DBIO Executive Committee Annual Meeting
March 15, 2022
Mariott Marquis Hotel, Dance Room Room 8 pm

Zoom: Join Zoom Meeting
https://uchicago.zoom.us/j/99319057686?pwd=a2Jjc1Npa294a0dENDBvNFFmVWxjdz09

Meeting ID: 993 1905 7686
Passcode: 846426

Requested attendance:

Chair: Margaret Gardel

Chair-Elect: Margaret Cheung

Vice Chair: Josh Shaevitz

Vice Chair-Elect: Ajay Gopinathan

Past Chair: Philip Nelson

Councilor: Daniel Fisher

Interim Secretary/Treasurer: Orit Peleg

Secretary/Treasurer-Elect: Andrew Mugler

Member-at-Large: Meredith Betterton

Member-at-Large: Moumita Das

Member-at-Large: Rana Ashkar

Member-at-Large: Nancy Forde

Member-at-Large: Taviare Hawkins

Member-at-Large-Elect: Suliana Manley

Member-at-Large-Elect: Armita Nourmohammad

Early Career Member-Elect: Sarah Marzen

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Outgoing/New members of the Exec Committee

Welcome to the new members of the Exec Committee!

Member-at-Large-Elect: Suliana Manley;

Member-at-Large-Elect: Armita Nourmohammad;

Early Career Member-Elect: Sarah Marzen ;

Secretary/Treasurer-Elect: Andrew Mugler;

A great thank you to the outgoing members!

Member-at-Large: Meredith Betterton

Member-at-Large: Moumita Das

Member-at-Large: Srividya Iyer-Biswas

Past Chair: Philip Nelson

Opening Remarks
By Margaret Gardel

Thank you all for the time you have spent on your service to the Division of Biological Physics this past year. I was especially impressed by the enthusiasm to improve upon our current activities and expand our Unit's horizons to start new activities. This past year we ratified new bylaws, elected our first Early Career Member, awarded the first DBIO Early Career Award and explored new opportunities for Community Engagement. In addition, the Program Committee had significant changes in how to organize March Meeting program. A significant challenge I, and others, have seen on the ExComm is continuity from year-to-year in Operating Procedures. Changes to the bylaws should help improve this continuity for our standing committees and continued efforts from all ExComm members to assist each other with this institutional memory (including where changes are needed) is essential. Thanks again!

Program Committee

Margaret Cheung (Chair), Nancy Forde, Serena Bradde, Josh Shaevitz, Margaret Gardel, Moumita Das, Taras Pogorelov, Omar Saleh

Executive Summary:
The APS has decided early that the MM 22 would be in a hybrid format. It created logistically surmountable challenges that required coordination with the APS. DBIO decided to opt in APS' "Invited Nomination Systems" in early May. The APS logistics team has provided a table of roll-out deadlines that alleviated the stress to complete the selection of focus topics and to secure invited speakers before summer.

These roll-out deadlines allow broader participation of unit members to create sorting categories by building the scientific program around the focus topics before summer. The program committee and co-organizers nominated and selected the invited speakers for these focus topics in following weeks until mid-summer.

The Program Committee partnered with 65+ focus session co-organizers who shared the heavy workload of sorting abstracts and identifying session chairs in Phase I sorting. In Phase II sorting, 8 Lead sorters compacted the scientific program by consolidating incomplete sessions. The "Power to the Players" partnership provided co-organizers with more autonomy in building their own focus sessions. The Program Chair/Committee was able to spend more time on strategic planning and coordinating. The outcome has been overwhelmingly positive. DBIO experienced a significant growth in the program size and the breadth of focus topics.

The hybrid (in-person/virtual) format opened new opportunities to grow the scientific program. The DBIO has 5 concurrent sessions/conference rooms without sharing with other units. With more options, we were able to honor special requests from speakers/organizers who wished to attend the meetings only in certain days.

About the hybrid format, logistically only the invited sessions provide synchronous live-streaming services, while others sessions provide asynchronized on-demand videos for remote participants. The logistics relie on in-person session chairs who manually switch presentations in the hybrid format. The DBIO is still adapting to meet the logistic challenges as the program rolls out. Fingers crossed.

- All data for this March meeting is found on page XX:
    - # Sessions = 71
    - # Abstracts (primarily sponsored) = 879
    - Total # Invited Talks = 101
        - 41% women, 38% POC
- We didn't waive any fees for invited speakers. And we will discuss better policies to fund members with limited means for travel for MM23.
- I have overhauled our Operating Procedures.

