SEPARATIONS DIVISION

American Institute of Chemical Engineers

2022

Alice He	Seth Huggins	Isaac K. Gamwo	Atanas Serbezov	Tarun Poddar	Anand Vennavelli	
Chair	First Vice Chair	Second Vice Chair	Secretary Treasurer		Past Chair	
Chevron	Amgen	NETL/DOE	Dept. Chem. Eng.		Koch-Glitsch	
			Rose-Hulman Inst. Technol.		Research and Development	
(510) 242-5628	(805) 447-3710	(805) 447-3710	(812) 877-8097		(316) 250-8270	
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Josh Thompson General Topics & Other Methods (2h) thompsonja@ornl.gov

CTOC LIAISON

Paul Collins collins_paul_compton@lilly.com

MINUTES

Separations Division Online Planning Meeting

Wednesday, May 11, 2021 – 4:00pm – 5:00pm (EST)

Attendance:

Alice He **Seth Huggins** Isaac Gamwo Atanas Serbezov Tarun Poddar Marina Tsianou Steve Thiel Caryn Heldt Haiging Lin **Dan Summers** Paul Scovazzo **Paul Collins** Handan Tezel **Heather Chenette** Christine Duval Jenifer Gomez Tony Cai CJ Kurt Evan Hatakeyama Seyi Odueyungbo Paul Bryan

Bill Phillip Christina Boi Stefano Brandani Josh Thompson

Approval of Minutes from March 11, 2022 (Atanas Serbezov)

A motion to approve the minutes as distributed by e-mail passed by acclamation.

Jeff McCutcheon

Gerhold Award Process Review (Paul Bryan)

See slides in the Appendix for details.

Paul is stepping down at the end of 2022 as chair of the Gerhold award committee. Paul provided an overview of the Gerhold award history and administration process.

<u>Action Item:</u> The Executive Committee of the Division needs to identify and appoint a successor to Paul.

Education and Outreach Award Update (All)

One application has been submitted based on the current description of the award that focuses on the development of educational / outreach materials.

The new award description will be introduced for the 2023 award year. Jeff McCutcheon has sent the proposed description to the AIChE Education Division for comments but has not heard back. Steve Thiel offered to facilitate the communication since he is active in the Education Division. It is desirable to have a representative of the Education Division on the award administration committee.

<u>Action Item:</u> Have the new award description in place and officially on the AIChE website prior to the 2022 Annual meeting. Advertise the award at the meeting.

Awards Update (Dan Summers and Haiqing Lin)

See slides in the Appendix for details.

This year the number of Graduate Student Research Award (GSRA) nominations is very small. In the Membrane area there are only 2 nominations for 3 available awards; it was decided to give out one GSRA award (\$200) and one DB award (\$300).

Treasurer's Update (Tarun Poddar)

See slides in the Appendix for details.

Membership Initiatives (Evan Hatakeyama)

Evan has established contact with AIChE membership services.

There is a push from AIChE to nominate Fellows.

Action Item: Evan will find out the number of AIChE Fellows in the Division.

2022 AIChE Annual Meeting Programming Update (Alice He)

See slides in the Appendix for details.

CTOC Update (Paul Collins)

See slides in the Appendix for details.

Darlene Schuster is the new AIChE CEO and Executive Director.

AIChE encourages Divisions and Forums to update their bylaws every 5 years. The Separations Division completed an update in 2017.

APPENDIX



Distillation & Absorption

Crystallization & Evaporation

Extraction

Membrane-Based Separations

Adsorption and Ion Exchange
Fluid-Particle Separations
BioSeparations
General Topics



2022 Virtual Planning Meeting

May 11,

1:00 - 2:00 PM PST

Gerhold Award – Past & Present

Paul F. Bryan

Somewhere in Cyberspace May 11, 2022

Gerhold Award – 1

History:

- Awards Given Annually 1992 Present
- 30 Awards given to date (2021)
- 17 Academics, 9 Industry, 4 Both
- Award Committee Chairs:
 - G.E. Keller (et al.?) 1992 2002
 - P.F. Bryan 2003 2022
 - ???? 2023 ???

Process:

- Nominations due May 1 each year
- 6-7 Review Panel Members = Chair / 1VC / 2VC / IPV + Past Winners + Non-Voting Committee Chair (+ adjustments as needed for conflicts)
- Votes counted, Winner announced, Winner speaks at Sep. Div. Dinner

Gerhold Award – 2

Future:

- Chair & Process:
 - PFB moving on; new Chair needed
 - Selection of New Chair
 - Defined Duration of Term, if any
 - Changes in Process, if any

Ongoing Issues:

- Non-Academic Nominations limited for multiple reasons
- Many candidates weak or totally lacking in service to the Division (Criterion #3)
- "Evergreen" Nominations Some are turning or have turned brown
- Occasional: Problems forming the Review Panel (conflicted / apathetic / unresponsive)
- Occasional: Tie-breaking (2 re-votes / tie-breaks in 20 years)
- Occasional: Pressures from Nominees or Nominators
 - Why Didn't I / My Nominee Win?
 - Where did I / My Nominee finish in the voting?
 - You must accept this late submission!

Gerhold Award – 3

Turnover:

- I will handle the process this year, help with turnover next year
- New Chair can follow along if named now
- Process is now all-electronic and fairly simple
- Ranking spreadsheet open for revision by New Chair and/or Division
- Extensive Record
 - 2000 2002/3 (paper; PFB was a Review Panel Member)
 - 2003 Present (electronic; PFB was Chair; missing 2016 Ranking for some reason)

2022 – Non-Academic Year:

• 4 Nominees:



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Awards Team Update

Dan Summers and Haiqing Lin



Adsorption and Ion Exchange Fluid-Particle Separations BioSeparations General Topics



Summary of Awards – May 2022

Accomplished

- Award Responsibilities for 2022 Distributed
- Website looks much better
- Honoree for Area 2a given their plaque at the Spring meeting in San Antonio. CV and Photo given to Marina for the Newsletter
- Contacted Fluor for potential GSRA Awards contributions.





Adsorption and Ion Exchange Fluid-Particle Separations BioSeparations General Topics



Summary of Awards – May 2022

Awards Submitted

- 2 New Founders Awards, 2 New Kunesh Awards, 1 New Innovation Award and 1 Education and Outreach Award submitted
- At least one new Gerhold Award nomination submitted that we know of
- Only 8 GSRA nominations submitted
 - 3 in Distillation (Note: There was a 4th, but the nominee was an undergraduate doing graduate work)
 - 2 in Membranes
 - 2 in Adsorption and Ion Exchange
 - 1 in Bioseparations
- We were very low on GSRA Nominations. Is the award amount too low?



Adsorption and Ion Exchange Fluid-Particle Separations BioSeparations General Topics



Summary of Awards – May 2022

Completed to date

- All GSRA and New major award submissions acknowledged
- Award committee chairs notified regarding new nomination submissions
- Area chairs given their GSRA nominations for review
- Checked with National AIChE who has (and has not) paid their dues to be eligible for awards.



Adsorption and Ion Exchange Fluid-Particle Separations BioSeparations General Topics



Summary of Awards – May 2022

Membranes Question

- There are two Awards plus a special DB Award each year. Since there are only two nominations in 2022, do we;
 - •A.) Give out one \$200 dollar Award and the DB Award at \$300

Or

B.) Give out both \$200 awards and one of them gets an additional \$300 award?



Adsorption and Ion Exchange Fluid-Particle Separations BioSeparations General Topics



Summary of Awards – May 2022

Minor Issues

- 1. The GSRA review in Area 2a has a conflict of interest with the chair representing one of the nominees. The vice chair will take over the review committee.
- 2. One of the GSRA nominators was initially "flagged" as not paid up on their AIChE dues. The issue has been resolved. National only checked for Bruce Eldridge not his official name "R. Bruce Eldridge."
- 3. We had two nominations come in that were several days late. One was a Kunesh Award nominee and the other was a GSRA (Area 2b) nominee. We informed the nominators that their submissions will be saved for next year. This is consistent with past practice.



