

APS DBIO Executive Committee Meeting
Hybrid meeting

March 6th, 2023 at 9pm PT, Harrah's Hotel Parlor B

Zoom <https://pitt.zoom.us/j/8809402335>

In attendance

Chair: Margaret Cheung

Chair-Elect: Josh Shaevitz

Vice Chair: Ajay Gopinathan

Past Chair: Margaret Gardel

Secretary/Treasurer: Andrew Mugler

Councilor: Daniel Fisher

Member-at-Large: Nancy Forde

Member-at-Large: Armita Nourmohammad

Member-at-Large: Jianhua Xing

Early Career Member-at-Large: Sarah Marzen

Incoming Vice Chair: Arpita Upadhyaya

Incoming Member-at-Large: Elena Koslover

Incoming Member-at-Large: Alison Patteson

Incoming Early Career Member-at-Large: Noah Mitchell

Not in attendance

Member-at-Large: Rana Ashkar

Member-at-Large: Orit Peleg

Member-at-Large: Suliana Manley

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We thank the outgoing Executive Committee members:

Margaret Gardel (Past Chair)

Orit Peleg (Member at Large)

Jianhua Xing (Member at Large)

We welcome the incoming Executive Committee member:

Arpita Upadhyaya (Vice Chair -elect)

Elena Koslover (Member at Large - elect)

Alison Patteson (Member at Large -elect)

Noah Mitchell (early-career Member at Large -elect)

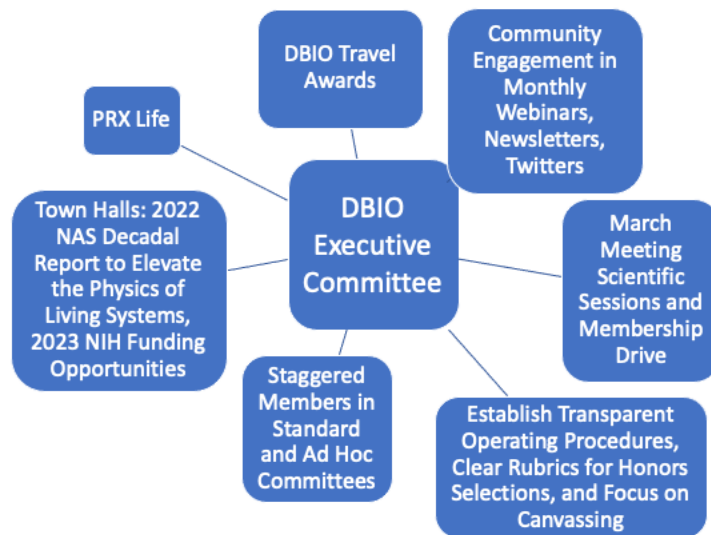
Opening Remark by Margaret Cheung:

Thank you for serving the biological physics community this past year. We come from diverse backgrounds, institutions, and career stages with different perspectives and priorities. I particularly appreciated everyone's effort in working together by communicating effectively and learning from each other's experiences. With active listening to one another, we marched toward a shared goal to better serve our beloved community by creating opportunities for the DBIO members through inclusion and equitable access to resources of the APS. This year, our activities are particularly empowered by the National Academies Decadal Survey on Biological Physics. Its opening remark stated, "Biological physics, or the physics of living systems, has emerged fully as a field of physics, alongside more traditional fields of astrophysics and cosmology, atomic, molecular and optical physics, condensed matter physics, nuclear physics, particle physics, and plasma physics."

With the wave of heightened enthusiasm from our beloved community, this year, together, we have achieved a lot, as shown by the Figure below. The Community Engagement Committee has established monthly webinars to engage with DBIO members on various issues they care about. The committee has issued quarterly Newsletters that keep our members informed of the opportunities that matter most to them. The Program Committee continues to engage more than 60 Focus Session organizers to attract abstracts, and sort or super sort the scientific program of the March Meeting 23. We have set up Townhalls to communicate the needs of our members for funding as well as a specialty journal dedicated to our field from the Physical Review Journals. This year, I am pleased to see the launch of the Biological Physics Specialty Journal, PRX Life, at MM23, with our outgoing past chair Margaret Gardel as Lead Editor, and Serena Bradde as Managing Editor.

