The AMALTHEA REU Program

A presentation to the ECE Advisory Board Meeting
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The AMALTHEA REU Program

- **AMALTHEA**: Advances of Machine Learning in Theory & Applications
  - Collaborative project between Florida Tech (lead institution) and UCF

- Sponsored by NSF’s IIS Division under the Research Experiences for Undergraduates (REU) Site program
  - The REU Site program is one of NSF’s premier and esteemed programs for undergraduate education.
  - Only 10% of proposals are funded

- AMALTHEA invites 10 Engineering or Science undergraduates to take part in a research experience during the summer for 10 weeks (typically, from mid May to end of July) at the host universities (FIT & UCF).

- Its intellectual focus is again Machine Learning (ML) and its applications, like Automatic Target Recognition, Speech recognition, Bioinformatics, Data Mining, etc.

- The faculty and graduate students will educate the undergraduate program participants about cutting-edge ML technology and, subsequently, perform supervised research with them. The ultimate goals are to
  - produce research results that directly impact the research area of ML and, finally, publish/present these results in technical journals and conferences.
  - recruit high-quality students into the nation’s graduate programs.
The AMALTHEA REU Program

- Other quick facts

  - Our proposal was one of the 12 funded out of all proposals submitted to NSF’s IIS division in 2006
  - 3rd REU Site proposal ever to be awarded to Florida Tech.
  - 3rd collaborative REU Site sponsored by IIS in the nation
  - Operating FIT budget ~200K for 3 years, total budget (both institutions) ~190K for 3 years; includes matching funds.
The AMALTHEA REU Program

- Web presence at
  - http://cygnus.fit.edu/amalthea/

- Information about
  - What is AMALTHEA about
  - Who we are
  - What we do
  - What we have accomplished so far
Invitation to the 2008 AB

• We need your involvement in our Advisory Board (AB)

• Role of AB Member
  • Facilitate and coordinate site visits (if applicable)
  • Aid in arranging for talks/presentations (if applicable)
  • Attend our Symposium (Friday, July 18th @ FIT, 09:00-15:00)
    • Attend student research presentations and assess their work
    • Participate in the End-Project Focus Group and help us assess our Program as a whole

• Please mark your name in the provided form, if you think you could potentially contribute somehow to the Program as an AB member. I will then contact you.

• Finally, for more details on the program, please contact me and/or visit http://cygnus.fit.edu/amalthea.
Questions or Comments?
Thank you for your attention!
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REU Site AMALTHEA

Projected Impact

- By the end of the program in April 2010 a minimum of 30 undergraduate students and 12 graduate students will have been impacted.

- By inviting high-quality students from other universities and engaging them into a close student-mentor interaction, we hope that we can retain at least a small percentage of them to continue with us for their graduate studies here at FIT.

- There are also high expectations, due to the program’s staff prior experience, that the REU research results will be published in interdisciplinary conferences, and, potentially, technical journals.

- These REU research advances as well as educational material and proven practices will be fed back and integrated into the teaching of ML-related courses at the partnering institutions.

- Via their participation in the Advisory Board, I hope to strengthen FIT’s ties to the local industry and government, and, finally, to enhance and develop further the fruitful collaborations and partnership with UCF and our many more Affiliate Universities dispersed across the US.