

Center for Particulate and Surfactant Systems

An NSF Industry/University Cooperative Research Center (I/UCRC) since 2008



International Partner Site
Dharm Singh Desai University

Fall 2014 Industrial Advisory Board (IAB) Meeting

August 6-7, 2014

Columbia University, New York, NY

~Meeting Highlights and Minutes~

The CPaSS Fall 2014 IAB Meeting took place in the Davis Auditorium, Shapiro CEPSR at Columbia University, New York, on August 6-7, 2014. The two-day program consisted of technical presentations, affiliated & supplemental project updates, an interactive research project ideas discussion, industry feedback and a poster session.

Below are the Main Outcome Highlights of the meeting.

The Center leadership would appreciate any comments, corrections, questions, or suggestions you may have regarding any of these items

Welcome & Introduction

Professor Steve Cohen, Executive Director of the Earth Institute, Columbia University

Spoke on the Columbia's interactions with industry members and welcomed all on behalf of the administration

NSF I/UCRC Program Update

Dr. Denis Gray, I/UCR CPaSS Evaluator

Spoke about the NSF I/UCRC program and the general opportunities for funding and the results of the program for the industrial community.

CPaSS Sites - Status & Update

Dr. Brij M. Moudgil & Dr. P. Somasundaran, CPaSS Directors

Dr Moudgil presented an updated overview of the Center (facilities, research expertise, etc.) and the most recent outcomes, enhancements and initiatives. He also detailed the UF site project portfolio. Prof. Somasundaran continued the presentation by summarizing the research efforts at the CU site.

Research highlights of respective centers were also presented by Dr. Dinesh O. Shah, Founding Director, Shah-Schulman Center for Surface Science and Nanotechnology, Dharm Singh Desai University (DDU) – CPaSS International Partner Site; and Prof. Devinder Mahajan, Center for BioEnergy Research and Development (CBERD), Stony Brook University, New York (NSF COLBI Partner with CU).

Project Updates, New Initiatives and Poster Session

Aug 6th Afternoon (2.55-5.50 PM) and Aug 7th Morning (8.45 – 10.05 AM) Technical Sessions

Projects were each presented for ten minutes followed by questions/discussion and completion of the LIFE forms by the industry members.

Poster Session

Electronic copies of the posters are available on the CPaSS website (<http://iucrc.perc.ufl.edu/>) in the Members Area.

IAB Executive Committee Meeting (Closed-Door)

Chaired by Greg Spontak (P&G, Ret.), IAB Executive Committee Vice Chair

Attendees

- | | |
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| • Brij M. Moudgil (CPaSS Director) | CPaSS presenters attending for L.I.F.E. form discussion: |
| • P. Somasundaran (CPaSS Co-Director) | Lokendra Bengani |
| • Greg Spontak (IAB Executive Committee Vice Chair) | Jun Wu |
| • D. R. Nagaraj (Cytex Industries) | Georgieva Angelina |
| • Chuck Hodge (ECOLAB Inc.) | Yang Shen |
| • Wendy Chan (ECOLAB Inc.) | Parag Purohit |
| • K. P. Ananth (Unilever) | Nandakumar Vignesh |
| • El Shall Hassan E (Sumicol) | Jose Martinez-Santiago |
| • Partha Patra (CPaSS Researcher) | Sathish Ponnuramam |
| • Teleconference: Pete He (Dial-Henkel) | |
| • Crespy Daniel (Clariant) | |
| • Miralles Altony (Ecolab) | |
| • Wilson Elena (Shell Oil) | |
| • Dave Frattarelli (Dow) | |

Greg Spontak, IAB Vice Chair called the Executive Committee Meeting (ECM) to order at 10:15 A.M.

A. Discussions on CPaSS Projects

Spotlight: PIs will communicate with the industrial members about modifying the project programs and address the comments made on the projects and that outlines in the L.I.F.E forms

1. Denis Grey initiated the proceedings by presenting the questionnaires' to the ECM.
2. He said PIs are to present which projects are of interest to the IAB members and how to tweak an existing project to make it more relevant.
3. Can the project presentations be separated according to that are mostly funded by CPaSS vs. those leveraged?
4. Share comments and responses from the L.I.F.E forms with the IAB members
5. IAB members to bring laptops; it could be efficient if L.I.F.E forms are filled out online
6. Develop a summary of L.I.F.E forms for ECM
7. Industrial members to provide comments and pressing questions during discussions of the L.I.F.E forms during ECM
8. Comments along with the name of the members making the comments are sent to PI's
9. Based on the priority and the objectives, PI's will discuss with the members who made specific comments/suggestions:
10. Member representative from Shell suggested categorization of the presentations
 - a. Can we categorize the presentations according to the projects that are funded by the respective members?
 - b. Prof. Moudgil: Currently the presentations are according to disciplines (e.g. Greener surfactants)
 - c. Dr. Nagaraj: Color coding of the projects might be an option to categorize the projects
 - d. Denis: Categorization of the projects can also be considered in terms of collateral funding

