature