

# SEPARATIONS DIVISION

## American Institute of Chemical Engineers

Scott Husson  
Chair  
Clemson University  
127 Earle Hall  
Clemson, SC 29634  
(864) 656-4502  
shusson@clemson.edu

Mark Davis  
First Vice Chair  
UOP  
50 East Algonquin Road  
Des Plaines, IL 60017  
(847) 375-7277  
mark.davis@uop.com

Roger D. Whitley  
Second Vice Chair  
Air Prod. and Chem., Inc.  
7201 Hamilton Blvd.  
Allentown, PA 18195  
(610) 481-3961  
whitlerd@airproducts.com

Atanas Serbezov  
Secretary  
Dept. Chem. Eng.  
Rose-Hulman Inst. Technol.  
Terre Haute, IN 47803  
(812) 877-8097  
serbezov@rose-hulman.edu

Neil Yeoman  
Treasurer  
LNCK Associates  
1723 Alexis Road  
Merrick, NY 11566  
(516) 946-9530  
loretta.neil@yahoo.com

Tim Frank  
Past Chair  
The Dow Chemical Company  
Eng. & Process Sciences  
Midland, MI 48667  
(989) 636-4310  
tcfank@dow.com

### DIRECTORS

G. Glenn Lipscomb  
The University of Toledo  
glenn.lipscomb@utoledo.edu

Marcus Dutra e Mello  
Chevron  
mvdem@Chevron.com

Tarun Poddar  
tpoddar@att.net

Jeff McCutcheon  
University of Connecticut  
jeff@enr.uconn.edu

Kathleen Mihlbachler  
mihlbachler@yahoo.com

Anand Vennavelli  
FRI  
vennavelli@fri.org

Megan Donaldson  
Dow  
medonaldson@dow.com

Christopher Burcham  
Lilly  
cburcham@lilly.com

Lauren Greenlee  
University of Arkansas  
greenlee@uark.edu

Alice Z. He  
Chevron  
azhe@chevron.com

### AREA CHAIRS

Dan Summers  
Distillation & Absorption (2a)  
dan.summers@sulzer.com

Marina Tsianou  
Crystallization & Evaporation (2b)  
mtsianou@buffalo.edu

George Goff  
Extraction (2c)  
georgeg@lanl.gov

Jeff McCutcheon  
Membrane-Based Separations (2d)  
jeff@enr.uconn.edu

Matthias Thommes  
Adsorption & Ion Exchange (2e)  
matthias.thommes@quantachrome.com

Isaac K. Gamwo  
Fluid-Particle Separations (2f)  
gamwo@netl.doe.gov

Stephen Thiel  
Bioseparations (2g)  
Stephen.Thiel@uc.edu

Stephen Ritchie  
General Topics &  
Other Methods (2h)  
sritchie@coe.eng.ua.edu

**CTOC LIAISON**  
Sharon Robinson  
Oak Ridge National Lab  
robinsonsm@ornl.gov

## MINUTES

### Separations Division Planning Meeting American Institute of Chemical Engineers 2016 AIChE Annual Meeting

Sunday, November 13, 2016 - Noon to 5:00 pm  
Powell I, II (Parc 55 San Francisco)

#### *Attendance (in person):*

Scott Husson	Roger Whitley	Neil Yeoman
Atanas Serbezov	Marcus Mello	Jeff McCutcheon
Mark Pilling	Glenn Lipscomb	Anand Vennavelli
Megan Donaldson	Alice He	Dan Summers
Marina Tsianou	Matthias Thommes	Isaac K. Gamwo
Seyi Oduyungbo	Stephen Thiel	Kathleen Mihlbachler
Paul Scovazzo	Stefano Brandani	Lauren Greenlee
Stephen Ritchie	Chris Burcham	Paul Bryan
D.B. Bhattacharyya	Sharon Robinson	Robert Giraud

#### *Attendance (via phone or Skype):*

Mark Davis	Tim Frank	
------------	-----------	--

#### *Approval of Minutes from the Planning Meeting on May 17, 2016 (Atanas Serbezov)*

The minutes were distributed via e-mail. A motion to approve the minutes as distributed by e-mail was made, seconded and passed by acclamation.

#### *Election Results & Introduction of New Officers (Scott Husson)*

Marcus Mello - 2<sup>nd</sup> Vice Chair

Marina Tsianou – Director

Isaac Gamwo - Director

Neil Yeoman - Treasurer.

Atanas Serbezov – Secretary

#### *CTOC Update (Sharon Robinson)*

Sharon's term as Division's CTOC representative expires at the end of 2016.

**Action item:** The Division should provide CTOC with names of interested individuals to succeed Sharon as CTOC liaison.

25% of AIChE membership are young professionals (YPs), 35 and under. AIChE has launched "AIChE 35 Under 35 Award" program to promote the achievements of 35 younger members of AIChE who are making a mark on the profession in the early stages of their careers. The Young Professionals Committee is calling upon members of the chemical engineering community to nominate early-career candidates who exemplify the profession at its best.

**Action item:** The Division should consider nominating members for the "AIChE 35 Under 35 Award" program.

AICHE is looking for ways to engage the young professionals to volunteer. AICHE is planning to develop a volunteer central, where Divisions can ask for volunteers to work on “micro-tasks” so that tangible results are produced in a relatively short time span.

**Action item:** The Division should consider appointing a Director for interfacing with the YPs via the new volunteer central portal.

AICHE has completed a review of the rapid fire sessions and has concluded that they were not as effective as initially thought.

AICHE is promoting the use of the DIPPR database by offering free Thermodynamics courses.

The AICHE Foundation has \$250K in funding to support projects in defined initiative areas. Are there projects that the Division could propose?

AICHE has formed a Rapid Advancement in Process Intensification Deployment (RAPID) Manufacturing Institute. The RAPID Manufacturing Institute has applied for the support of the U.S. National Network for Manufacturing Innovation Modular Chemical Process Intensification Institute for Clean Energy Manufacturing, a partnership sponsored by the U.S. Department of Energy (DOE).

***Treasurer's Report (Neil Yeoman and Tarun Poddar)***

The report is distributed electronically (via e-mail) every month. If anyone wants a copy, he/she can contact Neil or Tarun. The financial health of the Division is good. At the end of September 2016 the Division had \$ 79,300 in its account.

Tarun Poddar has prepared and presented an analysis of the past use of the Division's funds. The presentation slides can be found in the Appendix to the minutes.

***Review of Action Items:***

***1-Proposal for new awards administration process (Anand Vennavelli)***

The current award responsibilities are shown below:

<b>Award</b>	<b>Award Chair</b>	<b>2016 Responsibility</b>
Founders	Division Chair	Scott Husson
Kunesh	Past Division Chair	Tim Frank
Innovation	Division Chair	Scott Husson
Education and Outreach	2 <sup>nd</sup> Vice Chair	Roger Whitley
Awards Dinner	2 <sup>nd</sup> Vice Chair	Roger Whitley
GSRA	Awards Director facilitates thru Area Chairs	Anand Vennavelli
Gerhold	Paul Bryan	Paul Bryan

Receiving the award nominations is more challenging than the administration of the awards. A more streamlined process is needed. After a discussion, the following motion was made:

**Motion:** That starting in 2017 all nominations (except Gerhold) are submitted to the Awards Director with a copy to the appropriate award chair.

The motion was seconded and passed unanimously.

**Action item:** Megan Donaldson to implement the new process on the Division's web page and to explore the option of submitting the nomination to two e-mail addresses simultaneously (one click submission).

***Review of Action Items:***

***2- Proposal for e-mail voting procedure (Tim Frank)***

Tim Frank proposed a policy for e-mail voting when timing is an issue. The policy is outlined below.

1. Motion is made and must be seconded
2. If seconded, a 72 hour discussion/wait period starts
  - Longer period can be specified at Division Chair's discretion (or his or her delegate)
  - Discussion can be via email or chat session on the website or other
3. No votes will be accepted during this discussion/wait period
4. Voting will be done by a survey (e.g., Google or SurveyMonkey)
  - The motion will be written on the survey
  - Votes will be cast by clicking an option: In Favor, Opposed, Abstaining
  - Only votes cast by survey will be counted
  - Time period for voting will be 72 hours

**Motion:** That the policy for e-mail voting as proposed by Tim Frank be approved.

The motion was seconded and passed unanimously.

There was a question about quorum. According to the current Division bylaws, "a majority of the members of the Division Council shall constitute a quorum."

***Review of Action Items:***

***3- Proposal for revisions to the Division bylaws (Scott Husson/Alice He)***

Presently there are two versions of the bylaws in circulation (2002, 2011). Review of minutes since 2009 indicates that the 2011 version was never approved (it stalled in 2013). Alice He and Scott Husson worked on revisions to the 2011 version before it became clear this version was not in force. Scott Husson has now compared the 2002 and 2011 versions and has identified unmarked/unapproved changes in the 2011 version.

**Action item:** Scott to distribute the revised bylaws to the Division leadership for discussion in the months leading to the first 2017 Spring online planning meeting.

**Action item:** The revised bylaws to be presented to the Division Council for approval in the first 2017 Spring planning meeting.

According to the current Division bylaws, "a proposed amendment and ballot shall be sent to all Division members by first class mail." There was a discussion how to handle this provision. Division's ballots are administered by AIChE and have been done electronically for a number of years. It was decided to send a mass email communication to the Division members explaining that upcoming revisions to the bylaws will be distributed and voted on electronically, in compliance with current AIChE practice.

***Review of Action Items:***

***4- Re-engagement with Advisory Council (Mark Pilling, Chris Burcham)***

Mark Pilling and Chris Burcham have agreed to contact members of the Advisory Council to get more people involved in Council initiatives. The target is to have 4 to 5 people working on the following two initiatives

- Educational opportunities for those who do not attend annual meetings - Chris Burcham
- Use of Division's funds - Mark Pilling

The above initiatives were the top ranked initiatives in a survey of the Advisory Council members.

***Review of Action Items:***

***5- Manuals for Division leadership roles (Scott Husson)***

Scott has completed the Chair document. He will complete the Past Chair document during 2017.

**Action item:** Current (and past) leadership members to send Scott any documents that they have.

**Action item:** Scott Husson to collect completed documents for various leadership roles from current (or past) leadership members, assemble them and post on the web page.

#### ***6-Review of Action Items:***

##### ***Improve quality and increase awareness of TED-SEP session (Scott Husson)***

The TED-SEP format allows many more oral presentations to be accommodated in regular sessions, without the perceived lesser status of a Poster Session. Presenters give a 5-minute pitch of their work to a live audience. Cash prizes are given to the 3 best presenters. The judging is done by a panel of 6-7 professionals. The presentations are recorded and uploaded to the Division's YouTube channel.

The Division organized its first TED-SEP session at the 2015 Annual Meeting. The time slot was the same as the regular poster session. There were only 6 participants and a small number of audience members. Presenters did not quite well understand the concept of the TED talk.

In May 2016, the Division decided to recruit high quality participants from the pool of rejected submissions to regular sessions. TED-SEP chair contacted the area chairs with a request to ask their session chairs to transfer quality overflow submissions to the TED-SEP session. As a result this year's TED-SEP session has 19 participants.

Also in May 2016, it was decided that the Division will produce and post model TED talks and will ask participants to view the model(s). Jeff McCutcheon has created the first model presentation, which was uploaded to the Division's YouTube channel: [https://youtu.be/\\_yfTTPhqlbQ](https://youtu.be/_yfTTPhqlbQ).

To improve the quality of the recordings on the YouTube channel, the Division purchased a new video camera: Sony FDR-AX33 which will remain in the custody of the TED-SEP session chair (currently John Pellegrino).

A new rubric has been developed for the judges of the 2016 TED-SEP session. The scoring has been made user friendly for the judges via a smart phone app.

This year the TED-SEP session is scheduled in a regular presentation room immediately preceding the poster session. Even though a poster was not required from the TED-SEP participants, this arrangement is attractive to presenters who would like to have a poster as well.

Future improvements to be considered for the TED-SEP session:

- Require a poster from all presenters
- Restrict the awards to students only
- Collaborate with the YPs to co-sponsor and advertise the session since TED format is attractive to YPs
- Formalize the TED-SEP session awards as Division awards and advertise as such

##### ***Proposal to Formalize a TED-SEP Awards Program (Scott Husson)***

The TED-SEP session has a monetary award for the top 3 presenters but this is not formalized as a Division award. A formalized award structure will increase the visibility and elevate the stature of the TED-SEP session.

**Action item:** Scott Husson, Anand Vennavelli, John Pellegrino and Paul Scovazzo to develop a proposal for formalizing the TED-SEP awards as Division-sponsored awards.

##### ***Director Reports: Awards (Anand Vennavelli)***

See the Awards Report slides in the Appendix. In addition, there was discussion about considering teams for the Innovation Award.

##### ***Director Reports: Website Updates (Megan Donaldson)***

The Awards page has been updated. The planning meeting minutes since 2009 have been posted. There was request to combine all minutes in a single document that would be easy to search.

**Action item:** Megan to explore options for combining all minutes in a single document.

***Director Reports: LinkedIn Updates (Marcus Mello)***

The LinkedIn group has 157 members. Recent announcements of the Division's activities:

- Session: AltSep Sustainable Separations Processes Roadmap
- Call for 2016 Elections
- Call for Awards Nominations and Awards Winners
- Links to the website (where more content can be stored).

There is a consensus that LinkedIn is a great place for connecting members, but we need to drive professionals to start discussions. There is an opportunity for the SepDiv leadership to catalyze discussions and let them grow.

***Director Reports: Diversity planning (Kathleen Mihlbachler, Megan Donaldson)***

This is still work in progress. A report will be presented next year.

***Area Reports (Scott Husson, Area Chairs)***

See slides in the Appendix

***Programming Plans: Annual Meetings, 2016 – 2018 (Scott Husson, Area Chairs)***

See slides in the Appendix

***Programming Plans: Topical Conferences***

Topical conferences are an effective tool to increase session allocation. A possible topical conference for 2017 is Process Intensification and Reactive Separations. Glenn Lipscomb and Robert Giraud will pursue this based on their current AltSep collaboration. This topical is in line with the newly formed RAPID Manufacturing Institute.

It was suggested that the Division adopt a plan to submit a proposal for a topical conference every year.

**Action item for past chairs:** Put together a list of topical conferences for future meetings.

DB Bhattacharyya suggested that the Division organize a symposium in Spring 2018 that brings together AIChE SepDiv/ and ACS SST/ACS IEC groups on a topical of interest to chemical engineers and chemists. Robert Giraud volunteered to help with initiating the communication.

***New Business:***

***Awards Dinner Planning Update (Roger Whitley)***

See slides in the Appendix

***New Business:***

***Subsidizing Meeting Dinner Cost of Meals (Neil Yeoman)***

See slides in the Appendix

If needed, the Division will continue to subsidize the cost of the awards dinner. The amount of the subsidy will be determined on case-by-case basis.

***New Business:***

***Review award descriptions and nomination requirements for the Innovation award (Scott Husson)***

There have been recurrent issues with the nominations submitted for the Innovation award:

- Information provided talks about research achievements and contributions, but does not demonstrate fulfillment of award requirements
- Not clear the extent to which innovations have been implemented
- Not clear the measured value derived from implementation
- Not clear how the work done is true innovation as opposed what people might consider an incremental improvement/modification of something previously done

The need for revising the award description was discussed. It was decided to leave the description as is for now.

***New Business:***

***Division plan to engage industry thought leaders and YPs (Scott Husson)***

AICHE would like each Division to identify ways to increase participation by industry leaders and young professionals in meeting programming. Some examples are:

- Invite talks from "thought-leaders" (plenary, invitation only sessions, speaker at start of a session)
- Organize panel discussions akin to this year's ALT-SEP session
- Invite YPs to chair/co-chair sessions

**Action Item:** 2017 Chair to appoint an ad hoc committee to put together a plan to engage industry thought-leaders and YPs

***New Business:***

***Lifetime membership for Division (Chris Burcham)***

A Division member has asked if the Division had a lifetime membership option. Currently there is no such option. The need for such option was discussed.

**Action Item:** Neil Yeoman will inquire with other divisions (CAST and PD) who offer life memberships to understand their rationale

**APPENDIX**

**Presentation Slides**  
**Separations Division Planning Meeting**  
**2016 AIChE Annual Meeting**

Sunday, November 13, 2016 - Noon to 5:00 pm  
**Powell I, II (Parc 55 San Francisco)**

# **Financial Summary**

## **Separation Division, AIChE**





# Financial overview for 2015

Assets on 12/31/2014	72,460.12
Assets on 12/31/2015	75,896.94
Net Change	3,436.82



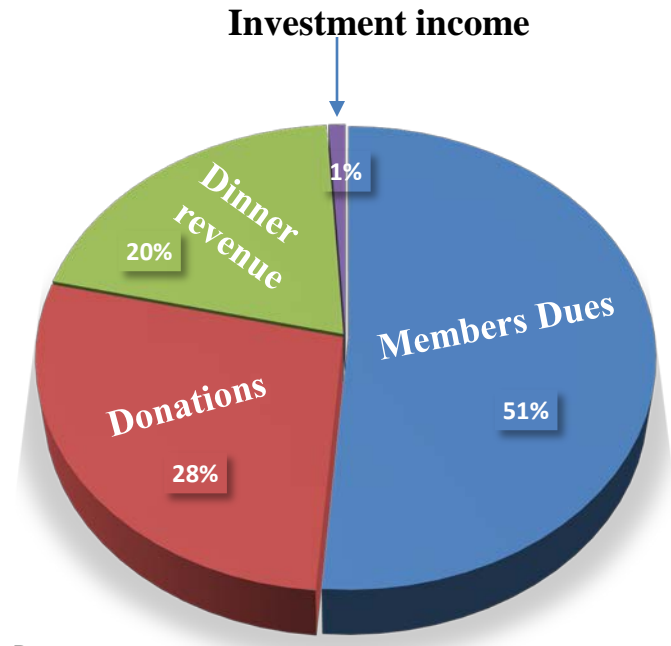
Total Receipts	16,000.68
Total Disbursements	12,563.86
Net Earning	3,436.82

Held by AIChE	73,396.94
TD Bank Checking Account	2,500.00
Total	75,896.94



# Revenue details for 2015

<b>Members Dues</b>	8,205.00
<b>Donations</b>	4,400.00
<b>Award dinner revenue</b>	3,240.00
<b>Investment Income</b>	155.68
<b>Total Revenue</b>	<b>16,000.68</b>

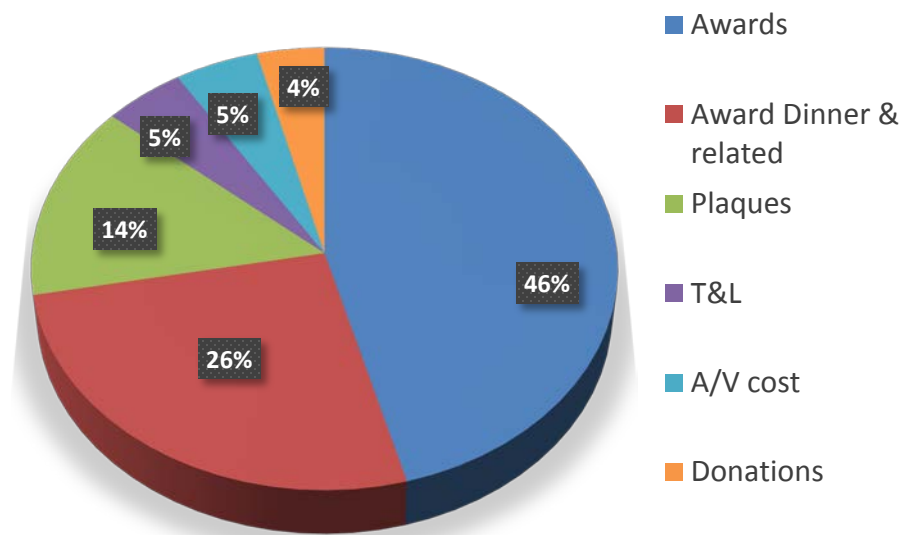


- Members Dues
- Donations
- Award dinner revenue
- Investment income



# Expense details for 2015

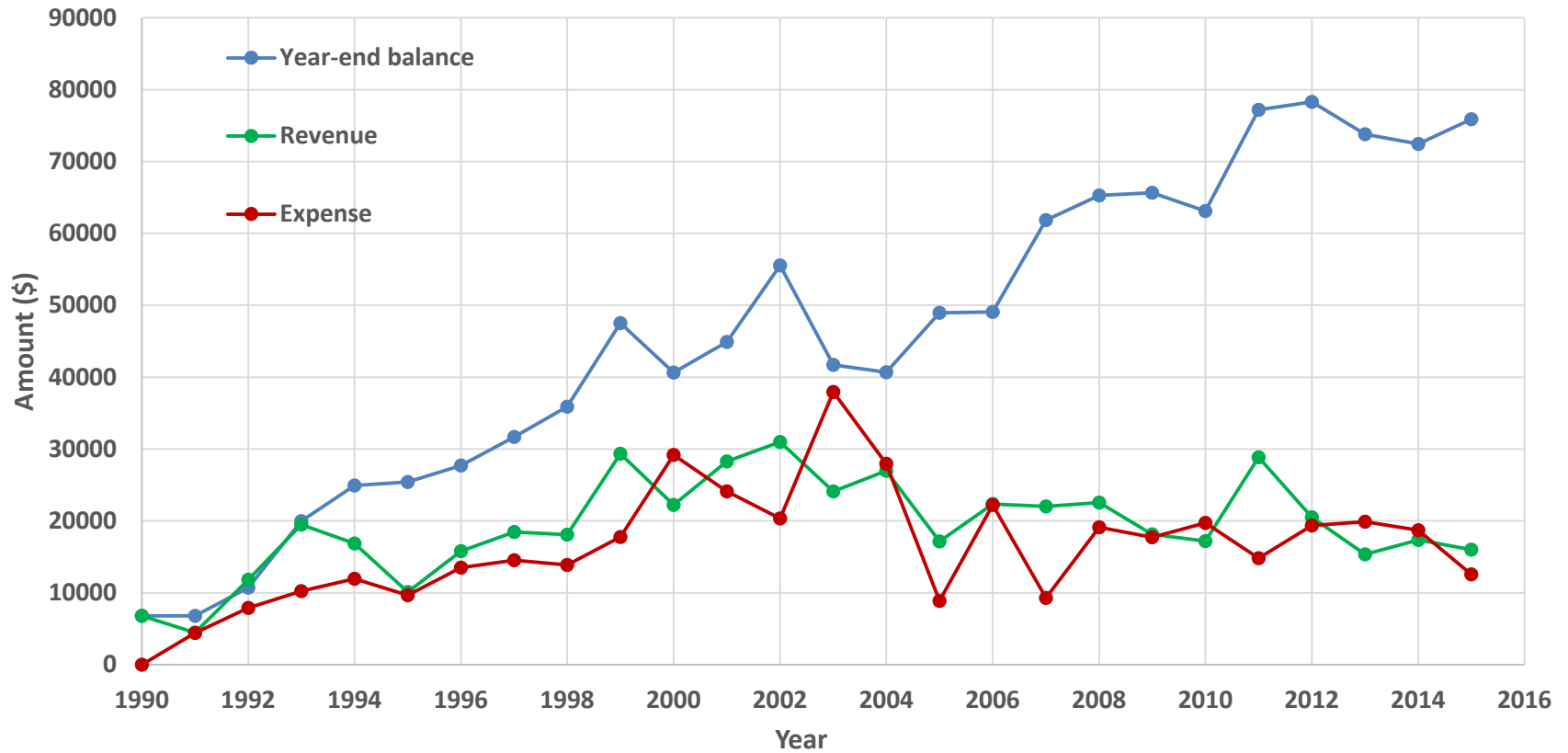
Awards	5,750
Award Dinner & related	3,293.54
Plaques	1,793.77
T&L	602.74
Audio/Visual	622.32
Donations	500
Miscellaneous	1.49
<b>Total Expense</b>	<b>12,563.86</b>