B. Discussions on L.I.F.E forms

Spotlight: The technical session presenters (CPaSS) provided responses to major comments in the L.I.F.E forms. (L.I.F.E forms when filled out online will make comments and the responses available to all the IAB members) Each PI/Investigator was given one minute to respond to select specific comments posed by the IAB members

1. How the specific suggestions/questions were addressed by the PI's should be discussed upfront starting with the next IAB meeting at Florida (spring 2015)

2. Questionnaires can be addressed in a manner which says, "out of scope", and if not, should be pressed for enhanced funding.
3. Spontak: What is the status of Nanohygenics? Is there a possibility of a Patent/Option to other company? Companies Moudgil responded that due to financial and other reasons the company has suspended its operations
4. The present mechanism of discussing the L.I.F.E form is better (1-2- minutes per PI to address specific comments).
5. Industrial partners contributed while discussing the L.I.F.E forms and provided clarifications. 6. Was the new format for L.I.F.E discussions helpful, Strategic Planning Committee (SPC) will discuss and recommend.

C. Provision for laptops to the member participants, and making technical presentation available prior to the IAB meetings

Spotlight: It is an option from CU and UFL sites to provide laptops to the industrial members to fill out the L.I.F.E forms online. Draft slides of the presentations may be sent to the members prior to the IAB meeting.

1. Provision for tables along with laptops would be helpful
 - Availability of power plugs for laptops
 - Send reminder to the industrial members to bring laptops to the IAB meetings
 - A suggestion from Dr. Daniel (CLARIANT) and Dr. Nagaraj was that paper based method of filling out the L.I.F.E is more dynamic to chalk down comments
2. Is it possible to provide the presentation slides prior to the IAB meeting, so that members are well versed with the topics to be presented? Dr. Nagaraj suggested that even though the presenters provide a draft of the presentation that is about 80-90% ready, it would be helpful. It was agreed that preliminary slides will be sent to the industrial members.
3. Presenter's response to comments in the L.I.F.E forms for 60 seconds was helpful. However, some members commented that that time was not enough to have elaborate discussions and brainstorming.
4. It is thus proposed that, online filling out of the questionnaires would be helpful and then 60 seconds time will be provided to the PIs to go through the comments in the L.I.F.E forms. For specific questions/projects 1-2 minutes may be given. Dr. Denis Grey suggested that alongside 60 seconds, some more time can be given to the industrial members to ask pressing questions
6. Dr. Pete He suggested adoption of the internet based model for presentations.

D. Discussion in Poster Sessions

Spotlight: More time may be allotted for the poster sessions; around 50 minutes was allotted in Fall 2014 IAB meeting. Suggestions were to extend the IAB meeting to 1 and ½ day.

Suggestions were that the poster session could be extended. Members suggested that the students have spent time in making their posters and more time would provide better interactions with the students, and thus, enabling the members to understand their research work. Posters should not be removed during the course of the meeting.

E. CPaSS chair nomination

1. Voting at UFL
2. There was a call in the Closed Door Meeting for the post of CPaSS chair positions. A response to the call for VC/VP was issued for members to self-nominate or nominate any other IAB member. Voting for the new IAB officers would take place at the spring IAB meeting at Florida (Feb. 10-12, 2015).

F. Membership fees

Spotlight: Increase in membership fees to \$35,000 was voted for by the members

1. Two options were presented to raise the member ship fee level. Revised membership fees (Target: \$50K/yr.) would allow dedicated efforts for each selected project by a graduate student or a post-doctoral fellow with expedited & timely project deliverables. Additionally, increased project funding would also encourage other faculty members to submit or work on industry needs through the Center.

There were discussions for an increase in the membership fees, and two options, as given below, were discussed:

- i. Option A: Next year \$35K; \$5K/year for the next three years
 - ii. Option B: 25% increase every year for the next three years
2. Discussion was on the benefits of membership amount being 50K. It was justified that this increase in funding will allow a post doc/researcher dedicated to a project enabling more comprehensive results and timely completion of the project.
 3. Daniel from CLARIANT: Does the suggested 50K increase in membership fee indicate more results being generated?
 - a. Prof. Moudgil answered that the number of projects possibly may remain the same, however, the idea is to have a dedicated program in place, and more results will be generated consequently.
 4. Dr. Nagaraj suggested that 25K (which is the current -2014-15 - membership fees) does not provide enough support in terms of research work to be done for a particular project. According to him other major centers charge a membership fee that is significantly higher than CPaSS current membership fee. Such fees allow researchers to dedicate reasonable efforts to complete projects in a timely fashion with specific deliverables of benefit to member companies.
 5. Members suggested increasing the number of IAB members. Prof. Somasundaran mentioned that an effort has been in place where each member is expected to bring in additional member/s to the center.
 6. Greg Spontak said that a decision has to be made so that the enhanced membership fee can be incorporated in the next (2015) year's budget.
 7. Pete He suggested that companies may have differed responses to this increase in the membership fees.
 8. Discussion was on which options of increase in the membership fee would be suitable?
 9. A report would be required as to how this increase in the membership fee would benefit member industries? This report is to be provided by the center directors to the industrial members.
 10. Dr. Pete He suggested categorization of the membership (\$40K/yr for joining one project; additional fees for joining additional projects as some other IUCRCs e.g., UMinnesota?, have adopted), to which, Prof Moudgil suggested that enough membership numbers/support would be required for each project to be viable. To this, Dr. Denis Grey further added that, in such categorization (e.g., 40K and 50K as membership fees for the categories); at least one group (category) would need to meet the minimum requirement set by NSF (\$175K/yr).
 11. For some members, the original member company was different that the current one due to mergers or acquisitions. Therefore, the logistics in membership fee enhancement may need in-depth internal (within the company) evaluation.
 12. Voting took place for the options A and B for an increase in membership fees (35K/yr.); the voting results (in support) are given below. Option A:
 1. Unilever
 2. Cytec
 3. Shell
 4. EcoLab
 5. Sumicol
 6. CLARIANT

Option B:

1. Dial Henkel (voted as a choice)

Voting and approval was for increase in membership fee to 35K for the year 2015. Subsequent increase in membership fee @ \$5K/yr. will be discussed at spring 2015 IAB meeting at Florida.

13. Discussions on the implication and impact of adopting either option A or B
 - a. Dr. Nagaraj: It need to be shown how \$25K/\$35K will impact the bottom line. In management structure, personnel think differently in terms of value, and also depend on who in the organization dealing with the management of the funds.
 - b. Greg Spontak: a 1-2-page document justifying \$35K membership fee will be required- what additional value will be provided for \$35K membership support to CPaSS. The Center Directors will provide suggestions to the members so that they can convey the value of the increased membership funds to the higher/respective authorities within the

companies. The center directors Profs. Somasundaran and Moudgil will provide a ONE-PAGE summary to the members and potential members.

G. Center Name

Spotlight: Center name will remain as it is for the time being with a subtitle such as:

Center for Particulate and Surfactant Systems (CPaSS)

Applied to Personal care, Consumer Products, Mining, Specialty Chemicals, Pharmaceutical, Cosmetics, Healthcare, Food & Nutrition....

1.
 - a) No distinction in UFL and CU sites focus
 - b) Sector-wise subtitle is more concise
2. Ecolab: Surfactant dedicated center was one of the reason towards joining CPaSS
3. Suggestions for the change of the CPaSS title
 - a) Particle and surfactant application in consumer products, pharmaceuticals...etc.
 - b) Dr. Dennis Grey (@ NSF) mentioned about a transition strategy. The center name CPaSS remains the same, but a subtitle is added, such as: 'Application to personal care, consumer products and health care....'
 - c) Ecolab suggested to go for a slower change of the center title
 - d) Suggestions were also made that the sub-title may become part of o the main title later

The members approved the 2014-15 CPaSS budget for Columbia University site

H. Suggestions for future meetings at IAB member sites

Spotlight: Columbia site and Florida site as meeting venue is preferred. Option for holding IAB meeting may be considered.

1. Strategic planning committee will make recommendations in this regard.
 - a. Holding the meeting at different locations; one of the industries can hold the meeting. Some of the members suggested that this possibility of venue at industry interferes with exchange of inter-industry information and may not be suitable.
 - b. Pros and cons on IAB meetings at member company sites
 - i. Do on case-by-case basis (Nagaraj), possibly considering a project that is of importance to many.
 - ii. Address budget issues with the projects (Dr. Ananth @ Unilever) and see if more support would be required.
 - iii. Members emphasized that they would like to be involved in brain-storming sessions with the research work of the projects.
 - iv. Discussions can be extended to a particular research project, enabling members to have options to direct/redirect a particular research program and subsequently develop a proposal on what can be done on a particular project.
 - v. A few members commented that, in some cases, the ideas of the research project addressed in the meeting are generic

Company presentations at the IAB meetings

It was suggested that brief (10 minutes) presentations by the industrial members will be considered at the next (Feb. 2015) IAB Meeting. Most of the participants agreed to this recommendation. This will provide understanding of the potential ideas considered and that is important to the members, and thus, providing an opportunity in transferring of ideas towards project development by PIs and members.

Additional suggestions included

- vi. It was suggested that the industrial relevance of the projects need to be improved. In this regard, specific problem statements would be required for the projects and how they can be utilized by IAB member companies.

Greg Spontak mentioned that the projects can be made more specific. The strategic planning committee will discuss the following and present their recommendations to the IAB at Florida.

- a) Reconfigure the research presentations
- b) Recommend specific problem statement and business applications templates.

Next meeting dates

- The next meeting dates are as follows:
 - Spring Meeting at University of Florida: Feb 10-12, 2015
see <http://iucrc.perc.ufl.edu/> for meeting details

Meeting Was Adjourned At 1 P.M.

- Minutes as recorded by Partha Patra, Sathish Ponnurangam, and Brij M. Moudgil/P. Somasundaran