

First Ever IEEE Antenna Design Challenge: Antennas on a Budget 2010

**Travel to the 2010 IEEE Antennas and Propagation Symposium
Win \$1500, \$750, \$250**

Join the First Ever IEEE Antenna Design Challenge! Build an Antenna Demo System that can be used to teach the magic of antennas. The top three teams (or individuals) will receive up to \$2,500 in travel funds to attend the IEEE Antennas and Propagation Symposium in Toronto, Ontario, July 10-17, 2010 to present their designs. From these top teams, First (\$1,500), Second (\$750), and Third (\$250) Place will be announced at the 2010 IEEE AP Awards banquet Wednesday evening.

Design Goals:

- Design an Antenna Demonstration System that can be used to teach how antennas work. Such a system might be used in college undergraduate or graduate courses, and in pre-college ('High School') physics courses.
- The system must be safe and durable, easily reproducible by others, inexpensive, and portable.

The Application and Review Process:

1. The applicants will be required to submit a preliminary design by October 1, 2009.
2. The Student Contest Committee will assess the design and choose the top 6 teams, each of which will receive \$1,500 to build and test their design.
3. Teams will be notified by December 1, 2009 if they are in the top 6 teams.
4. The six contestants will then submit their Final Design by May 1, 2010.
5. The Student Contest Committee will assess the design and choose the top 3 teams by June 1, 2010.
6. The finalists will receive stipends up to \$2,500 (per team) to travel to and attend the IEEE AP-S conference.
7. The finalists will be expected to demonstrate their designs during the conference. The Student Contest Committee will judge the designs and decide on the first, second and third prize winners at the IEEE AP-S conference.
8. The finalists will be awarded \$1,500, \$750 and \$250 for the first, second and third place.

What to Submit -

Preliminary Design Review: **Deadline: October 1, 2009**

- A letter indicating agreement to oversee the project from a professional mentor (professor or engineer in industry) who is an IEEE AP-S member. The mentor should also indicate that the members of the team are all students (graduate or undergraduate) at a university, college, or technical school.
- Proposal limited to two pages that describes
 - The objective; i.e. description of what will be demonstrated and its educational value.
 - An 'on-paper' preliminary design that describes the system to be built.
 - A bill of materials (up to \$1,500)
- Merge the letter and two page proposal into a single pdf file named StudentLastName.pdf. Proposal should precede the letter. (Font size should be at least 11 pt)

Final Design: **Deadline: May 1, 2010**

- A 10 page long final report that includes:
 - Design of 'Antennas on a Budget' System (schematics, description, etc.)
 - List of parts and materials including where to obtain them and cost
 - Photos of final system (include a scale to show how large it is)
 - Instructions on how to build and operate the system
 - List of topics / material that can be demonstrated with this system.
- A biography (100 words or less) and photo of each member of the design team
- The report should be in pdf format. (Font size should be at least 11 pt)
- All pictures should be named as the LastName.jpg.

How to Submit:

Please send pdf files only.

It is recommended to name your file YourLastName.pdf.

The deadline will be strictly observed.

Send all information to Ozlem Kilic (kilic@cua.edu) and Milica Popovic (poppy@ece.mcgill.ca) with a subject line "2010 IEEE AP-S Design Contest Submission."

All participants will have free access to the FEKO software package to aid the design and simulation stage. Please contact cjreddy@emssusa.com for information on how to gain access.