# **Trends Since Inception in 1990**

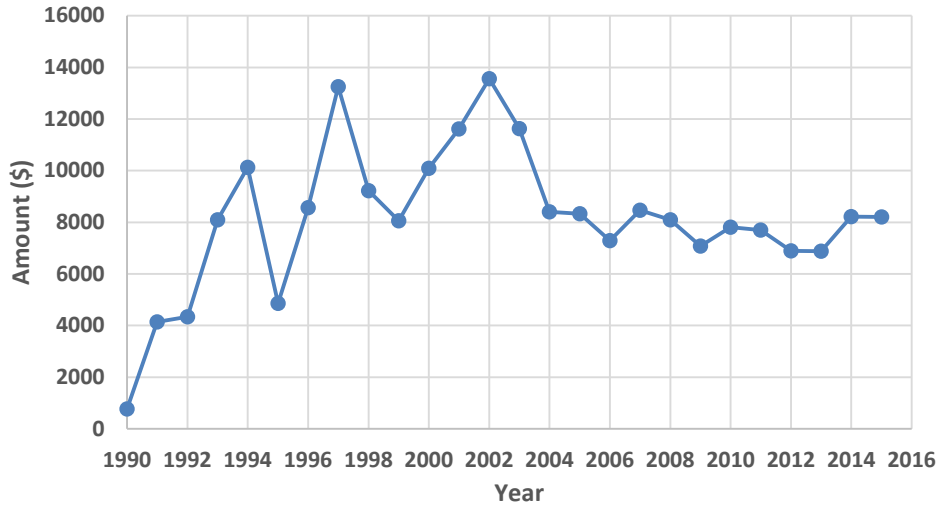


# Financial Overview

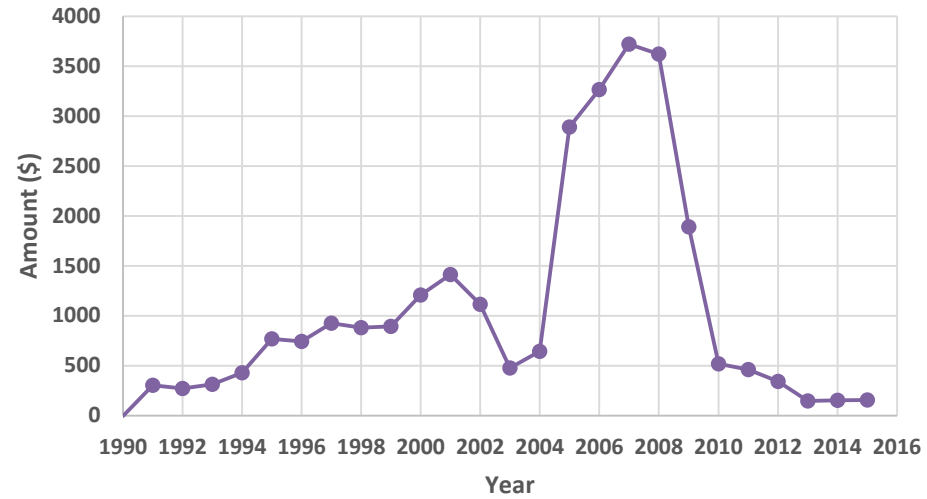


# Trends of Four Revenue Sources

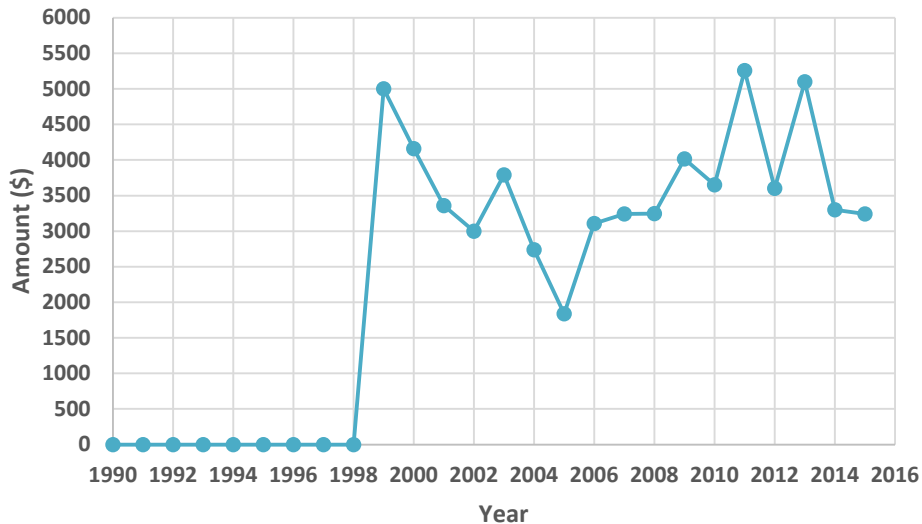
## Dues



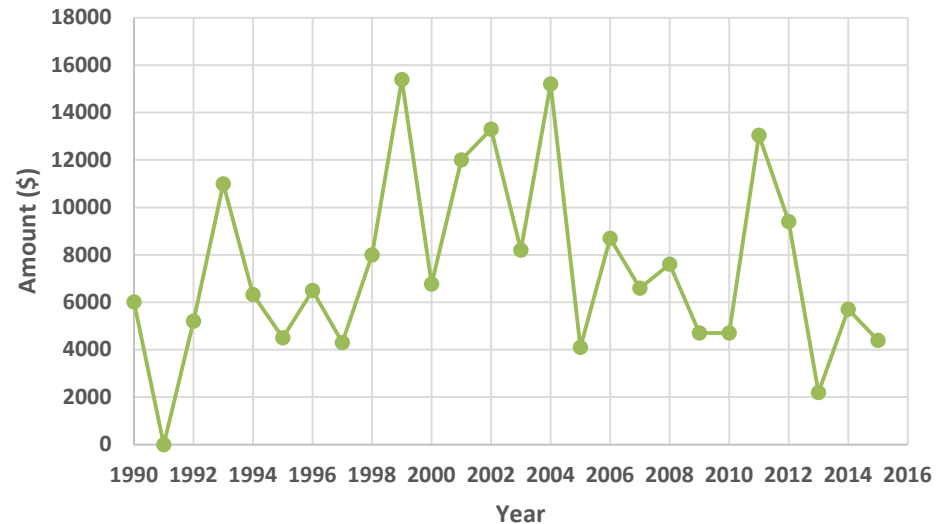
## Investment income



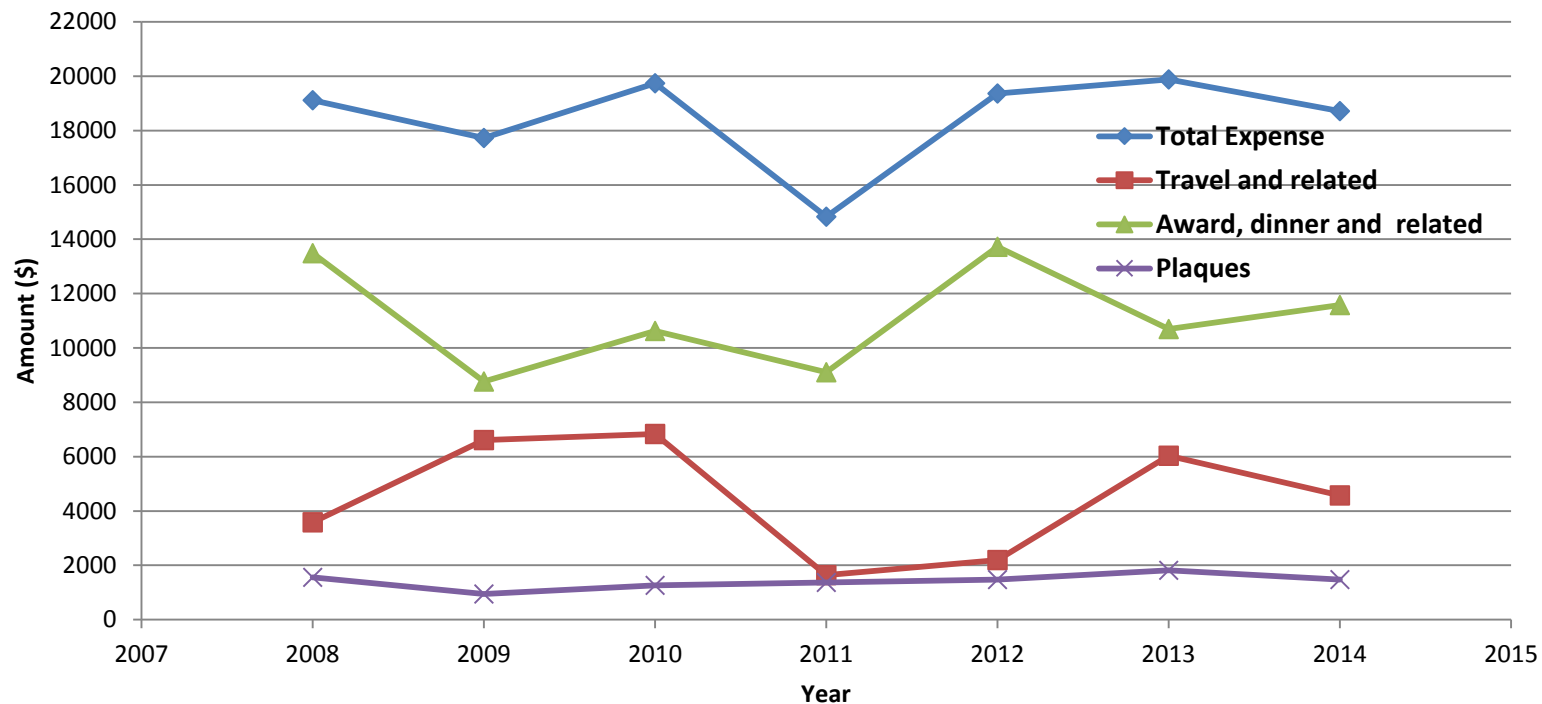
## Dinner revenue



## Donnation



# Trend of Four Expenses Items since 2008



- Consistent expense items since 2008
- Difficult to track inconsistent expense items before 2008



# Awards Report

Fall 2016



# 2016 Awards Administration

- Anand assumed responsibility in 2016
- Thank you Glenn and Nick for your help!
- Awards Dinner
  - Organized by the 2<sup>nd</sup> vice chair – Roger Whitley



# Division Awards 2016

- Gerhold:

- Daniel R. Summers (Sulzer Chemtech, USA)

- Kunesh:

- Krista S. Walton (Georgia Institute of Technology)

- Founders:

- Mark W. Pilling (Sulzer Chemtech, USA)



# Area Recognitions

- Area Recognitions (San Francisco, Fall Meeting):
  - Paul C. Steacy (Distillation and Absorption – 2a)
  - Georges Belfort (Membrane-based Separations – 2d )
  - Katsumi Kaneko (Adsorption and Ion Exchange – 2e)
  
- Area Recognitions (Houston, 2016 Spring meeting):
  - Charles J. Colwell (Distillation and Absorption – 2a)



# Graduate Student Research Awards 2016

- Recipients chosen by Area Chairs: 2 max

## Recipients (8):

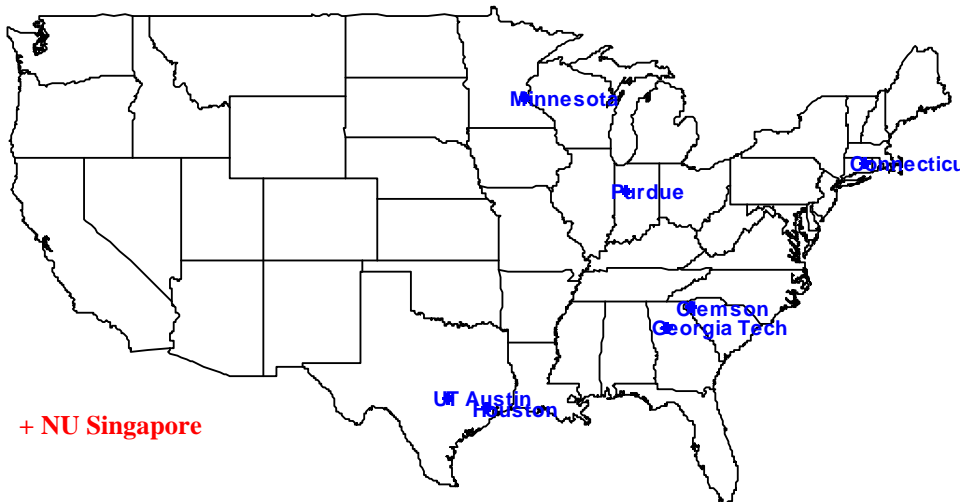
- Katy Olafson (University of Houston):  
Crystallization and Evaporation
- Daniel Griffin (Georgia Tech):  
Crystallization and Evaporation
- George Weeden (Purdue University):  
Extraction
- Jian Ren (University of Connecticut):  
Membrane-Based Separations
- Jovan Kamcev (University of Texas at Austin)  
Membrane-Based Separations
- Mansi Shah (University of Minnesota)  
Adsorption and Ion Exchange
- Christine Duval (Clemson University)  
Adsorption and Ion Exchange
- Jinsong He (National University of Singapore):  
Professor Dibakar Bhattacharyya  
Graduate Student Research Award

## Breakdown (8):

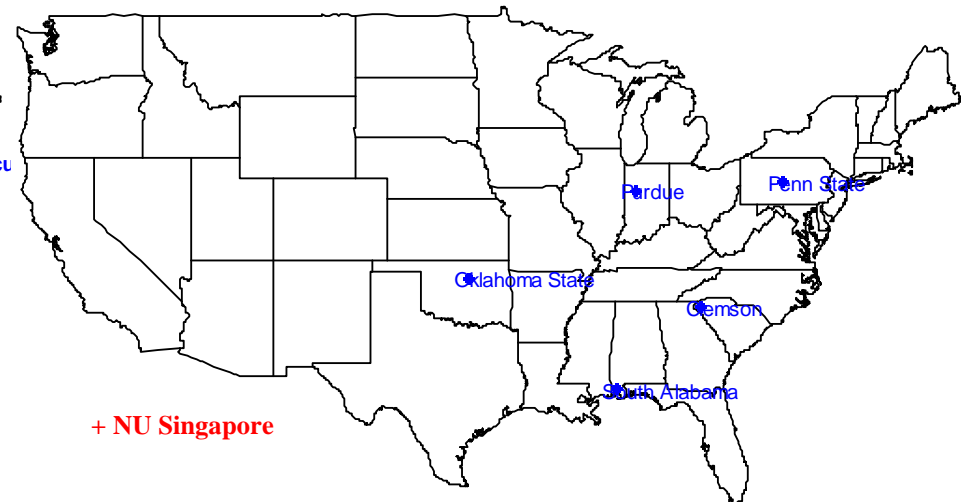
- Distillation and Absorption (0)
- Crystallization and Evaporation (2)
- Extraction (1)
- Membrane-Based Separations (3)
- Adsorption and Ion Exchange (2)
- Fluid Particle Separations (0)
- Bioseparations (0)