The Travel Award Selection Committee has created an equitable procedure by expanding the selection criteria to include early-career DBIO members. The honors selection committees have established rubrics for ranking. To better enforce conflicts of interest, this past year was the first time the Unit Chair served as a Canvassing chair. The outcome was overall satisfactory as each honors selection committee reported an increase in the number of nominees from diverse backgrounds. To keep the institutional memory of the DBIO Executive Function, this year, the Executive Committee has approved to install of a Vice Chair on each standing Honors Selection Committee (mandated by the APS), as well as three ad hoc committees (membership, community engagement, and travel award selection committees), to provide a staggered leadership that the appointed Vice Chair will become Chair in the next cycle. This staggered leadership will improve the continuity of the effort by all executive committee members to assist one another and make changes in the operational procedure where it is essential. Through a multi-year effort in fundraising, we have fully endowed the Delbruck Prize to be a yearly award, and we will continue to grow our membership. Thank you, everyone. It's my great honor to serve on this committee with you.

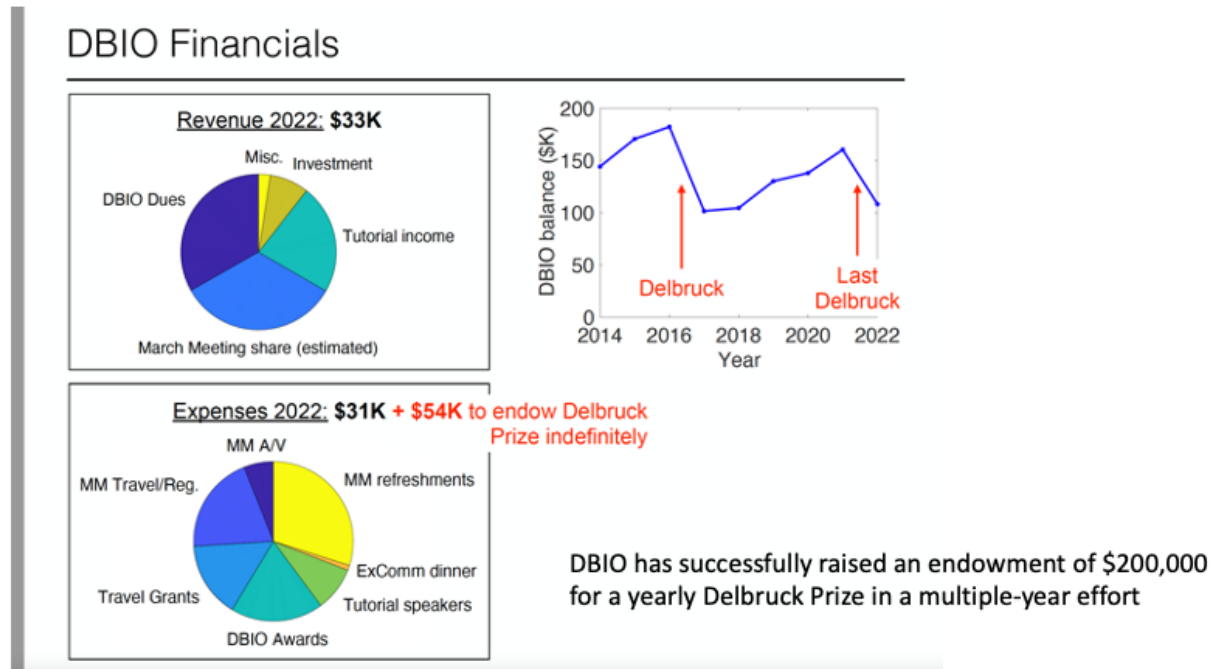
Create opportunities for members through inclusion and equitable access
Encourage diverse perspectives and effective communication



Together we achieved a lot as a group!

DBIO 2022-2023 Finances:

Secretary/Treasury: Andrew Mugler



Canvassing committee:

2022 Committee membership: (Chair) Margaret Cheung

This is an ad hoc unit activity (not in bylaws). Current DBIO Chair is in charge of canvassing activities, obtains help from Executive Cmte and other members as needed. In 2022, the activities done to solicit a diverse nomination/application pool of APS Fellows and Delbruck Prize Nominees and Nominations for Executive Cmte were as follows:

- DBIO S&T maintains a [google form](#) throughout the year to solicit ideas for strong individuals for nominations for honors and ExComm. This form was advertised at our Business meeting, as well as in several emails and tweets in spring 2022.
- Emails were sent out to all DBIO members asking for their input for nominations. ExComm was requested to submit names to google sheet.
- In April, a list of all fellowship-eligible APS members and the list of active/rollover fellowship nominations from APS Honors. The list was to identify strong

applicants for Canvassing Chair to reach out to individuals who could serve as nominators for strong candidates - these were senior colleagues who had previously served as mentors or collaborators.

- Canvassing for Delbruck may require a multi-year plan and improvements should be made. Activities done in 2022, several potential nominators were contacted by the Canvassing Chair.
- Canvassing should be done by the Canvassing Chair for the Thesis prize in future years.
- Canvassing for Nominations Cmte included obtaining a list of all APS-DBIO members as well as a list of all folks who previously agreed to serve on the ballot (whether or not they were elected or not). ExComm was asked if they'd be willing to help; several members helped identify strong members.
- The S&T maintained the spreadsheets. Given the sensitive nature of canvassing, this information should be kept confidential.

Delbruck Prize Selection committee:

2022 Committee membership: Aihua Xie (Chair), Terence Hwa ('22 Recipient), Jennifer Ross, Joshua Shaevitz, Ibrahim Cisse, Zuzanna Siwy

-

* The Canvassing Chair (DBIO Chair) solicited nominations for those persons to help ensure a strong pool. Candidates are not restricted to be DBIO members, nor even to be APS members, or in physics departments.

* APS supplies committee Chair with detailed procedures and with all nominations, once the deadline has passed.

* DBIO Chair charges committee to consider diversity in all the above aspects. Diversity can also involve levels of biological organization, theory vs experiment, class of institution, established versus new research areas.

* Committee Chair (Xie) discussed a selection rubric for evaluation and scoring and the case of conflict of interest (e.g. conflicted committee member is excused for part of the discussion). Committee members should not themselves nominate any candidate, though they may previously have done so for an active holdover candidate.

* Before examining nominations, each year's committee should begin by coming to a consensus on the philosophy of the award; for example, "To consider the impact of nominee's research on Biological Physics and Physics more broadly." The committee has had the flexibility to decide for themselves the relative weights of these considerations as well as:

- Single breakthrough versus sustained career accomplishment.
- Impact outside Biological Physics versus inside.
- Impact through mentoring versus primary literature contributions.
- International vs US,

with the overarching goal that we wish to identify a scientist whom we are proud to hold up as a model. We prefer to award the prize to one scientist in the same year.

A selection rubric for evaluation & scoring used in 2022

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

- A. Quality of research achievement (onetime or lifetime) (eg. originality, innovation...)
- B. Discovery of new principles or invention of new technology in biological physics
- C. Impact on physics, biology, and/or medicine (biol. Phys. research is often multidisciplinary)
- D. Diversity (gender & ethnic groups)

The first three criteria were equally weighted in the scoring. The averaged scores from the first three criteria (A-C) were used to rank the nominees. The diversity score was used as a tiebreaker if the top two nominees are close in their scores.

The quantitative evaluation data and the final selection in 2022

We ranked the nominees based on their average scores. After scoring, the selection committee met via Zoom to discuss the research achievements and impacts of the top two nominees. The final selection was made by anonymous votes. One mechanism was designed in advance and used to ensure rational votes (not to be pursued by an eloquent committee member). The selection committee members were allowed to have more than 24 hours to process the information from the Zoom meeting before casting their anonymous votes

* DBIO Chair as an ex officio to confirm diversity is carefully discussed. DBIO Chair only votes in case of deadlock. Otherwise, the committee has no discussion with the Excomm to ensure independence.