Recommendations for Next Year:

1. APS Nomination System has attracted new comers to co-organize focus sessions. They saw less “gate-keeping” of focus topics by the Program Committee.
2. Allocate the invited sessions more equitably among the stake holders. They organically fall into 5 major subgroups: Molecular-subcellular Biophysics, Cellular Biophysics, Population Biophysics, Neural Biophysics.
3. Communicate what “axes of diversity” we’ll be focusing on when considering speakers – I highly recommend these categories: women/gender minority, historically under-represented groups, POC, international (current institution), early career.
4. Set up travel funds for at-risk DBIO members at all career stages.
5. The program committee included a PRE biophysics editor Dr Serena Bradde who volunteered her time to build a diverse program. MC has met with other Physics Review biophysics editors who wished to volunteer in MM23, and established a more long term partnership with DBIO.

Data:

YEAR	# ORAL ABSTRACTS
2016	427
2017	
2018	
2019	647
2020	653
2021	708
2022	879

Table 1: Number of contributed and invited Oral Abstracts for MM.

Nonequilibrium statistical physics models of the origins of life.	Ken Dill	Molecular-subcellular Biophysics
Molecular Machines	David Sivak	Molecular-subcellular Biophysics
Sensing chemical spaces	Andreas Mayer	Cellular Biophysics
Rheology of Biological Tissue	M. Cristina Marchetti	Cellular Biophysics
Optimal trade-offs determining quantitative biological parameters	Sahand Rahi	Population Biophysics
Learning dynamical models across physical systems"	Joshua Shaevitz	Neural Biophysics
Topological invariants in biology and chemistry	Evelyn Tang	Neural Biophysics
The Delbruck Prize Session	Terry Hwa; Margaret Cheung	Population Biophysics

Table 2: Invited Sessions at MM 2022

	# Invited Talks	% women	%POC
Focus Session	61	41 % (25)	39% (24)
Invited Sessions	40	40 % (16)	35% (14)
Total Sessions	101	41%(41)	38%(38)

Table 3: # of Invited Talks

Molecular Biophysics-Subcellular Biophysics		
P Dynamics I	Physics of Proteins Ia: Structure & Dynamics of Proteins	FOCUS
P Dynamics II	Physics of Proteins Ib: Structure & Dynamics of Proteins	FOCUS
Protein disorder folding	Physics of proteins II: protein folding and intrinsically disordered proteins	Focus
Prot. Evolution & Interactions	Physics of Proteins III: Evolution and Function of Molecular Interactions	Focus
Machines I	Molecular Machines	Focus
Machines II	Molecular Machines	Focus
Droplets I	Biomolecular Phase Separation	Focus
Droplets II	Biomolecular Phase Separation	Focus
SubCellular Structures	Cellular Structures: Droplets and Assemblies	Contributed
ProteinAssembly I	Emergent Biomolecular Assembly I: Regulatory Complexes	Focus
Cytoskeleton I	Physics of Cytoskeleton I	Focus
Cytoskeleton II	Physics of Cytoskeleton II	Focus
GenomeOrganization I	Physics of Genome Organization: Phase Separation	Focus
GenomeOrganization II	Physics of Genome Organization: From DNA to Chromatin	Focus
BioNetwork/Omics	Hierarchical Models for Omics Data	Focus
ThermoRxnSelection I	Non-equilibrium Thermodynamics: From Chemical Reaction Networks to Natural Selection	Focus
ThermoRxnSelection II	Non-equilibrium Thermodynamics: From Chemical Reaction Networks to Natural Selection	Focus

Active Bio Fluids	Active Biological Fluids	Focus
Biomembranes I	The Physics of Cell Membranes: From Simplified Models to Complex Functionality	Focus
Biomembranes II	The Physics of Cell Membranes: From Simplified Models to Complex Functionality	Focus
Transport I	Motor-driven Transport and Self-Organization Across Scales	Focus
Transport II	Intracellular Transport	Focus
Instrumentation	Instrumentation	Focus
Celllular Biophysics		
Cell-medium mechanobiology I	Mechanobiology of Cell-Medium Interactions I	Focus
Cell-medium mechanobiology II	Mechanobiology of Cell-Medium Interactions II	Focus
Cells Tissues 1	Mechanics of Cells and Tissues: The Role of Heterogeneity II	Focus
Cells Tissues 2	Mechanics of Cells and Tissues: The Role of Heterogeneity II	Focus
Cell Fate I	Physics of Cell Fate Transitions I	Focus
Cell Fate II	Physics of Cell Fate Transitions II	Focus
ActiveBio I	Biological Active Matter	Focus
ActiveBio II	Biological Active Matter	Focus
ActiveBio III	Biological Active Matter	Contributed
Morphogenesis I	Morphogenesis I	Focus
Morphogenesis II	Morphogenesis II	Contributed
COVID I	Physics of COVID-19 and pandemics	FOCUS
COVID II	Physics of COVID-19 and pandemics	FOCUS
Evol Phase Trans	Phase Transitions in Evolutionary Dynamics	Focus
Synthetic Bio I	Synthetic Biology I	Focus
Synthetic Bio II	Synthetic Biology II	Focus
Collective I	Collective Behaviors in Biology	Focus
Collective II	Collective Behaviors in Biology	Contributed
Population Biophysics		
Biofilm I	Physics of Bacterial Communities: Structure and Mechanics	Focus
Biofilm II	Physics of Bacterial Communities: Interaction and Dynamcs I	Focus
Biofilm III	Physics of Bacterial Communities: Interaction and Dynamcs II	Focus