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Financial Summary and Updates

Tarun Poddar

May 2022



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Financial Overview for 2021

Assets on 12/31/2021	82,552.02
Assets on 12/31/2022	90,301.47
Net Change	7,749.45

Total receipts	23,080.66
Total disbursements	15,331.21
Net earning	7,749.45



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Receipts & Disbursements Details for 2021

Receipts

Dues Payment	6,435
Donations from corporations	6,400.00
Investment income	7,515.66
Dinner ticket	2730
Total Receipts	23,080.66

Disbursements

Awards	6,700.00
Plaques and related	1,943.50
Award dinner and related	5,012.90
Annual meeting audio visual	219.81
Amex card membership fee	55.00
Total Disbursements	15,331.21



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Award Dinner Details for 2021

Ticket sale: 2,730 (39 @ 65/ticket)

Total award dinner related expenses: 5,012.90

Division's expense: 2,282.90

Award Related Expenses

Dinner expenses for 51 meals + event fee (20%) + gratuity(15%) : 4,697.94 Award related printing and shipping: 314.96



Distillation & Absorption

Crystallization & Evaporation

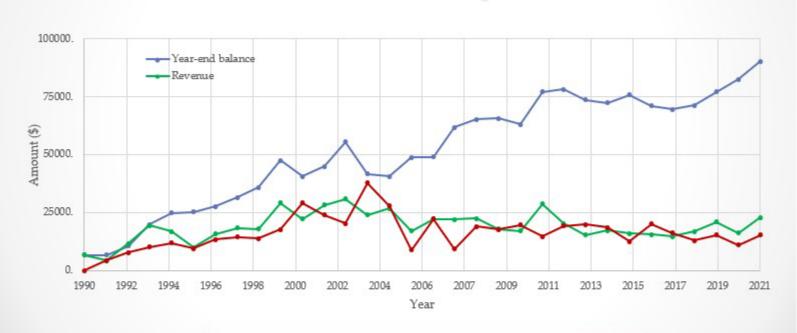
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- Historical high yearend balance in 2021
- Previous highest yearend balance was in 2020



Distillation & Absorption

Crystallization & Evaporation

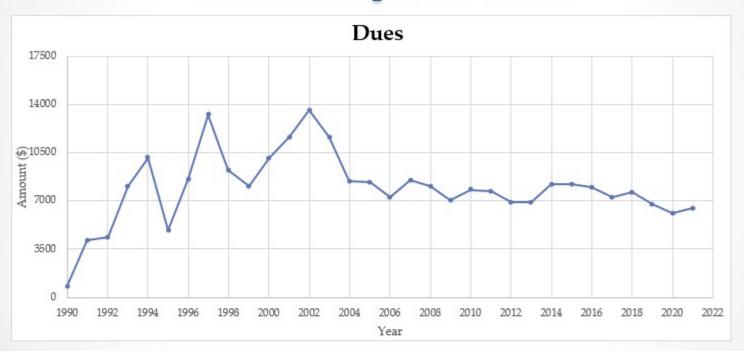
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Membership Dues Trend



- Change in trend after lowest membership dues collected in the last 24 years
- 429 membership
- Record dues collected in 2002, \$13560 (904 memberships at the rate of \$15/member)



Distillation & Absorption

Crystallization & Evaporation

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Adsorption and Ion Exchange

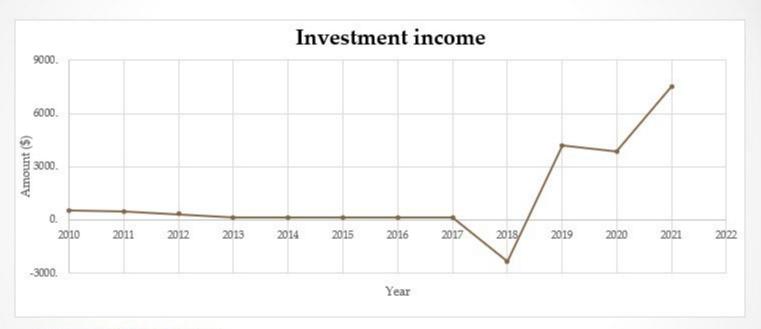
Fluid-Particle Separations

BioSeparations

General Topics



Investment Income Trend



Investment Distribution

Year	% in CD	% in AIChE portfolio
Prior 2018	100	0
2018	25	75
2019	75	25
2020	50	50
2021	25	75