* Committee chair forwards a decision directly to the APS and waits for APS approval. The committee chair sends the report and informs the decision to the Unit Chair as a courtesy. The decision is not to be shared with anyone else, including awardee. It is easy to forget this, so the committee chair firmly instructs the committee.

2023 Max Delbruck Prize in Biological Physics

Arup Chakraborty from MIT

Citation: *"For the leading role in initiating the field of computational immunology, aimed at applying approaches from physical sciences and engineering to unravel the mechanistic underpinnings of the adaptive immune response to pathogens, and to harness this understanding to help design vaccines and therapy"*

Community Engagement Committee:

2022 Committee membership: (Chair) Nancy Forde; (from the APS DBIO Executive Committee) Margaret Gardel, Suliana Manley, Sarah Marzen, Andrew Mugler, Josh Shaevitz, Jianhua Xing; (additional community members) Ré Mansbach (Asst Prof at Concordia U), Mohammad Nooranidoost (PDF at Florida State U), Orrin Shindell (Asst Prof at Trinity U)

For 2022-2023, the community engagement committee undertook two main tasks. Member Sarah Marzen revived the DBIO Newsletter and has done an excellent job at providing ~quarterly newsletters to the DBIO community, which summarize DBIO-sponsored events and promote APS-related opportunities such as awards, publications, etc. We also continued to organize and host approximately monthly online events throughout the year.

For online events, we wished to build on the success of the Living History (LH) online program initiated during the pandemic, but find a distinctive focus since LH continued independent of DBIO. The following is the operating procedure that was followed, which should be re-evaluated annually to see if this process best serves the ongoing needs of our diverse DBIO community.

The engagement committee met in April 2022 and planned a series of monthly events during the year. Members each volunteered to lead one event in an area of interest to them. This helped to distribute the workload! The working spreadsheet is accessible

here:

https://docs.google.com/spreadsheets/d/1u4Xvyw6KJWxRUHESjVH8yDM1Cjd3aZSDn_3bGNNtIUE/edit#gid=0. When finalized, information about events was posted to the APS DBIO page, here: <https://engage.aps.org/dbio/resources/workshops-networking>

We aimed for a range of events that could cover a variety of interests in the DBIO community, hoping to have “something for everyone”. Events were led by different members of the DBIO Engagement Committee, ranging from our postdoc member and assistant professors through to senior professors. When selecting panellists for the events, organizers were advised to ensure that diverse voices were found.

In one case, a proposed event targeting networking for Black DBIO members did not take place, as we could not find a Black DBIO member to help lead the event and did not hear back from Black in Physics week organizers about having us help do the work and publicity for a Biophysics event during that week.

We were able to add an additional event around teaching of biological physics, brought to us by DBIO member Catherine Crouch (Swarthmore). It is good to be able to add such community-proposed events throughout the year and these could be more broadly solicited in the future.

For each event, the following operating procedure was followed:

1. Once date, time, title, panellists and description were confirmed by the organizer, the committee chair (Nancy) did the following:
 - a. Request that APS set up a Zoom link for the event (<https://apsphysics.atlassian.net/servicedesk/customer/portal/14/group/30/create/10442>)
 - b. Once the Zoom link was set, request that APS update our events page with the description of the event and a Zoom registration link (<https://apsphysics.atlassian.net/servicedesk/customer/portal/14/group/30/create/10367>).
 - c. Once the website was live, request that the event organizer/moderator take responsibility for advertising. The following instructions were sent:

Example Email to the event organizer/moderator:

“The website and Zoom registration link for “your” DBIO event are now live: <https://engage.aps.org/dbio/resources/workshops-networking>

Can you please do the following?