BiomaterialsNano I	Biomaterials and Nanotechnology I	Focus
BiomaterialsNano II	Biomaterials and Nanotechnology II	Focus
ActiveMicrobEcol	Statistical Mechanics of Active Matter and Microbial Ecology	Focus
Eco-Evo I	Ecological and Evolutionary Dynamics I - virus	Focus
Eco-Evo II	Ecological and Evolutionary Dynamics II -ecological dynamics	Focus
Eco-Evo III	Ecological and Evolutionary Dynamics III -bacterial evo 1	Focus
Eco-Evo IV	Ecological and Evolutionary Dynamics IV -bacterial evo 2	Focus
Eco-Evo V	Ecological and Evolutionary Dynamics V -landscapes	Focus
Immune I	Immune Sensing and Response	FOCUS
Cancer	Physics of Cancer	FOCUS
Patterns I	Pattern Formation in Biological Systems I	Focus
Patterns II	Pattern Formation in Biological Systems II	Focus
Inference	Data Science for Biophysics	Focus
Multi-scale	Multiscale computation and theoretical methods in molecular biophyscs	Focus
Plants	Plant Physics	Contributed
Neural Biophysics		
Robophysics I	Robophysics I: Soft + Long	Focus
Robophysics II	Robophysics II: Complex Terrain	Focus
Robophysics III	Robophysics III: A Little Bit of Everything	Focus
Neural Systems I	Physics of Neural Systems I	Focus
Neural Systems II	Physics of Neural Systems II	Focus
Neural Systems III	Physics of Neural Systems III	Focus
Behavior I	Animal Behavior I	Focus
Behavior II	Animal Behavior II/Plant II	Focus
Social Interactions I	Physics of Social Interactions	Focus
Social Interactions II	Physics of Social Interactions	Focus
Sensory-motor	Information Processing in sensory and motor systems	Focus
Learning I	Physics of Learning I: Natural systems	Focus
Learning II	Physics of Learning II: Artificial systems	Focus

Table 4: The Final Focus and Oral Contributed Sessions of MM2021

Activity	
DBIO Short Course: The physics of biological movement across scales	Short Course
DBIO Networking: Virtual 2 events	Networking
Meet the Expert Student Tables: 2 tables	Expert Tables
Membership Drive :	Tables
Coffee breaks: Tue/Thur from 2 to 2:30pm.	Tables

Table 5: Other Activities

Nomination Committee

Phil Nelson (Chair), David Lubensky, Ilya Nemenman, Moumita Das, Angel Garcia

The Nominating committee met several times starting in summer 2021. First, we met to hear and debate each others' general criteria, without considering any names. Next, we circulated some names and encouraged each other to investigate them. The cmte Chair reviewed the complete list of every current DBIO member, obtained from APS, when coming up with names. In our next meeting, we added all the self-suggested and member-suggested names harvested from the online tipsheet (DBIO Canvassing), which was unveiled at the Annual Meeting in March and again on other occasions. The Chair found which of these names were actually eligible for office, and they were added to the committee's big "persons of interest list" for equal consideration with the others. Finally, in two more meetings we arrived at two names per open office, plus a rank-ordered list of alternates in case our top choices declined (as several did).

The Committee gave full consideration to diversity along several axes, including not only the proposed new Excomm members but also the existing members that will carry over, that is, the entire future Executive Committee.

The Committee considered a suggestion from the Chairline to field >2 candidates per office. We unanimously agreed that there are serious problems with that suggestion if the election is a simple highest-count vote:
* Such a system can elect a candidate who is actually opposed by a majority.
* We currently don't nominate a candidate if that candidate ran in the previous year. So >2 per office would greatly increase the pool of ineligibles.
* Other unexpected things would happen with >2 candidates, in part because total vote counts are always small.
* The only reasonable way to have >2 candidates is ranked-choice; it's too late to propose that for this year; not sure APS even allows it.
* Cmte does suggest exploring ranked-choice for future years, though that would entail a change in Bylaws.

The committee noted that a considerable number of potentially appealing candidates were ineligible because of lapsed or insufficiently long DBIO membership. It thus might be useful for the Excomm to consider whether to amend Bylaws to adjust the eligibility rules to allow a broader pool of candidates to be considered while maintaining the spirit of the requirement that nominees have strong ties to the biological physics community.

