



**Education & Student Activities Committee
(ESAC)**



2004 Draft Minutes

**EMC Society Education & Student Activities Committee Meeting
IEEE EMCS Symposium – Santa Clara, CA
Tuesday, August 10, 2004**

1. Call to Order – Introduction

1.1 The ESCA Chairman, Maqsood Mohd called the meeting to order at 7:05 am. He thanked everyone for coming.

1.2 Introductions were made by all present (See attendee list at end).

2. Review of Draft Agenda

2.1 No new items were added to the agenda.

3. Announcements

3.1 No announcements were made.

4. Minutes of Last Meeting

4.1 Minutes of the August 19, 2003 meeting were presented by Randy J. Jost. Motion to accept by Kimball Williams, seconded by Bob Nelson. Minutes approved by the committee.

5. Old Business

5.1 Brief Sub-Committee Reports

5.1.1 NARTE

Jim Whalen reported that the NARTE activities were progressing nicely. This was the 11th year of giving the workshop and exams. There were 38 participants in Monday's workshop and 16 had signed up for Friday's test.

5.1.2 Experiments, Volume II

Dick DuBroff updated the committee on the status of the second edition of the EMC Experiments Manual. There are now seven experiments listed on the web site for

volume II. Maqsood said that he would talk to the symposium committee about getting copies of the demonstrations submitted to the experiments II page. Dick also mentioned that he needed to step down from heading up this activity because of other commitments. Ed Wheeler, from Rose-Hulman agreed to take over the job of overseeing this activity. Maqsood led the committee in thanking Dick DuBroff for his long efforts in leading the charge to obtain new experiments for the web site. Those wishing to review the new experiments that have been added to the web site can see them at < <http://www.ewh.ieee.org/soc/emcs/edu/exper.htm> >.

5.1.3 Demonstrations

Andy Drozd was not available to report on the status of demonstrations, so Maqsood spoke to the status. We had 16 hardware demonstrations and 10 software demonstrations, which is up some from last year's number. As this activity is becoming more of a host committee responsibility, we need to oversee this activity a little more so that we continue to get a good number of experiments.

5.1.4 Tutorials

Maqsood reported on the Tutorial activity that was taking place at this year's symposium. The Fundamentals workshop was overflowing, with even more attendees than last year. He noted that this was the 11th year of such tutorials. Maqsood is looking for new material and topics, as well as new speakers, to be presented in future symposia.

5.1.5 EMC Outreach

Maqsood also provided us with an update on Outreach activities. He said that this committee really is made up of three components, to include K-12 and Life-long learning, as well as the traditional college age support. As with last year, he said that they are working hard on emphasizing K-12 activities, with an average of a presentation per week. Maqsood talked about the availability of the experiments CD produced by Dick Ford, and suggested that we need to get them out to EMC instructors, and other faculty at schools, as well as the chapter chairs around the world, as an outreach activity. Randy Jost mentioned that NASA is a good source of outreach material, as well as a possible source of schools interested in outreach activity. He will put some links to these sites up on the outreach web page. Jerry Meyerhoff updated the committee on his activities as a mentor for high school students in the Chicago area.

5.1.6 University Grant

As he is the general chairman of the symposium this year, John Howard was unavailable to talk about the University Grant Proposals. Bob Nelson attended the University Grant meeting Monday and provided a brief report as to its activities. Bob said that due to unusual circumstances this year, none of the proposals submitted met

the committee's criteria for award. There was some discussion about revising and clarifying the grant call for proposals and making the process a bit better structured for evaluation purposes. Results will be posted on the web when completed.

Mark Steffka, representing the 1999 Grant winner (University of Michigan at Dearborn) gave a brief presentation on what he had done since he received his grant money. Tom Jerse, the 2003 winner from the Citadel, also gave a presentation on his University Grant activities. He also has written up his activities and they will appear in a future issue of the EMC newsletter. A link to this article will be placed on the University Grant winners web page when the article is published.

Kimball Williams made a plea that we should be looking to provide a mechanism to help get some of the grant money to the less developed countries, as their needs are so much greater, as well as the fact that for them the money has a much greater impact than in the US. Discussion was held on how to get the word out to more of these countries so they get a chance to submit. It was suggested that we might form a pool of possible "mentors" to help these schools provide a better submission.

5.1.7 Student Activities

Maqsood first reported on the student paper contest. He said that approximately 10 papers were submitted, which is fewer than last year, but they were still of good quality.

With regards to the student design project, Ahmad Fallah reported that there were requests for 34 design kits, and 8 came back. This year the winning team came from the University of Tennessee.

Ahmad discussed the current approach to evaluating the kits, which requires a lot of time for those doing the judging. Jim Whalen talked about having a MOSIS-like test capability that could be used for all of the student designs. Ahmad pointed out that the design really doesn't need the most sophisticated equipment, because the students are really evaluating relative degrees of improvement in their kits. Kimball suggested that maybe next year's symposium (Chicago, IL) could arrange for a lab in the local area to test the kits as an in-kind donation. Bob mentioned that we may be mixing up two aspects involving testing. One involves how students carry out their own "self-test" of the kits to gauge how well they are doing. This is the aspect Ahmad referred to. From past experience students have successfully used a variety of test equipment and methods (oscilloscopes, spectrum analyzers, etc.) to gauge whether their fixes have helped decrease emissions or not. Final testing of the kits is the second test aspect. For that part, Phoenix International, Inc. (Fargo, ND) has donated test time and facilities each year. Harold Rudnick of Phoenix has used Phoenix's GTEM cell for the tests each year - providing excellent test consistency. >From all indications, Phoenix will continue to offer this service to the EMC Society.