- Post to Engage, advertising the event and including a link to the Zoom registration and to our Workshops & Networking page.
 - 1-2 weeks prior to the event, ask Andrew Mugler to send an email about the event to all DBIO members
 - Post a reminder to Engage ~5 days prior to your event
 - Send info to Jules Nde (jndekeng@uw.edu) to Tweet (PhD student in Margaret C's lab who will be handling our DBIO Twitter account)
 - Ask panellists to complete the permission form so we can post a recording after the event: [APS Permission Agreement form](#)
 - Ask Sarah Marzen to include information about this event in the next newsletter.”
2. APS opens the event on Zoom and readies it for recording. They transfer host duties to the moderator and/or the Chair of the Engagement Committee 15 minutes prior to the event start. We hit record when the event starts. Chair of the Engagement Committee makes a brief intro to the DBIO engagement committee and encourages attendees to attend future events, view past events on our website. Then moderator runs the event. Scheduled for 60 minutes; good to keep to this, though some events had discussions that continued briefly afterwards.
 3. APS sends a notification to the Chair of the Engagement Committee that the recording is available on their YouTube channel. the Chair of the Engagement Committee requests a website update (<https://apsphysics.atlassian.net/servicedesk/customer/portal/14/group/30/create/10367>) to replace the Zoom registration link with a link to the video recording.
 4. The Chair of the Engagement Committee notifies Newsletter Editor (Sarah) that a recording is available, so they can review it and write up a description of the event for the DBIO newsletter.

Attendance at online events ranged from 13 to 60. Having S&T (Andrew Mugler) send a dedicated email to DBIO members about the event was correlated with increased attendance (vs. using Engage platform only for advertising). Best attended events included the Future of Biological Physics discussion, Teaching Biological Physics, and Applying for Faculty Positions.

[Membership Engagement Committee:](#)

2022 Committee membership: (Chair) Jianhua Xing

One main task of the committee is to organize the membership engagement activities at the APS March meeting. During the meeting, the division will have one table for the committee members to interact with current and potential DBiol members, with small gifts imprinted with the DBiol logo distributed.

Through discussions with the engagement committee members, the committee worked out a purchase plan of small gifts and reusable materials that was approved by the executive committee.

Item	Vendor	quantity
Table throw	4imprint	1
pens	4imprint	300
seedcards	4imprint	250
Tote	4imprint	100
sticker	4imprint	1 roll
Paper foldscope	Foldscope Instruments, Inc	60

Total cost: 1,386.27

Note: (1) Plan for MM2023: Before the meeting, we will recruit volunteers to serve on the committee. The sign-up [google sheet](#) was distributed over engage, dbio email and slack channel for program committee members/sorters before a few weeks of the MM. The membership drive will focus on days from Monday to Thursday. Most members leave on Friday early afternoon, so they needed time to clean up and pack the materials into their luggages. (2) A DBIO member objected the distribution of live seeds at MM as Live seeds are prohibited in international travels, and some species are even invasive. We should not use seeds anymore.

[Program Committee](#)

[1. Committee Composition:](#)

2022 Committee: Josh Shaevitz (Chair, Program chair for DBIO March Meeting 2023) Ajay Gopinathan (Tutorial, 2024 Program Chair), Margaret Cheung (2022 program chair), Mugler, Manley, Xing, Forde

The APS March Meeting Handbook will be sent to the DBIO Program Chair at the end of April (April 25 for MM23). This contains a large amount of information about running the meeting and all relevant APS deadlines. This set of Operating Procedures outlines the main tasks for the Program Committee and DBIO volunteers as a whole. There are many other smaller tasks that the Program Chair carries out and are not discussed below but are well-covered in the APS March Meeting Handbook.

2. Focus Session Topics

There is no limit to the number of focus topics that DBIO can sponsor at the March Meeting.

Pre-identified Focus Topics: APS will send the Program Chair a list of focus topics from the last meeting that had significant submissions. These should be automatically carried over to the next year as “Pre-identified Focus Topics”. Once these topics are agreed upon by the Program Committee, an email is sent to the DBIO membership asking for volunteers to organize the Pre-identified Focus Topics via a [Google Form](#). Organizers are asked to tweak the topic title and description, advertise and encourage abstract submissions, select invited speakers, sort the topics into sessions, and identify potential session chairs for the meeting. For March Meeting 2023, 63 people volunteered.