The committee chose the slates below. We went back to APS to be absolutely sure those persons are eligible. We then asked S/T to prepare a ballot and carry out the election.

For Chair:

Ajay Gopinathan (UC Merced Physics) agreed to run. Elected.
John Marko (Northwestern) agreed to run.

For Secretary-Treasurer:

Andrew Mugler (Pitt Physics) agreed to run. Elected.
Gordon Berman (Emory Biology) agreed to run.

For two Members at Large:

Kirsty Wan (Exeter UK) agreed to run but later withdrew.
Armita Nourmohamad (U Washington) agreed to run. Elected.
Suliana Manley (EPFL Lausanne Switzerland) agreed to run. Elected.
Raghu Parthasarathy (U Oregon) agreed to run.
Zuzanna Siwy (UC Irvine) agreed to run.

For one Early Career:
Following APS directions, this election had to be separate from the main one, because these positions did not exist until after ratification of new Bylaws.

Suraj Shankar (Harvard) agreed to run (self-suggested). Election pending in early 2022.
Sarah Marzen (Claremont College) agreed to run (self-suggested) (PhD 2016) (just joined DBIO but that's not a problem). Election pending in early 2022.

Previous committees:
2020: Massimo Vergassola (cmte Chair), Srividya Iyer-Biswas, Mingming Wu, Alex Morozov, Ilya Nemenman
2019: Jenny Ross (Chair), Mingming Wu, Meredith Betterton, Alex Morozov
2018: Yuhai Tu (Chair), Jeff Gore, Megan Valentine, Mingming Wu
2017: Ilya Nemenman (Chair), Jeff Gore, Keir Neuman, Megan Valentine

Next committee:
DBIO members ratified the revised Bylaws, which state: "The Nominating Committee shall consist of four members plus a Committee Chair, who shall be the Past Chair of the Division. The Committee Chair shall appoint one member annually, in consultation with the Executive Committee, to serve a three-year term. One member shall be appointed by the APS annually, to serve a one-year term. The Chair of the Division shall provide the Corporate Secretary of the

Society with the names of several candidates from which the APS appointment will be chosen. Not more than two members of the Nominating Committee shall be members of the Executive Committee."
One member of last year's committee declined to serve this year when asked. So 2021 was:
Nemenman's 2nd year on Cmte;
Nelson's first year on cmte;
Das's first year on cmte;
Lubensky's first year on cmte.
(Garcia had the 1-year appointment to cmte.)

There appears to be a tradition that each year's cmte Chair does not carry on to the following year.

Thus, the 2022 cmte should include Margaret Gardel (cmte Chair), plus a new 1-year member, plus a new 3-year member, plus two of the following: Das, Lubensky, Nemenman. The awkward requirement to drop one of these arose because one member from 2020 declined to serve in 2021, and because for forgotten reasons there is no member finishing 3 years of service.

Community Engagement

Srividya Iyer-Biswas (Co-Chair), Orit Peleg (Co-chair), Tapomoy Bhattacharjee; Jasmine Nirody; Chantal Nguyen; and Charlie Wright, Olga Shishkov

The community engagement committee broadened participation through meaningful engagements with the community at large. To this end, the committee oversaw innovation and actualization of two kinds of activities: (1) Creating new community spaces: creation of the APS-DBIO twitter acct, managing the APS DBIO twitter acct and growing its audience to > 1000 followers; conceiving of and organizing the Mondays-in-Focus series to advertise 2022 DBIO Focus Sessions to assist the Program Cmte; creation of the APS DBIO facebook acct, subsequently deleted owing to not enough activity. (2) Reimagining extant spaces: through continuing to organize the DBIO Happy Hour, conceived of in the previous year; conceiving of and see through fruition the #DBIOTweetorial and the #DBIOEditweetorial series, with input from the Tweetorial Advisory Group; conceiving of the JOIN-DBIO initiative, to encourage DBIO membership at Community Engagement activities throughout the year.

Financials

Interim S/T: Orit Peleg

General operations: The most recent financial statement available from APS is from December 2021 (attached). It shows us with total assets of $160,452.

We started the year with assets of $139,853. Our income was $24,873. Our main source of income has been membership dues ($9,845) and Unit Share of APS ($10,752). Our total expenses were $4,553, mostly for travel and awards. Most of this amount was spent on travel

expenses related to this year's awards. Our net income for this year is $20,320, leaving us with assets of $160,452.

APS Meeting: We received a share of last year’s (2021’s) March Meeting registration ~$17,000 amount, out of which we have $12,920 left. We received $5,000 for the MM tutorials, out of which we have $1830 left.