Ahmad said that he hasn't had too much time for doing other student activities. He

gave a presentation at North Dakota State University. He also gave a 2-day workshop in Iran. He said that the Iranians requested information on how they could host a symposium there. Ahmad is trying to follow up on that.

Because of all the activities that Ahmad is involved in, he decided that it would be best to have a new chair for the Student Activities subcommittee. Bob mentioned that Ahmad has volunteered to continue to head up the Design Contest, and that he will be joined in that activity by Harold Rudnick. Tom Jerse was nominated by Bob Nelson to be the new Student Activities subcommittee chair. This was seconded by Kimball Williams. Tom was declared the winner by acclamation. Maqsood led the committee in thanking Ahmad Fallah for all his work on the Student Activities subcommittee. The Student Activities subcommittee is divided into 2 parts so the workload is reduced for one person. Student Design Contest subcommittee is cochaired by Ahmad Fallah and Harold Rudnick. The Students Activities subcommittee is chaired by Tom Jerse and he will focus on college campus related activities (interfacing with IEEE student chapters, promoting EMC in those chapters, and taking care of the President's Award, such as promotion, advertising, and seeking nominations for it).

5.1.8 Web site Activity

Randy Jost has spent a significant amount of time updating the web site and adding new material to it. New pages have been added to highlight various aspects of the committee's activities, such as the student design contest and the best student paper award. Also pages for outreach and teaching resources have been added. He will continue to add material as he finds it. He also made a request for people to submit useful information and he will add it to the site as it is sent to him.

5.1.9 Video Productions.

Dick Ford gave us a historical overview as to how we got to where we are today. He pointed out the amount of effort required to develop our CD of three experiments was considerable. He also pointed out that not only are there technical issues to be addressed in making a good product, but that aesthetic issues were very important in putting together a good product. He recommended that the Video Production subcommittee be dissolved. Maqsood Mohd led the committee in thanking Dick for his dedicated efforts over many years to develop the CD and produce such a professional product that we could all be proud of. We discussed ways that we could get the CD into the hands of potential users at the various universities. Bob Nelson will be manning a table in the demonstrations area to hand out copies to instructors and chapter chairs. He requested additional volunteers to help man the booth, and passed around a sign up sheet.

5.1.10 University Survey

Maqsood mentioned that there was nothing new to report from Antonio Orlandi. Randy Jost mentioned that if we can get the information from Antonio, we could post the composite results on the web site and encourage more people to participate on line. Jost will follow up with Antonio to see what can be done.

5.1.11 Nominations

Tom Jerse to replace Ahmad Fallah as head of student activities subcommittee, as reported above.

5.2 No other old business to report.

6. New Business

6.1 Elya Joffe talked about his experiences during the Istanbul symposium and how he managed the process of selecting the best student paper. He provided a short presentation that addressed several points. Maqsood Mohd said that almost all of these points have been in practice from the very beginning by the ESAC and there are no issues as alleged. One issue that was not really discussed, due to time constraints, is whether there should be a breakout based on the level of the student, i.e. is it really fair to compare a bachelor's or master's student to someone about to finish up their PhD. At the present time all students are evaluated together, but this is probably something that should be looked at more in the future.

6.2 Elya also proposed that we should initiate an Education Track for Education on selected EMC topics at the symposia. This would be a training track that would parallel the symposium. It was proposed that such a track be established in 2006. Dick Ford said that he thought such an activity would be highly desirable. Maqsood Mohd wants a subcommittee to study this issue and gather inputs from other committee members, as well as others in the society. Elya will try to form one and report back their findings.

6.3 2005 Workshop for EMC Faculty - Randy J. Jost proposed that we look at sponsoring a workshop for new (or current) EMC faculty members at the Chicago Symposium. The idea would be to have a series of short presentations to cover various aspects of starting up a new EMC course, or improving an existing course. Contents of the workshop could also be made available to others via the web. The general consensus was that this was needed and a good idea. Maqsood said that one was held about 10 years ago and it is time for another one. Mark Steffka said that he would be willing to help out in such an activity. Randy will put together a proposal and submit it to the Chicago symposium committee. He will also have a sign up sheet at the ESAC table in the demonstration area to see what topics people are interested in and judge the initial interest in attending such a workshop. Maqsood requested Mark Steffka to develop a template that would help new instructors develop a course that includes theory and experiments. He agreed to do that and email to Maqsood.

7. Adjourn

A motion was made by Elya Joffe to adjourn the meeting and seconded by Tom Jerse. The motion passed and the meeting adjourned at 9:23 am.

Respectfully submitted,
Randy J. Jost, Secretary

Meeting Attendees

Andrew L. Drozd
Dick DuBroff
Ahmad Fallah
Dick Ford
Fred Heather
Tom Jerse
Elya Joffe
Randy J. Jost
Warren Kesselman
Jerry Meyerhoff
Maqsood A. Mohd
Bob Nelson
Howard Rudnick
Mark Steffka
Jim Whalen
Ed Wheeler
Kimball Williams
Ken Wyatt