New Focus Topics: New Focus Topics are solicited from the DBIO membership via a [Google Form](#). Submissions are discussed and approved by the Program Committee. As there is no cap to the number of topics, the committee's main goal is to make sure there is not significant overlap between two topics and to encourage a merging of topics if there is.

Submissions for both Google Forms were due on May 27, 2022.

Focus topics and any “Standard Sorting Categories” (8 for DBIO in 2023) make up the set of sorting categories available during contributed abstract submission. DBIO had 44 total sorting categories in 2023. The final list of categories was due to APS on June 3, 2022.

3. Invited Symposia and the APS’ “Invited Nomination System”

For the past two years, DBIO has “opted in” to the APS Invited Nomination System (Request due May 6). This is a very flexible system and different units use it differently. DBIO is closing in on an effective pipeline but there is room for improvement in the future.

Invited Symposia: The APS MM logistics team provides the quota (8 for 2023) for Invited Symposia for each unit based on the size of participation over the past 5 years. It has also been the tradition for several years to host a Symposium organized by the Delbruck Prize winner (which is not decided by the nomination deadline), and thus the Program Committee must choose (N-1) Symposia.

Invited Symposia are nominated through the APS Nomination System which opens on June 30 and has a submission deadline of August 5. Nominators are asked for a topic description, list of (confirmed) speakers, and talk titles. If the number of submissions is larger than (N-1), then the Program Committee must meet to select the final slate of symposia. The Nomination System allows submissions with speakers that are not confirmed. *This has caused issues in the past and DBIO should make a concerted effort to make it known that nominators should secure commitments before submission and the Committee should only select symposia with confirmed speakers.*

The Program Chair and the Delbruck Prize Winner work together to select an appropriate set of diverse speakers for the Delbruck Symposium after the winner is selected. This is often a rushed process but has been successful in the past.

Invited Talks for Focus Sessions: The Focus Topics Volunteer Organizers are tasked with selecting invited speakers for the Focus Sessions. Each focus session at the March Meeting can have up to two invited speakers—a hard line for the APS. As the invited talk nominations are due before the contributed abstract submission, there is some noise in this process as we don’t know the final number of sessions for each topic. For the 2023 meeting, some focus topics had far too many invited speakers relative to the number of submitted contributed talks which caused problems during the sorting process. *It is suggested that carry-over topics with historical data be allowed $2*(M-1)$ invited speakers, where M is the number of sessions from the previous year. For new focus topics, it is suggested to allow only two invited speakers.*

4. Sorting the Contributed Abstracts

After the deadline for contributed abstract submissions, the DBIO abstracts need to be sorted into sessions. Contributed sessions have either: 15 contributed talks; 12 contributed talks + 1 invited talk; or 9 contributed talks + 2 invited talks. In the sorting

process, APS pushes for completely full sessions so the process must have some flexibility. Based on the total number of submissions, APS allots DBIO a number of total contributed sessions $N = (\text{Num_contributed} + 3 * \text{Num_invited}) / 15$. This is basically a hard cap from APS. For 2023, DBIO had 690 contributed submissions and 72 invited talks for focus sessions which resulted in 61 total sessions.

Sorting happens in two phases. For Phase I, DBIO involved all of the 63 volunteers to do a rough sorting of the talks into sessions. Communication was facilitated by the creation of a Slack group. Sorting these rough groupings into the final sessions was performed by a smaller group of volunteers in Phase II. Sorting must be completed by mid-November.

5. Virtual Meeting

The APS is holding a fully virtual March Meeting separate from the in-person meeting for the first time in 2023. Abstracts were submitted through the same system as for in-person, with the speaker opting for one or the other. There were no invited symposia for the virtual meeting. DBIO received 49 contributed abstracts for the virtual meeting. This was too few to use the sorting categories to generate even remotely full sessions, so the committee opted to make six sessions based roughly on generate topic and spatial scale, e.g. Molecular Biophysics; Multicellular Phenomena; and Neuroscience and Behavior. There were three invited speakers who chose to speak in the virtual meeting. This is a new experiment for APS/DBIO, and it is likely that this process will change significantly in the coming years.