Record investment income



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2022 Annual Meeting Programming Update

Alice He



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	5102022	2 a	2b	2 c	2d	2e	2f	2 g	2h
		Distillation	Crystalization		Membrane-	Adsorption & lon Exchange	Fluid-Particle Separations	Bioseparations	General Topics
Areas	Division	and	&	Extraction	based				& Other
		Absorption	Evaporations		Separations				Methods
							Seyi		
	Alice He &		Thomas Vetter		William Phillip	F. Handan	Odueyungbo &	Heather	Josh
	Anand	Tony Cai &	& Christopher	David Cantu&	& Christine	Tezel & Daniel	Jenifer Gomez-	Chenette &	Thompson &
Area Chirs	Venavelli	Greg Cantley	Burcham	George Goff	Duval	Siderius	Pastora	Cristianna Boi	Steve Ritchie
Current									
Sessions	2 /1 n)	1	9	2	17 (1p)	10 (1n)	,	0 (1n)	1 /1n\
confirmed in	3 (1p)		9	2	17 (1p)	19 (1p)	2	8 (1p)	1 (1p)
the Confex									

A total of 61 sessions including 4 postersessions

	0310 2022	2a	2b	2c	2d	2e	2f	2g	2h
Aroos		Distillation	Crystalization		Membrane-	Adametica 9	Fluid-Particle Separations	Bioseparations	General Topics
Areas	Division	and	&	Extraction	based	Adsorption & Ion Exchange			& Other
		Absorption	Evaporations		Separations	lonexchange			Methods
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	Alice He &		Thomas Vetter		William Phillip	F. Handan	Odueyungbo &	Heather	Josh
	Anand	Tony Cai &	& Christopher	David Cantu &	& Christine	Tezel & Daniel	Jenifer Gomez-	Chenette &	Thompson &
Area Chirs	Venavelli	Greg Cantley	Burcham	George Goff	Duval	Siderius	Pastora	Cristianna Boi	Steve Ritchie
Current									
Sessions	2 (1p)	1	9	2	16 (1p)	12 (1n)	,	0 (1n)	1 /1n\
confirmed in	2 (1p)	1	9	2	16 (1p)	13 (1p)	2	8 (1p)	1 (1p)
the Confex									



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Important Timeline for 2022 Annual Meeting Program Alice He



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7. Important Timeline for 2022 Annual Meeting Program

Monday, February 28, 2022	Session Chairs finalized in Confex	
Monday, April 11, 2022	Call for Abstracts Closes	
Monday, May 16, 2022	Abstract Review Completed, Send in	
	Scheduling Requests	
Monday, June 13, 2022	Draft Program Available for Review	
Monday, June 20, 2022	Draft Program Changes due back from	
	Chairs	
Thursday, June 30, 2022	All Invited Session Information Finalized	
	and in Confex	
Sunday, July 31, 2022	Division/Forum Award Winner	
	Information Due	



Search Process Overview April 9, 2022

Christine Grant, 2022 AIChE President; Chair of Search Committee Deborah Grubbe, 2021 AIChE President; Vice Chair of Search Committee

Committee Members

AIChE
The Global Home of Chemical Engineers

- Phil Westmoreland: CBE Dept. NC State University
- Dale Keairns: Deloitte Consulting LLP
- Kim Ogden: ChE Dept. Head, University of Arizona
- Otis Shelton: Retired-Praxair
- Henry T. Kohlbrand: Principal of HT Consulting
- Chair: Christine Grant: AIChE President (NC State University)
- Vice-Chair: Deb Grubbe: AIChE Past President (President of Operations and Safety Solutions, LLC.)