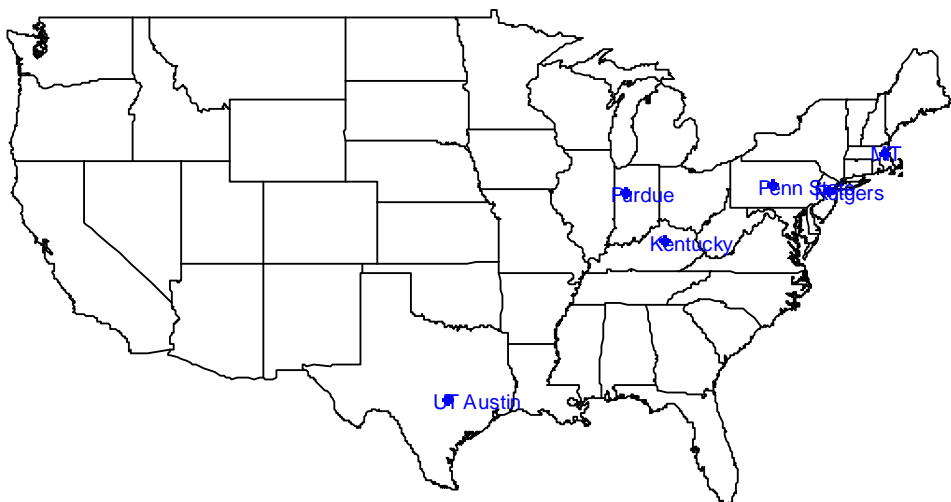
2016 GSRA Winners



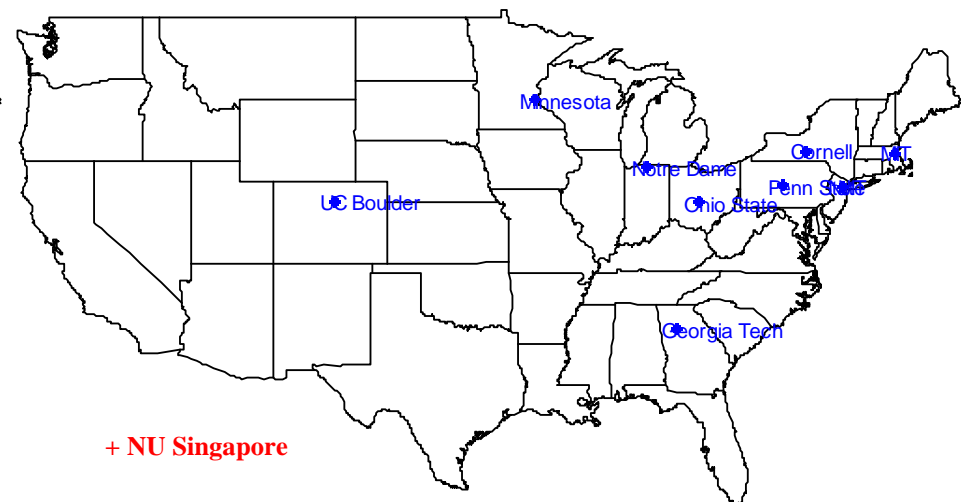
2015 GSRA Winners



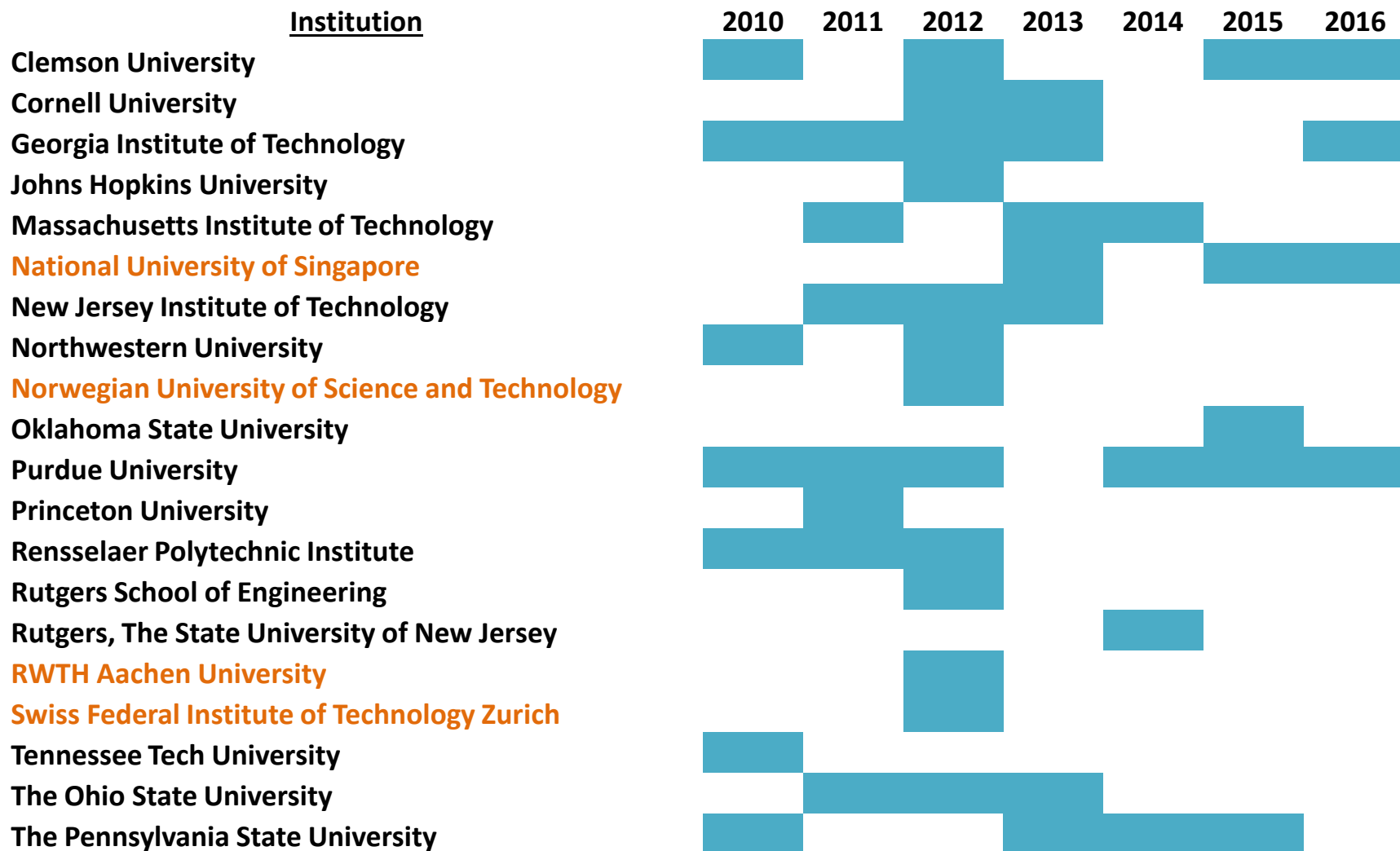
2014 GSRA Winners



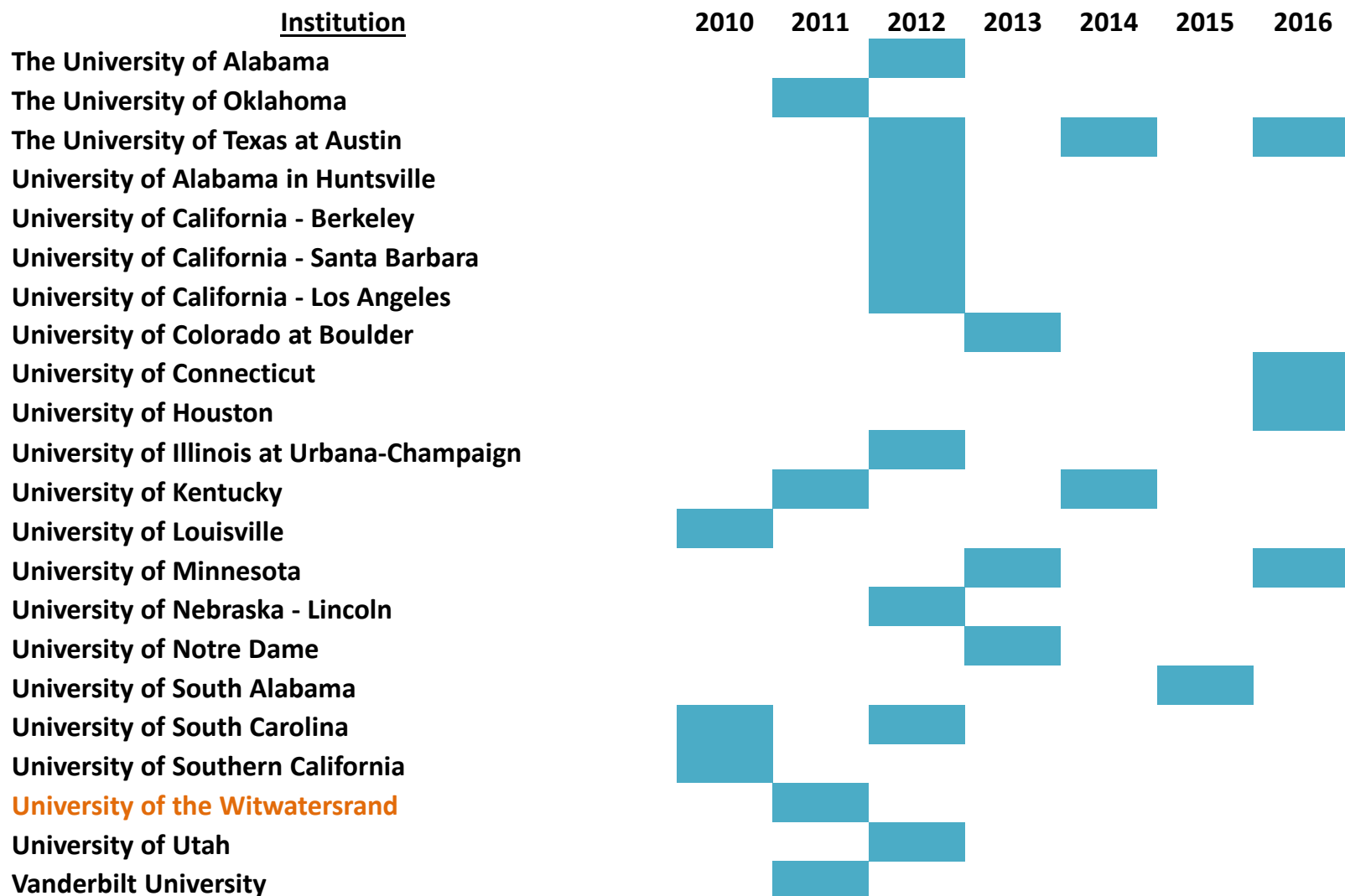
2013 GSRA Winners



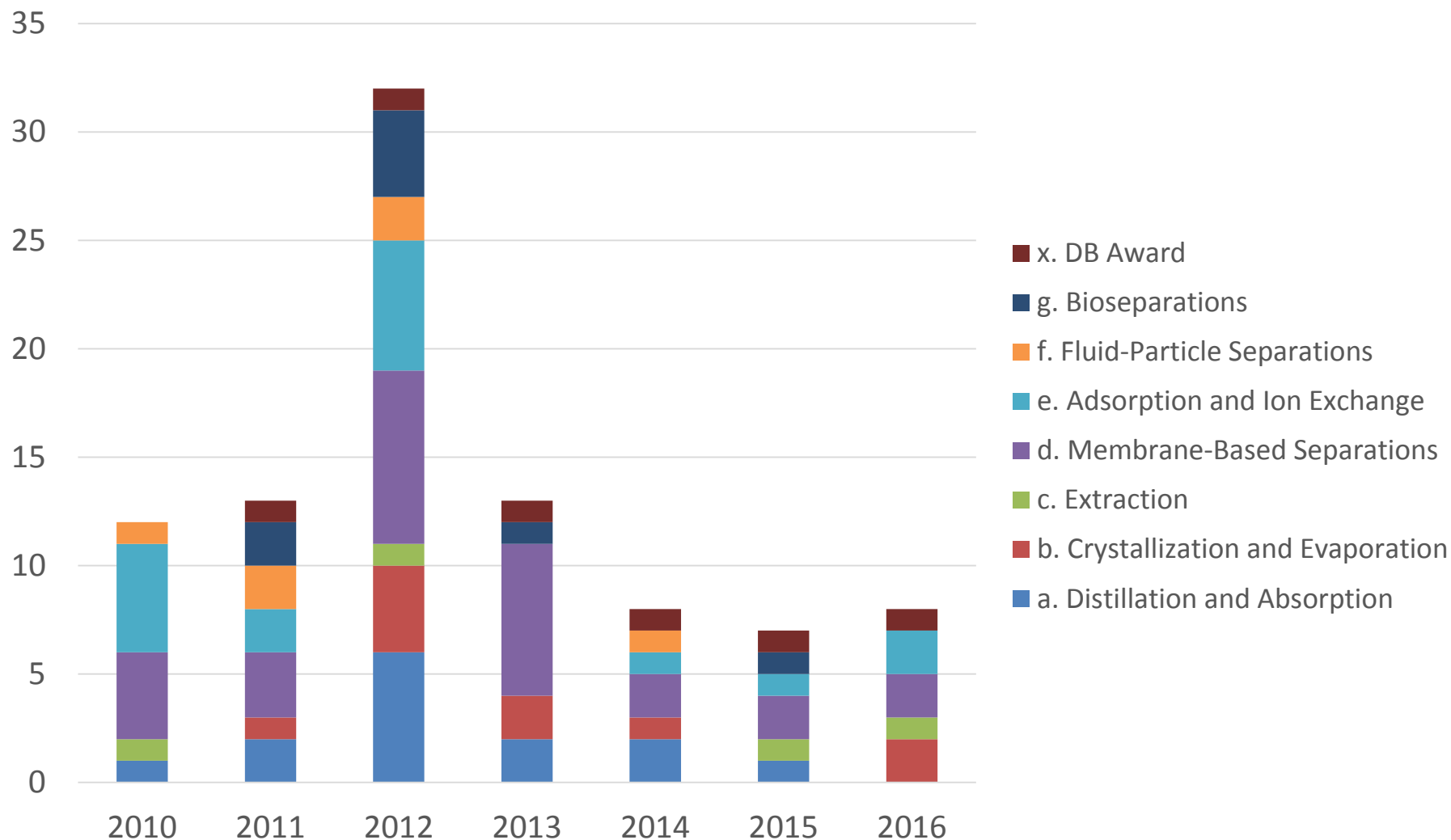
# GSRA by Universities



# GSRA by Universities

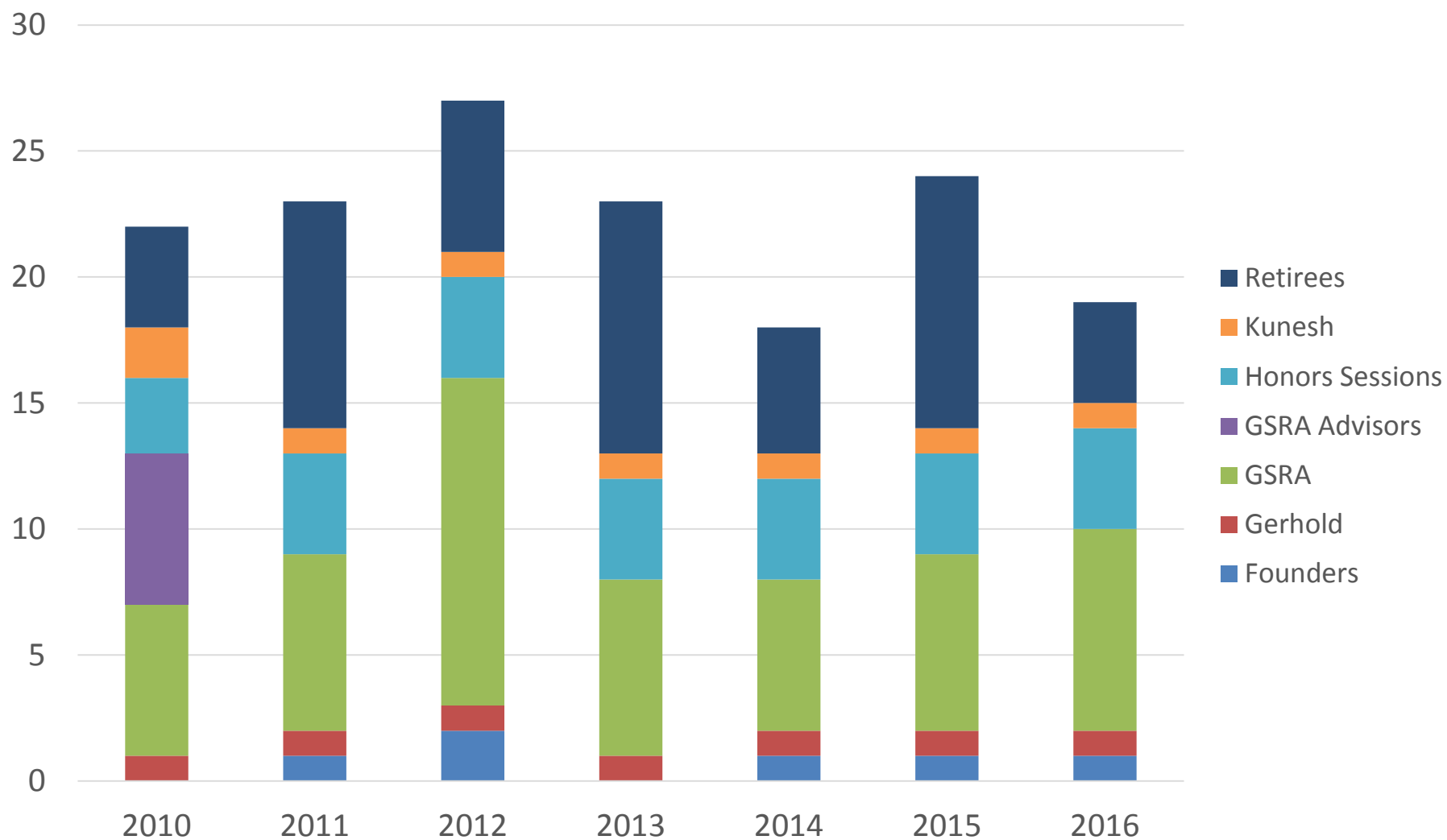


# Graduate Student Research Awards





# Plaques



# Awards Report – Misc. items

- Student Misconduct
  - Student found guilty contacted by email
  - Requested return of plaque and monetary award
  - No response
  - Name removed from web site
- Award Adjustment?
  - Bhattacharyya Award = \$300
  - GSRA = \$200
  - Founders Award = **\$1,000 ← was increased in 2016**
- Website wording for GSRA
  - Early in the year, the webpage stated a plaque will be provided to the advisor along with the student
  - This wording has been corrected to state only the student will be provided a plaque



# Area Reports

# Separations Division Area 2a

## Distillation & Absorption Update

D. R. Summers | November 2016



## **Spring 2016**

---

### **■ Houston Spring Meeting 2016**

- Oral Sessions = 10**
- Poster Sessions = 0**
- Special Sessions = 7 in the Distillation Symposium**
- Co-sponsored Sessions = 3, 1 with YP and 2 with F&PD**
- Honors Session = 1, Honoree was Charlie Colwell of ExxonMobil**

**Please note: One whole session was dedicated to Distillation Thermodynamics and presented by (the now late) Dr. Marco Satyro**

## **Fall 2016**

---

### **■ San Francisco Fall Meeting 2016**

- Oral Sessions = 2**
- Poster Sessions = 0**
- Special Sessions = 0**
- Co-sponsored Sessions = 0**
- Honors Session = 1, Honoree is Paul Steacy of UOP**

## **Spring 2017**

---

### **■ San Antonio Spring Meeting 2017**

- Oral Sessions = 9**
- Poster Sessions = 0**
- Special Sessions = 7 in the “Kister Distillation Symposium”**
- Co-sponsored Sessions = 2, 1 with YP and 1 with F&PD**
- Honors Session = 1, Honoree was Neil Yeaman**

# Fall 2017

---

## ■ Minneapolis Fall Meeting 2016

- Oral Sessions = 4
- Poster Sessions = 0
- Special Sessions = 0
- Co-sponsored Sessions = 0
- Honors Session = 1, Honoree maybe Marco Satyro or Tony Cai



## **Spring 2018**

---

### **■ Orlando Spring Meeting 2016**

- Oral Sessions = 7**
- Poster Sessions = 0**
- Special Sessions = 6 in the Distillation Symposium**
- Co-sponsored Sessions = 1 with YP**
- Honors Session = 1, Honoree TBD**

**Dan Summers is Chair until end of 2017**

**Vice Chair is Clint Aichele. Will be chair until end 2019**

**Andrew Sloley will follow after Clint.**

## Separations Division

### Area 2B – Crystallization and Evaporation



#### AIChE Fall 2016

Area Chair: Marina Tsianou, University at Buffalo