5. Tutorials/Short Courses

Tutorials are separate workshops held on the Sunday before the March Meeting (March 5, 2023) consisting of four one-hour pedagogical talks on a specific topic. Each tutorial is four hours long (Morning tutorials are 8:30 AM - 12:30 PM, afternoon tutorials are 1:30 - 5:30 PM). Tutorials should be designed to bring researchers up to speed on a new or rapidly developing field or teach a technique to new users. The deadline to submit proposals for Tutorials is typically in July (July 21, 2022)

Short Courses are unit-led and feature an intensive course on a particular topic relevant to that unit. They are typically one full day (8:30 AM to 5:30 PM) but may vary depending on the course structure and needs. Courses are designed for graduate students, postdocs, and other early-career scientists, though they are open to all

conference attendees. The deadline to submit proposals for Short Courses is typically mid-August (August 12, 2022)

A reasonable procedure is to solicit the membership for tutorials/short courses of interest - both interest in attending and interest in delivering - in June.

We received some feedback from students regarding interest. Based on responses, two themes were chosen this year (2022) - Machine Learning/Model Inference and Communicating Biological Physics.

The Tutorial Chair contacted several experts in these fields who might potentially be interested in delivering these. 4 lecturers for each tutorial were finally confirmed.

The Chair collaborated with each set of lecturers separately to come up with the details of the proposal (see above) by the deadline.

Submissions were made to the APS Tutorial Organizer and accepted by APS by late July.

APS then follows up with lecturers regarding paperwork for honorarium, materials to share etc.

[Nominating committee:](#)

2022 Committee membership: Gardel (Chair), Mo Das, Lubensky, Nemenman, APS appointee (John Marko)

The Nominations Committee is in charge of identifying capable candidates willing to be put on the ballot for open DBIO Executive Committee positions. Below “Chair” refers to Nominating cmte chair.

1. The Nominations Cmte typically meets 2-4 times in August/September so that the election may occur in October.
2. Nominees must meet the membership requirements in the Bylaws.
3. Per Bylaws, if by October 1 as many as five percent of the total Division membership (determined on December 31 of the year preceding the election) suggests the same person for the same office, and that person agrees to run, then that person shall be nominated. The Nominations Committee must then provide enough other nominations for a slate. In 2022, there was consensus that fielding more than the required number of candidates for each open position was undesirable (this means 2 candidates for each open seat).
4. Starting early September, Cmte discusses and draws up a rubric of desirable qualities before discussing any specific individuals.
5. Cmte members circulate some names and Chair annotates the list, especially noting past service. Past service in a lower office was a plus when being

considered for higher offices. Any candidate who ran unsuccessfully in the most recent election was not fielded again this time, but could be in future.

6. Ways to identify candidates:
 - a. Google form (online tip sheet) to self-suggested and member-suggested names. Advertised at the Annual Meeting in March and again on other occasions via email. All were added to the working list and annotated as above.
 - b. Canvassing Chair sends an email to the general membership asking for ideas for nominees including self-nominations via the tip sheet. This email must be sent early (April just after the meeting), so that the suggested nominees can be vetted by the nominating committee.
 - c. List of past candidates from prior year's Nominations Cmte Chair
 - d. Active solicitation of candidates over the course of the year by Executive Cmte members (and in some cases over several years)
 - e. Brainstorming by the Nominations Cmte
7. Chair consults with APS (Unit Operations Manager, Ericka Stansbury) to make absolutely sure we know which candidates meet eligibility criteria. Note that APS employees, including full-time journal editors, are ineligible due to COI. Also no one may run for DBIO office while also running for office in any other APS unit.
8. Cmte gives careful consideration to diversity along several axes: balance of sub-fields of biological physics, balance of approaches used to study problems (experiment/computation/theory), geographic diversity, institutional diversity. This is considered not only the proposed new Excomm members but also the composition of the proposed Excomm including existing members that will carry over. Cmte must ensure that two candidates from the same institution are not competing for the same office.
9. As names are selected, Chair proposes to them by email phone, outlines the duties, and offers them a few days to think it over. When a candidate declines to run, cmte goes down its list if necessary adding names until a full slate of willing candidates has been found.
10. When a candidate agrees to run, the DBIO Secretary/Treasurer requests a photo, short bio, and short statement (<250 words but can be much shorter). In 2022, Chair circulated some samples of past statements. (Photos are not required, but if submitted must be in a 100:124 aspect ratio to upload without skewing. APS can assist with this.)
11. DBIO Sec/Treas, who communicates with the APS (through the Unit Service Desk Email Request Form) submitting the short bios, photos, and statements. The ballot's "Welcome Page" should also include names of all officers and MALs (and now Early Careers) who will carry over, to let members assess overall diversity.