Search Activity Timeline



Notification & Organization Processes (March - June, 2021)

Early Stage Planning & Board Execution (July – Sept)

Early Search Firm (H&S) Activities (Oct – Nov)

Detailed Search Activities & Interviews (Dec – March, 2022)

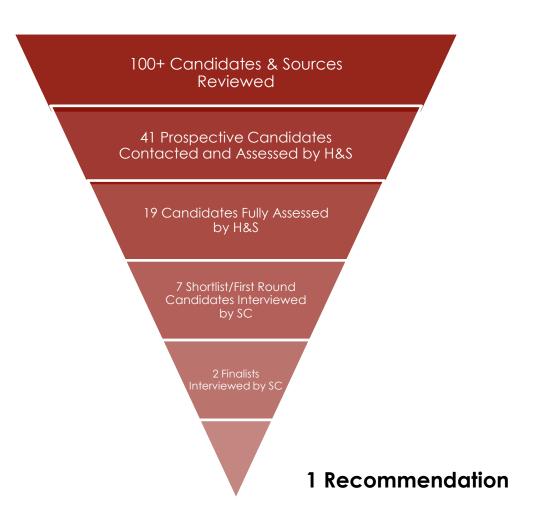
Transition & Forward Activities (April – Nov)

Search Summary



Search Statistics

- H&S entered the market in November 2021. The Search Committee met first round candidates in early February 2022 by video conference and second round candidates in early March 2022 in person in Heidrick & Struggles offices in New York City.
- H&S reviewed over 100 potential candidates and contacted and assessed 41 of these individuals according to criteria agreed upon with Search Committee.
- H&S fully assessed 19 candidates from the corporate, public/not-for-profit/NGO, and academia sectors.
- Of the 19 candidates vetted by H&S, 6 (31.6%) were diverse (2 ethnically diverse, 4 gender diverse).
- 7 Shortlist candidates were invited to interview with the Search Committee (Diversity on following page)
- The Search Committee narrowed this down to 3 Finalists, but one withdrew from the process.
- 2 Finalists were interviewed in person by the Search Committee and the Committee reached a unanimous consensus on one candidate to recommend to the Board.







The Board of Directors of AIChE has appointed Darlene S. Schuster as the chemical engineering organization's new CEO and Executive Director, effective April 25, 2022.



CTOC – Division & Forum Funds, Earnings Options & Information

April 9, 2022

D&F Earnings on Fund Balance AlChe The Global Home of Chemical Engineers



Earnings on Fund Balance

For simplicity, the division or forum will elect prior to December 31 each year whether to accept the results of AIChE's investment portfolio or the one-year CD rate as published by Citibank for the following year's earnings. The division or forum may divide their funds between these two alternatives at its own discretion. The decisions can be changed annually. (Please note that returns on investments can be positive or negative, so there is a potential for the fund balance to decrease.) For those divisions or forums that have elected to use the oneyear CD rate, earnings on the fund balance will be reflected in the financial statements in March, June, September, and December. For divisions or forums using the rate of return from AIChE's investment portfolio, a one-time adjustment will be reflected in the financial statements at the end of each year. Appreciation or depreciation will be based on the average of the monthly fund balances.

Investment Income - Division & AIChE



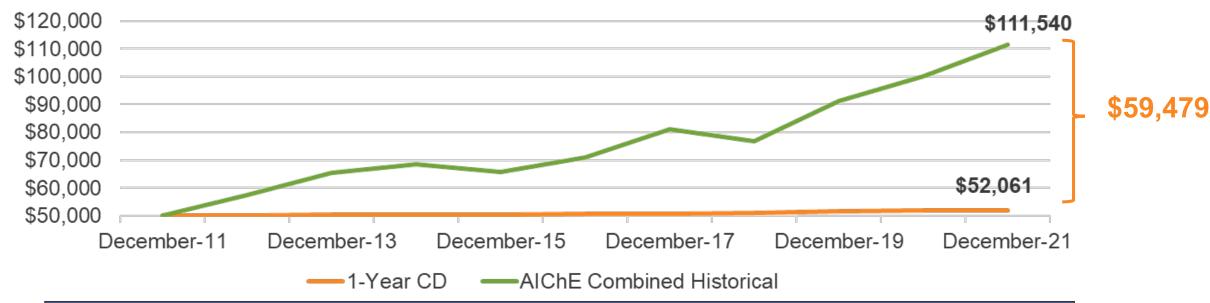
Forums

- 13 of 23 D&F take the interest rate from a CD; 3 take AIChE rate
- 2020:
 - CD rate = 0.6%; AIChE earnings = 9.86%
 - \$39K of D&F interest would have been \$104K in 2020
- In 2021: AIChE "permanent" fund delivered an 11.8% return. CD rate remained at 0.6%.
- Last 10 years:
 - 5 years of double-digit returns
 - 2 years of negative returns
 - Return over the period almost 8.7%