Date: 02/18/22
Time: 11:23

The American Physical Society
Summary Budget Report
For The 12 Months Ended 12/31/21

Accounting Unit DBIO
Description DBIO General Operations

YTD 12/31/21	YTD 12/31/20	$ Change	Account	Account Description	YTD Budget	YTD 12/31/21	Annual Budget	REMAINING BUDGET
$160,452.53	$138,095.26	$22,357.27	1905-0000	Funds Available from APS	$.00	$160,452.53	$.00	-$160,452.53
$.00	$.00	-$.00	1905-9920	Funds Available from APS	$.00	$.00	$.00	$.00
$160,452.53	$138,095.26	$22,357.27		**Funds Available from APS**	$.00	$160,452.53	$.00	-$160,452.53
$9,845.00	$10,285.00	-$440.00	4230-3201	Dues-APS Divisions/Tea Groups	$11,000.00	$9,845.00	$11,000.00	$1,155.00
$43.94	$.00	$43.94	4240-0000	Membership Write-offs-General	$.00	$43.94	$.00	-$43.94
$300.00	$.00	$300.00	4250-0000	Contributions-General	$.00	$300.00	$.00	-$300.00
$10,752.89	$.00	$10,752.89	4472-0000	Unit Share of APS General Mtg-General	$.00	$10,752.89	$.00	-$10,752.89
$3,931.23	$3,427.36	$503.87	4830-0000	Allocated Investment Income-General	$.00	$3,931.23	$.00	-$3,931.23
$24,873.06	$13,712.36	$11,160.70		**Revenue - Total**	$11,000.00	$24,873.06	$11,000.00	-$13,873.06
$1,375.00	$2,292.65	-$917.65	5422-0000	Programs-Travel Assist-General	$.00	$1,375.00	$.00	-$1,375.00
$.00	$400.00	-$400.00	5423-0000	Programs-Travel Grants (Taxable)-General	$.00	$.00	$.00	$.00
$100.00	$.00	$100.00	5426-0000	Programs-Mtg Fee Waivers-General	$.00	$100.00	$.00	-$100.00
$1,500.00	$1,500.00	$.00	5430-0000	Prizes & Awards-Stipends-General	$2,040.00	$1,500.00	$2,040.00	$540.00
$243.30	$.00	$243.30	5432-0000	Prizes & Awards-Certificates/P-General	$.00	$243.30	$.00	-$243.30
$.00	$306.90	-$306.90	5434-0000	Prizes & Awds-Travel Recipient-General	$.00	$.00	$.00	$.00
$14.71	$13.20	$1.51	5931-0000	Priority Mail-General	$.00	$14.71	$.00	-$14.71
$.00	$.00	$.00	5950-0000	Committee Meetings-Meals-General	$1,020.00	$.00	$1,020.00	$1,020.00
$1,320.00	$.00	$1,320.00	5952-0000	Non-Staff Travel-General	$.00	$1,320.00	$.00	-$1,320.00
$4,553.01	$4,512.75	$40.26		**Expense - Total**	$3,060.00	$4,553.01	$3,060.00	-$1,493.01
$20,320.05	$9,199.61	$11,120.44		**Net Income (Loss)**	$7,940.00	$20,320.05	$7,940.00	-$12,380.05

Fundraising Committee

Bill Bialek and Margaret Gardel

The Delbruck prize is currently underendowed by $140,000 to continue awarding it annually. This has been a problem since 2015; It is unclear why APS allowed the change from biennial to annual to occur without fundraising. Through discussions with APS staff, it was decided to conduct a campaign with a well-defined end date of March 31, 2022. An anonymous donor agreed to match any donations up to $50,000. Requests were sent to all previous Delbruck winners, APS DBIO Fellows and past Executive Committee members. As of March 1, 2022 just over $25,000 had been raised. Please contribute at any level before March 31 by going to this link.

DBIO Membership

Jenny Ross (March Meeting) & Community Engagement

DBIO Membership activities included inclusion of coupon to join DBIO for free at all virtual events throughout the year and a similar badge scanning activity at March Meeting. At March Meeting 2022, we will have a membership table and coffee break to encourage unit membership.

Year	Total Number of Members	Percentage of APS Total
2018	2165	4.4%
2019	2185	4.4%
2020	2057	3.8%
2021	1969	3.6%
2022	2188	4.0%

OFFICIAL 2022 UNIT MEMBERSHIP STATISTICS (Run date: 1/31/2022)