Area Vice Chair: Seth Huggins, Amgen Inc.

Sessions: 11 (7 sessions co-sponsored with 1A, 3A, 3C, 10B, 12A)

#### AIChE Fall 2017

Area Chair: Marina Tsianou, University at Buffalo

Area Vice Chair: Seth Huggins, Amgen Inc.

\* Area vice chair will take over as chair for 2018-2019 and elections for a new vice chair will occur at AIChE 2017 Fall planning meeting of Area 2B

Sessions: 10 (several sessions are co-sponsored)

## Area 2c: Extraction

- No report
- Area 2c needs a Vice-Chair

# Area 2d: Membrane-based separations

Succession plan for 2018

Vice-chair Haiqing Lin will take over for Jeff McCutcheon following the 2D business meeting at AIChE 2017. Vice-chair election to be held at business meeting in 2017.

Programming plans for 2017:

We were the primary sponsors for 23 sessions this year after originally planning for 21. We asked for 4 more sessions because our acceptance rate would be 67% on average (which included 100% acceptance rate for 3 honorary sessions).

I wish to increase the number of sessions to 25 so that we can keep the acceptance rate to between 70-75% while moving to all talks being 20 minutes (7 talks per session).



# Area 2d: Sessions and Submissions

	Submissions	# Accepted	% Accept
Honorary Session For Georges Belfort (3 sessions given)	21	21	100
Water Treatment and Desalination (initially 2 sessions)	37	16	43%
Gas Separations (initially 3 sessions)	52	24	46%
Surface Engineered Membranes	10	8	80%
Bioinspired Membranes	11	8	73%
Carbon based Nanostructured Membranes	10	8	80%
Charged Polymers for Membrane Based Water and Energy	9	8	89%
Fuel Cell Membrane	11	8	73%
Membrane Distillation and Membrane Contactors	11	8	73%
Membrane Formation	17	8	47%
Membrane Reactors	8	8	100%
Modeling and Simulation	16	8	50%
Membrane based organic solvent separations	10	8	80%
Membranes for forward and pressure retarded osmosis	9	8	89%
Self assembled soft materials for Membrane Applications	6	8	133%
High TDS Waters	7	7	100%
	<b>245</b>	<b>163</b>	<b>67%</b>

**1 session added for these sessions**

Contributed talk acceptance rate: (135/217), 62%

Contributed talk acceptance rate after new sessions:  
(151/217), 70%

Including invited sessions (179/245), 73%

AIChE Separations Division



# Area 2e: Adsorption & ion exchange

- 1) Area chair and Vice-chair for 2017: Matthias Thommes (Chair), Stefano Brandani (Vice-Chair)
- 2) Chair/Vice-chair for 2018: Stefano Brandani (Chair) , Vice-Chair from industry will be elected in the Area2e planning meeting in 2017 (Minneapolis)
- 3) Programming plans for 2017 Annual meeting (planned requests for oral sessions as primary sponsor and co-sponsor) :

15 oral sessions as primary sponsor.

