

MNTeSIG Minutes May 22, 2020

Scribe/host: Matthias Pleil – mpleil@unm.edu

Attendees:

Tony D., Valerie K., Abdelaali Fargi, Elaine Brewar, Abe M., Hector Baez Medina, Paul Weber, Marco C., Bob E., Jared A., Jim Smith, Pamela A., Jim Marti, Ray Tsui and others I did not catch.

Discussions

- Tony D mentioned Elaine Brewer with Nancy L. received a New to ATE grant, she will be looking for folks to test out the materials they will be putting together – topic is vacuum systems. David Hata is also collaborating. Hata’s vacuum book will be revised and available as an E-book (free).
- Hector from the National Polytechnic Institute in Mexico City; it is the biggest Technological Institute in Mexico, part of the computing research center. His laboratory works with micro and nanotechnology. The main partner is the nano science and nanotechnology center, they have a class 100 cleanroom. They have MEMS design software they are developing, similar to SUMMIT V (Sandia National Labs). It will be open source and available.
- Update from HI TEC – will be able to submit your accepted papers/presentations on line on an asynchronous platform.
- MNTeSIG meeting will be online – Pleil will be working with folks on the live MNTeSIG meeting.
- Bob E. – Don’t forget we can still leverage the RAIN Network – several labs are open for use.
- Matt P. – SCME-Support.org has asynchronous online short courses available.
- Bob E. – series of YouTube SEM topics – very cool samples shown and discuss – see the MNTeSIG.net web site.

Presentation by Andy Bell on Second Life – Highlights

See “Engineering Education Island: Teaching Engineering in Virtual Worlds by M.J Callaghan, K. McClusker, J. Lopez Losada, J.G. Harkins and S. Wilson”

<https://www.tandfonline.com/doi/full/10.11120/ital.2009.08030002>

Nice tour given of the Ivy Tech Eng Tech Islands. Kiosk of images (very nice); scrolling photos, picture frames showing projects by students, bar for students to meet and chat on line. One can right click to open up browser to take folks to websites. Billboards available. Simple to build new spaces – can use CAD to integrate 3D elements, models as well as buildings. You can “rent” places in second life to hold meetings, conferences. Use “Lindon Dollars” to purchase items. Can present etc. Andy would like to make a virtual cleanroom. Also, you can create a MEMS device, nano structure etc and then walk around it to get a good idea how it works.

There was a great discussion as to why this would be useful? The main thing is it could be more engaging and interactive – more interesting for some students. This would be a good gateway into the future of teaching – as VR gets better, this will be more and more of what we will do. Haptic feedback is great as well but now too expensive. Also, some students could help build areas for others to use in the future. Valerie made a good point that these sorts of things can get young folks hooked in.

Subteams

Marco – Curriculum Team Report Out

- Meets the week after every MNTeSIG meeting
- Showed his teams goals, team members are putting together a list of schools (CCs) doing MNT – 9 colleges only. “Websites are horrible and the way they market is even worse.” So, there is an opportunity for MNTeSIG and MNT-EC to help market these programs.
- Marco is determined to build this up – he is requesting videos/info to help market and spread the word through his online offerings. He can promote through Google Adds – perhaps can get ½ dozen or so more students per school.
- Presentation slides are available on the MNTeSIG website (look for the sub-teams area).

Industry Team – Jared, Matt

- COMS conference will be virtual, ATE PI looks like it will be as well. The COMS will be hybrid, some face to face and some online.
- Goals/Mission – Act as a clearing house for industry. Lots of Win Win opportunities.
- Struggle on horizon – budget cuts – will jeopardize small programs
- We plan to present (Jared, Bob, Matt) at the COMS conference.

Difficult finding videos whereby students pitch the various programs. Marco suggested we bring these together somehow to aid in the marketing of programs.

Actions

Pleil – Draft of MNTeSIG Live proposed schedule

Pleil – Minutes, post them and Andy’s article on MNTeSIG.net site (done)

New folks wanting to perhaps present at MNTeSIG Live in July:

- Elaine Brewer – Vacuum project
- Hector – MEMS Design/Nano work in Mexico (Maybe)

Sub-teams:

- Meet and be prepared to report out

All

Get folks to join MNTeSIG – sign up on the Website – also – re-register to update your info – to include organization etc.

Consider presenting at COMS 2020 (can still submit, even though web site says May 22 deadline – do this soon): <https://www.mancef.org/coms2020/>

Next Meeting – June 12, 2020, 12-1pm Eastern Time

Draft Agenda:

1. Elaine to update us on her new project
2. Matt to pitch MNTeSIG Live meeting
3. Bob – Update on HI TEC Meeting
4. Jared – Update on COMS/ATE PI (anything new?)