UNIT NAME	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
DIVISIONS										
Atomic, Molecular & Optical (DAMOP)	3,297	3,185	3,217	3,188	3,327	6.7%	6.4%	5.9%	5.9%	6.2%
Astrophysics (DAP)	3,049	3,007	2,879	2,799	2,899	6.2%	6.1%	5.3%	5.2%	5.4%
Biological Physics (DBIO)	2,165	2,185	2,057	1,969	2,188	4.4%	4.4%	3.8%	3.6%	4.0%
Condensed Matter Physics (DCMP)	6,739	6,694	7,158	6,324	6,731	13.6%	13.5%	13.2%	11.7%	12.4%
Computational Physics (DCOMP)	3,170	3,208	3,070	2,920	2,928	6.4%	6.5%	5.7%	5.4%	5.4%
Chemical Physics (DCP)	1,625	1,599	1,487	1,314	1,317	3.3%	3.2%	2.8%	2.4%	2.4%
Fluid Dynamics (DFD)	3,378	3,255	3,596	3,432	3,250	6.8%	6.6%	6.7%	6.3%	6.0%
Gravitation (DGRAV)	1,697	1,730	1,658	1,590	1,651	3.4%	3.5%	3.1%	2.9%	3.1%
Laser Science (DLS)	1,550	1,314	1,252	1,145	1,204	3.1%	2.7%	2.3%	2.1%	2.2%
Materials Physics (DMP)	3,318	3,264	3,313	2,844	2,979	6.7%	6.6%	6.1%	5.3%	5.5%
Nuclear Physics (DNP)	2,688	2,633	2,609	2,764	2,812	5.4%	5.3%	4.8%	5.1%	5.2%
Physics of Beams (DPB)	1,203	1,189	1,166	1,086	1,070	2.4%	2.4%	2.2%	2.0%	2.0%
Particles & Fields (DPF)	3,513	3,491	3,492	3,410	2,448	7.1%	7.1%	6.5%	6.3%	4.5%
Polymer Physics (DPOLY)	1,523	1,554	1,459	1,245	1,351	3.1%	3.1%	2.7%	2.3%	2.5%
Plasma Physics (DPP)	2,618	2,573	2,543	2,584	2,652	5.3%	5.2%	4.7%	4.8%	4.9%
Quantum Information (DQI)	2,140	2,398	2,732	2,864	3,321	4.3%	4.9%	5.1%	5.3%	6.1%
Soft Matter (DSOFT)	1,885	1,952	2,058	1,980	2,127	3.8%	3.9%	3.8%	3.7%	3.9%
TOPICAL GROUPS										
Data Science (GDS)	N/A	N/A	694	1245	1533	N/A	N/A	1.3%	2.3%	2.8%
Energy Research & Applications (GERA)	523	502	614	725	768	1.1%	1.0%	1.1%	1.3%	1.4%
Few-Body Systems (GFB)	353	353	333	329	307	0.7%	0.7%	0.6%	0.6%	0.6%
Hadronic Physics (GHP)	467	445	504	593	628	0.9%	0.9%	0.9%	1.1%	1.2%
Instrument & Measurement Science	540	510	535	553	609	1.1%	1.0%	1.0%	1.0%	1.1%
Magnetism (GMAG)	1,131	1,178	1,260	1,139	1,231	2.3%	2.4%	2.3%	2.1%	2.3%
Medial Physics (GMED)	477	525	495	508	518	1.0%	1.1%	0.9%	0.9%	1.0%
Plasma Astrophysics (GPAP)	399	387	412	464	477	0.8%	0.8%	0.8%	0.9%	0.9%
Physics of Climate (GPC)	573	526	412	571	630	1.2%	1.1%	0.8%	1.1%	1.2%
Physics Education Research (GPER)	578	590	581	630	702	1.2%	1.2%	1.1%	1.2%	1.3%
Fundamental Constants (GPMFC)	505	533	519	521	557	1.0%	1.1%	1.0%	1.0%	1.0%
Shock Compression (GSCCM)	472	354	483	427	469	1.0%	0.7%	0.9%	0.8%	0.9%
Statistical & Non-Linear (GSNP)	1,386	1,449	1,392	1,203	1,280	2.8%	2.9%	2.6%	2.2%	2.4%
FORUMS										
Diversity and Inclusion (FDI)	N/A	N/A	42	2352	3130	N/A	N/A	0.1%	4.3%	5.8%
Early Career Scientists (FECS)	2960	4009	4307	5224	5876	6.0%	8.1%	8.0%	9.7%	10.9%
Education (FEd)	4,267	4,305	3,956	4,099	4,262	8.6%	8.7%	7.3%	7.6%	7.9%
Graduate Student Affairs (FGSA)	6,431	6,497	4,813	3,570	3,641	13.0%	13.1%	8.9%	6.6%	6.7%
History and Philosophy of Physics (FHP)	3,302	3,385	3,357	4,027	4,268	6.7%	6.8%	6.2%	7.4%	7.9%
Industrial & Applied (FIAP)	7,067	6,835	5,836	5,439	5,509	14.3%	13.8%	10.8%	10.1%	10.2%
International Physics (FIP)	4,186	4,179	3,794	4,067	4,288	8.4%	8.5%	7.0%	7.5%	7.9%
Outreach & Engaging the Public (FOEP)	1,965	2,110	2,176	2,814	3,119	4.0%	4.3%	4.0%	5.2%	5.8%
Physics & Society (FPS)	5,782	5,770	5,185	5,436	5,663	11.7%	11.7%	9.6%	10.1%	10.5%
SECTIONS										
Four Corners (4CS)	1,893	1,809	1,761	1,792	1,777	3.8%	3.7%	3.3%	3.3%	3.3%
Far West (FWS)	2,996	2,994	2,553	2,545	2,605	6.0%	6.1%	4.7%	4.7%	4.8%
Mid-Atlantic (MAS)	1,747	1,702	1,669	1,897	2,022	3.5%	3.4%	3.1%	3.5%	3.7%
New England (NES)	2,553	2,667	2,541	2,536	2,707	5.2%	5.4%	4.7%	4.7%	5.0%
Northwest (NWS)	1,311	1,253	1,137	1,200	1,308	2.6%	2.5%	2.1%	2.2%	2.4%
New York (NYSS)	2,809	2,799	2,484	2,459	2,580	5.7%	5.7%	4.6%	4.5%	4.8%
Eastern Greak Lakes (EGLS)	1,619	1,551	1,450	1,410	1,544	3.3%	3.1%	2.7%	2.6%	2.9%
Prairie (PSAPS)	1,095	1,059	1,020	1,021	1,169	2.2%	2.1%	1.9%	1.9%	2.2%
Southeastern (SESAPS)	2,589	2,498	2,419	2,435	2,558	5.2%	5.1%	4.5%	4.5%	4.7%
Texas (TSAPS)	1,685	1,583	1,509	1,581	1,648	3.4%	3.2%	2.8%	2.9%	3.0%