1 poster session

Area 2e may consider to co-sponsor a session of another area (probably Thermodynamics), but this will be decided during the meeting)



# Area 2f - Fluid-Particle Separations

**Chair: Isaac Gamwo, U.S DOE-NETL**

**Vice Chair: Seyi Oduyungbo, Chevron**

- Houston (Spring 2016)
  - Number of Oral Sessions: attempted -2 – Actual 0
- San Francisco (Fall 2016)
  - Number of Oral Sessions: attempted 6 – actual 2
  - Topical attempted - 2;
    - Advances in Separation Technologies for Cleaning Up Oil Spills in Rivers and Oceans
    - Solids/Fluid Separation in Industrial Water and Wastewater Treatment
- San Antonio (Spring 2017)
  - Number of Oral Sessions: Attempted 2



# Area 2f - Fluid-Particle Separations

- Minneapolis (Fall 2017) and Pittsburgh (Fall 2018)
  - Number of Oral: 4
  - Topical Titles
    - Fluid Particle Separation Technologies for Critical Materials/ Rare Earth Metals Extraction and Production
    - Advances in Separation Technologies for Cleaning Up Oil Spills in Rivers and Oceans
    - Solids/Fluid Separation in Industrial Water and Wastewater Treatment
- Succession Plan
  - Current Chair's term expires in 12/2017
  - Suggestions for a successor are welcome





# Area 2g - Bioseparations

- **Fall 2016**

- Oral sessions: 4 originally scheduled, one cancelled
  - Advances In Bioseparations (Jessica Molek and Stephen Thiel)
  - Membranes for Bioseparations (Saurav Datta and Stephen Ritchie)
  - AIChE-SCEJ Joint Session: Bioseparations and Bionanotechnology (Giorgio Carta and Shuichi Yamamoto)
- Co-sponsored sessions: 5
  - Tribute to John Quinn: Scholar, Teacher and Mentor (John Anderson and Eduardo Glandt) – 15 (sponsor), 01C, 02D
  - Community-Based Water Treatment Innovations (Leslie M. Shor and Andi Rahardianto) – 09B (Sponsor), 04, 09G, 02, 23
  - Innovations in Biopharmaceutical Discovery, Development, and Manufacturing I (Kyle McElearney and Andréanne Bouchard) – 26 (Sponsor), 15B, 15C
  - Innovations in Biopharmaceutical Discovery, Development, and Manufacturing II (Yuguo Lei and Mo Jiang) – 26 (Sponsor), 15B, 15C
- Poster Session as Part of Separations Division (Tim Frank and Glenn Lipscomb)



# Area 2g - Bioseparations

- **Spring 2017**
  - No session planned to be sponsored by 02G
- **Fall 2017**
  - Number of Oral Sessions: 4
  - Number of Co-Sponsored Poster Sessions: 1
  - Number of Co-Sponsored Sessions: 5
  - Co-sponsors - 02C, 02D, 02E, 15B, 15C, 26
- **Spring 2018**
  - No session planned to be sponsored by 02G
- **Fall 2018**
  - Number of Oral Sessions: 4
  - Number of Co-Sponsored Poster Sessions: 1
  - Number of Co-Sponsored Sessions: 5
  - Co-sponsors - 02C, 02D, 02E, 15B, 15C, 26



# Area 2h – General Topics

- Josh Thompson will succeed Alice He as Vice Chair of Area 2h



# Summary of area succession plans

Area		2016	2017	2018
2a	Distillation & Absorption	Dan Summers Clint Aichele	Dan Summers Clint Aichele	Clint Aichele Andrew Sloley
2b	Crystallization & Evaporation	Mariana Tsianou Seth Huggins	Mariana Tsianou Seth Huggins	Seth Huggins TBD in 2017
2c	Extraction	George Goff	George Goff TBD ASAP	
2d	Membrane-Based Separations	Jeff McCutcheon Haiqing Lin	Jeff McCutcheon Haiqing Lin	Haiqing Lin TBD in 2017
2e	Adsorption & Ion Exchange	Matthias Thommes Stefano Brandani	Matthias Thommes Stefano Brandani	Stefano Brandani TBD in 2017
2f	Fluid Particle Separation	Isaac Gamwo Seyi Oduyungbo	Isaac Gamwo Seyi Oduyungbo	Seyi Oduyungbo TBD in 2017
2g	Bioseparations	Stephen Thiel Nick Merchant	Stephen Thiel Nick Merchant	Nick Merchant TBD in 2017
2h	General Topics & Other Methods	Steve Ritchie Alice He	Steve Ritchie Alice He	Alice He TBD in 2017



# Programming Plans

# Session programming plans/wishes – Oral sessions

Area		2016		2017	
		Spring	Fall	Spring	Fall
2	Separations Division	0	4 + 6*	0	3
2a	Distillation & Absorption	7 + 3*	2	7 + 2*	4
2b	Crystallization & Evaporation	0	<b>11</b>	0	10
2c	Extraction	0	4	0	4
2d	Membrane-Based Separations	0	<b>23</b> + 3*	0	25
2e	Adsorption & Ion Exchange	0	15 + 1*	0	15 + 1*
2f	Fluid Particle Separation	0	2	2	4
2g	Bioseparations	0	3 + 4*	0	3
2h	General Topics & Other	0	3 + 5*	0	4 + 5*
TOTALS		<b>7 + 3*</b>	<b>67 + 19*</b>	<b>9 + 2*</b>	<b>72 + 6*</b>
TARGET			<b>60</b>		<b>60</b>

\*co-sponsored (SepDiv is not the primary)

**Area 2b target was 6; Area 2d target was 21**



# Session programming plans – Area 2 sessions

## 2016 Annual Meeting – San Francisco, November 13-18

Plenary Session: Gerhold and Kunesh Awards on Separations

Altsep: Sustainable Separation Processes Roadmapping

Separation Process Efficiency

Rapid Fire Session: TED-SEP Separations Division

## 2017 Spring Meeting: San Antonio, March 26-30

Kister Distillation Symposium



# Future programming

**2017 Spring Meeting:** San Antonio, March 26-30

**2017 Annual Meeting:** Minneapolis, October 29-November 3

**2018 Spring Meeting:** Orlando, April 22-26

**2018 Annual Meeting:** Pittsburgh, October 28-November 2

**2019 Spring Meeting:** New Orleans, March 31-April 4

**2019 Annual Meeting:** Orlando, November 10-15





# Future programming

**2017 Annual Meeting:** Minneapolis, October 29-November 3

- Wednesday, November 30, 2016
  - New Topical Conference Submissions Due
  - Please send me any ideas for topicals
- Monday, December 19, 2016
  - Sessions & Session Chairs Due
- Monday, **January 16, 2017**
  - Call for Abstracts Opens
- Monday, **April 17, 2017**
  - Call for Abstracts Closes



# Dinner Planning Update San Francisco

Roger Whitley

# Background

- Traditional Venue, Empress of China, closed.
- Discussed options with leadership and suggested working with AIChE to arrange the dinner, which would be at a conference hotel. Suggestion was accepted
- Frequent communication with Todd Caporizzo, AIChE to organize. Venue provided Parc 55
- Todd provided menu options & prices Sep 14, 2016.
  - 3 course with coffee, teas.

# Menu

- Selected 3 entrée options and lowest cost bar

SALAD Fall Chopped Salad, mixed baby lettuce, radicchio, fingerling potatoes, cucumbers, toybox tomatoes, chives, champagne vinaigrette (VN, GF)

DINNER ENTREES (PICK ONE):

- 1.Grilled Salmon, soft polenta, baby carrots, broccolini, red pepper sauce
- 2.Grilled Chicken Breast, artichoke bacon relish, sautéed organic spinach, parsnip purée (GF)
- 3.Vegetarian Lasagna, butternut squash, oven-dried tomatoes, goat and mozzarella cheese, sautéed broccolini, basil pesto (V)

DESSERT Bittersweet Chocolate & Cassis Torte, cassis gelée, flourless cake, cassis mousse, chocolate mirror glaze

(VN: Vegan GF: No Added Gluten V: Vegetarian)

# Attendance & Cost

- Estimated cost per person, with bar drink and tips \$130-140
- Hotel required first estimate Oct 24, 2016
- Final estimate required Nov 7, 2016 and must be within 10% of first estimate on total attendance and entrees.
- We have 9 complimentary dinners (Dan Summers bought his and his wife's) and my final estimate of 47 paid attendee meals
- I capped the ticket sales at 47 and we currently have 42 paid at of Nov 9.
- Net costs to SEP:  $9 * \$140 + 47 * (\$140 - \$60) = \$5,020$  if we sell out

# Thoughts on the Process

- Todd was very responsive and communicative
- Very rigid timing constraints by the hotel venue
- Let's see if they provide good food and service
- Expensive
  - But so is San Francisco. How much was Empress of China for 3 course + drink?

# Subsidizing meeting dinner cost of meals

We have been subsidizing the awards dinner to make it more affordable and to encourage attendance.

- In Atlanta (2014), subsidy was \$2,700 (member cost = \$60)
- In SLC (2015), subsidy was \$120 (member cost = \$60)
- In SF (2016), subsidy was approved in April 2016 meeting to keep member cost of meal at \$60
  - Estimated subsidy:  $\{(9 \times \$140) + [(\$140 - 60) \times 47]\} = \{\$1,260 \text{ (for award winners)} + \$3,760 \text{ (for paying diners)}\} = \sim \$5,020$