Historical Growth Comparison A



10-Year Growth of \$50 Thousand Dollars



Growth of \$50 Thousand Dollars						
Index/Composite	Annualized Total Return	Value of \$50 Thousand				
1-Year CD	0.40%	\$52,061				
AIChE Combined Historical	8.35%	\$111,540				

Did you know that some Divisions have 10 Fellow Members or Less?

Who can you nominate for Fellow from your Division this year?

Check the Fellows Page for Video Directions and the Nomination Packet

Membership Committee Led by Kim Ogden, AIChE Past President

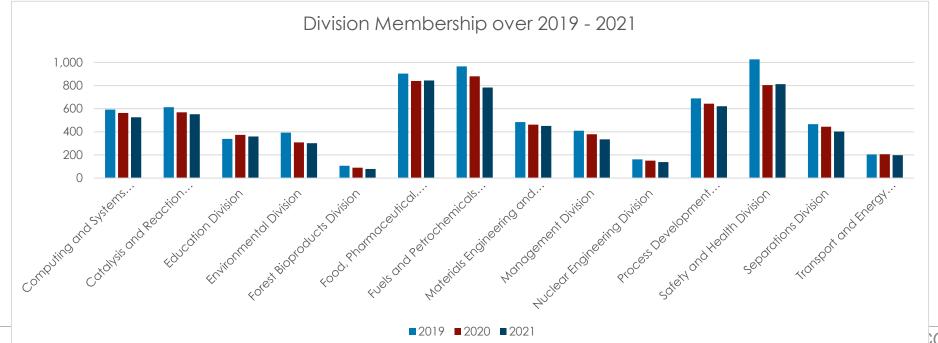


- Main Focus: member value and ensuring we're communicating AIChE effectively
- Goal for 2021:
 - Completed brainstorming benefits, ideas for engagement & communications to 3 targeted audiences
 - Recovery from Covid ex: near retirees with the great resignation
- Goal for 2022:
 - Implement marketing & communications plans for the following:
 - Near Retirees
 - Student Members transitioning to Young Professional members
 - Individually Sponsored Corporate Memberships
 - 2. Re-evaluate membership models for 2024 implementation while research and gather data from the other society dues shifts (from Blue Ribbon Task Force from 2019)
 - 3. Research and further develop our list of out of the box ideas

Community Counts



- Steady State on division membership numbers with incremental increases for 2022 thus far
- Achieved increased technical content and engagement in division webinars. Along with success in opting in more members for email
- Goal for 2022:
 - Continuing to provide enhanced customer focus and curated technical content while increasing communications and membership count



D&F Bylaws Best Practices Task Force 2022 Goals

Early 2022 Goals

- Submit the revised Division Model Bylaws, Forum Bylaws Template, and D&F Bylaws: Revision Procedures and Review Rubrics documents to CTOC for final approval
 - > Revise the Forum Bylaws Template based on the revisions made to the Division Bylaws Template
 - > Include IDEAL checklist elements in documents
 - > Add a one-page how-to revise bylaws document (e.g., Gantt chart/flow chart) with steps/timeline/contact info.
- Roll out the new documents to CDFO and encourage their use
 - > Present new documents at CDFO meeting (emphasize that they do not need to immediately revise their bylaws)
 - > Post on CDFO website and CTOC document storage
- Create a system and process to initiate and track D&F Bylaws reviews on 5-year cycles
 - > Reach out to Division & Forum officers to let them know that we are making a schedule
 - > Liaisons: Send most recent bylaws and date of last update for each Division & Forum

Late 2022 Goals (Stretch Goals)

- Update relevant sections of the *D&F Officers Resource Guide* and CDFO website
 - > Include "Guidance on Awards" section
 - > NOTE: D&F Officers Resource Guide would probably benefit from a comprehensive review / revision
- Review / revise the CTOC Bylaw