*Topical Group on Soft Matter became a Division in 2019

Official 2022 APS Membership - 49443	2021 - 49555	2020 - 54069	2019 - 55158	2018 - 55368	

Canvassing & Broadening Participation

Margaret Gardel (Chair)

This is an ad hoc unit activity that was started in 2021, with an explicit job to work to ensure our pool of nominations for fellowships, awards and DBIO leadership. The unit chair does not participate in any of these committees and, as such, is in an optimal position to lead such activities. The activities used in 2021 were:

- to create, advertise and maintain a google form to solicit ideas for strong individuals.

This form was advertised at our Business meeting, as well as several emails and tweets in the spring 2021.
- Obtaining a list of all APS members eligible for our honors, fellowship or DBIO leadership for further brainstorming.
- Contacting potential nominators and/or applicants to encourage their participation/application. This was done without interactions with the selection committees.
- Members of ExComm assisted with this process. I think it would be ideal to have 1-2 people outside of ExComm to assist chair in future years.

DBIO Early Career Award

Arpita Upadhyaya (Chair), William Bialek, Wouter Hoff, Raghuveer Parthasarthy, Jennifer Ross, Margaret Gardel (ex officio)

2022 Awardee: Armita Nourmohammad, University of Washington

The committee held two meetings, one on September 17th and one on October 1st. The first meeting was to discuss a rubric for reviewing and scoring of applications. The committee discussed that emphasis should be placed on work done during their independent career to clearly establish the originality of their research. Another equally important factor is the overall impact of their research in the field of biophysics. The committee concurred that the rubric should look at multiple dimensions of achievement including scientific accomplishments, impact and citizenship in the biophysics community. Applicant diversity and overcoming adversities as noted in the applicant statements were also considered (see criteria below). Members of the committee disclosed their conflicts to the chair and were not assigned those applications for review. All 18 applications were reviewed by each committee member (except in cases of conflict).

The following review criteria were chosen to ensure equitable and balanced evaluation of all applications: Originality of research (1-5), Impact of research (1-5), Citizenship in the scientific community (1-5), Diversity / Adversity (yes/no) (0/1)

Each committee member scored the applications based on the rubric above and the average scores were calculated and the applications sorted by the Chair.

Executive Summary:

The committee met for a second time on October 1 to discuss the highest scoring applications. There were several highly qualified applications, with strong accomplishments, in science and citizenship to the community. There was some amount of variability in scoring across the committee members and thus the top 7 (out of 18) candidates were discussed in more detail. However, many of these candidates were Associate or Full Professors. The committee members were given the opportunity to bring forward any candidates who were not part of the top seven. After thorough deliberations, the committee decided unanimously that Armita Nourmohammad was the top choice for the award. Her publications, CV and supporting letters stressed the creativity and originality of her work and the impact on the field, despite being early

in her independent career and the committee concurred that she was highly deserving of this honor.

The final citation read “for the creative development of theoretical and data-driven approaches to the dynamics and evolution of the adaptive immune system.”

The following are some suggestions for future committees as well as the APS leadership:

- This award should be targeted towards faculty who are truly early career, i.e. pre-tenure or five years from start of independent position.
- The applications should include a section on citizenship and service to the APS/Biological Physics community. This was a criterion for the committee but applicants did not sufficiently highlight their contributions.
- It was noted by the committee that there was a preponderance of theorists in the applicant pool. The committee felt that experimentalists should be actively encouraged to apply.
- The award should be widely advertised to get applications from early career international applicants and broaden the reach of the fellowship and recognition of biological physics research.
- All applications should be vetted for current memberships at the time of application. This should also be clearly stated in the fellowship application guidelines.

Delbrück Prize Committee

Jennifer Ross (Chair); Margaret Cheung, Ibrahim Cissé, Andrea Cavagna, Irene Giardina, John Marko

The committee met to create a rubric for evaluation of the nomination packets. The following selection criteria were evaluated and equally weighted in the scoring:

(1) Intensive scientific research achievement
(2) Extensive (lifetime) scientific research impact
(3) Impact on physics or discovery of new physical principles
(4) Diversity
(5) Mentoring & maintenance of the physical biology communities (service)

The committee selected Terrance Hwa to be the most qualified candidate. The nomination as sent to APS Council for approval. Congratulations, Terry!

We encourage the entire DBIO community to work to improve the diversity of the nomination pool for this award. Social issues abound with diversifying the applicant pool for this award because it is viewed as a lifetime achievement award, and the most senior among us with the “best records” are still mostly white men.

DBIO Dissertation Award

Rana Ashkar (Chair), Orit Peleg, Josh Shaevitz, Moumita Das

The committee members were all asked to rank the applications before the deliberations meeting which took place on Thursday, July 15 at 2:00 pm ET. Committee members were asked to report any conflict of interest before reviewing applications. One COI was indicated by Joshua Shaevitz, and he did not participate in the evaluation. All other nominations were evaluated by all committee members (except the committee chair).

Based on the ranking, the committee selected the top-ranked nominee. After a discussion, the committee unanimously selected Antonio Carlos Costa as the recipient of the 2021 DBIO Dissertation Award.

The committee provided the following citation for the selected nomination package: "For innovative integration of statistical physics and dynamical systems theory to predict behavioral states and ensemble dynamics of living systems across multiple scales, an outstanding problem with broad applications in biological physics."

Shirley Chan Travel Award

Rana Ashkar (Chair), Nancy Forde, Taviare Hawkins

The committee members were asked to rank the applications and communicate their evaluations via email by Jan. 3rd, 2022. It should be noted that the announcement of this award was made much later than the timeline proposed by the Operating Procedures Document (as a result of the initially assigned committee chair stepping down from the DBIO Ex.Comm.). Specifically, the award announcement was made on Nov. 4 (i.e. after the MM abstract submission deadline), and accordingly the application deadline was delayed to Dec. 10. The committee recommends that the timeline proposed in the Operating Procedures be followed in future years for a timely review of applications and announcement of the awards. Committee members did not report any conflict of interest in reviewing applications, and hence all nominations were evaluated by all committee members (excluding Rana Ashkar who took on the role of the committee chair). Based on the evaluations, the chair compiled a ranked list that was shared with the rest of the committee. All members approved the rankings, and the list of awardees was sent to the DBIO chair and secretary/treasurer to confirm the division membership and abstract authorship of the selected awardees.

Fellowship Committee

Josh Shaevitz (Chair), Rana Ashkar, Margaret Cheung, Daniel Fisher, Taviare Hawkins, Srividya Iyer-Biswas

We received a total of 28 total nominations (10 women, 1 black physicist). Conflicts of Interest and ranking procedures were discussed and decided over email. After reading all of the nominations, the committee met over Zoom to select the new fellows.

Each member, and the committee as a whole, considered many factors when selecting the fellows including scientific scholarship, service both broadly and to DBIO, as well as diversity

along a number of axes and personal trajectory. Overall, the nomination pool this year was excellent and quite diverse. The committee unanimously selected 4 new fellows and 4 ranked alternates. The APS only awarded the 4 selected and did not use our alternate list.

Notes from the Chair:
The conflict of interest guidelines and rules from APS have been changing every year so the new chair should consult these regularly.
The committee had considerable discussion about how to incorporate achievement along various professional axes (research, service, outreach). The chair opted not to institute a numeric rubric for each category and rather we discussed each category for every candidate. Often the nomination package did not uniformly highlight all the axes for each candidate. We should give better guidelines to nominators explicitely asking them to comment on research, service, outreach, and teaching.
There is lore being passed around that if we nominate a non-US physicist for a fellowship that we get an extra slot. This is not the case as confirmed by APS.