12. Sec/Tres conducts election online ASAP. Nov 1 – Dec 1. Election closes Dec 1, and cmte Chair informs all candidates of results of the election (see 2021 sample letter below). Then S/T announces results to members.
13. Sec/Tres informs new ExCom members of the calendar for the ExCom activities to begin orientation, and specifically communicates the dates for their required participation at various events, depending on role.

Fellowship Selection Committee:

2022 Committee membership: Gopinathan (Chair), Shaevitz, Fisher, Ashkar, Peleg

1. The Fellowship Committee's role is to review and rank the qualifications of all nominated fellowship candidates and can not themselves be candidates.
2. The fellowship committee is led by the DBIO Vice-Chair. See Bylaws for its composition. No Early Career members are allowed on this committee. It is recommended that the DBIO Chair-elect sit on the committee.
3. Nominations are due to the APS by June 1. This can be extended by one month through request to the APS. On May 1, one month before the nomination deadline, the committee Chair reviews the roster of nominees and contacts the Canvassing Committee if the pool needs to be expanded.
4. The APS has set out guidelines for Conflicts of Interest (COIs, (<https://aps.org/programs/honors/committee.cfm#hTab-conflicts-of-interest-427789-5>) along with Ethics Guildlines (<https://aps.org/policy/statements/guidlinesethics.cfm>). After the nomination deadline, committee members review the list of nominees and disclose to the entire committee any conflicts of interest as described above. The committee then unanimously decides on a response (ranging from case-by-case recusal to replacement) based on the level of the conflict.
5. The APS describes the fellow selection as follows, "The criterion for election is exceptional contributions to the physics enterprise; e.g., outstanding physics research, important applications of physics, leadership in or service to physics, or significant contributions to physics education." The committee will primarily consider and score each candidate in three categories: (i) scholarship, (ii) service to community, and (iii) teaching and mentoring. The committee is also encouraged to consider as secondary contributions: uniqueness of personal trajectory, barriers overcome, and other unique factors of the candidate's portfolio. There is no difference or preference for fellows from the US compared to non-US.

6. The scores are compiled by the Chair and shared with all committee members. These scores are used to guide discussions during a video conference meeting of the committee held to rank the nominees. It is to be noted that it is recommended that the Chair does not participate in the ranking process but facilitates the discussions and uses their vote only in case of ties.
7. Following this meeting, the committee recommends, via an unranked list, the number of fellow candidates that APS has requested from DBIO, in addition to a ranked list of qualified alternatives. The APS Committee on Fellowship will use these alternate candidates to assign any additional slots not used by other units. The lists as well as a Chair's Report of the procedures followed and COI procedure is then sent by the DBIO Vice-Chair to the APS by August 1.
8. The outgoing DBIO Chair-Elect communicates directly with nominators of specific candidates whose applications the committee felt could be strengthened for next year. It is recommended that this is done only if the nominators reach out to the committee for feedback.
9. Candidates must be current APS Member (<https://www.aps.org/programs/honors/fellowships/nominations.cfm>). If a candidate's membership with the APS has lapsed on the membership, they can petition a waiver by directly emailing to the APS honors program.
10. Nominations are good for two years. Past year's nominations are automatically included in the APS online ranking system for the current year.

The APS can send thank-you letters to the applicants who were not selected before the announcement of the awards. The Committee Chair can request to customize the thank-you letters that encourage the applicants to apply again next year.

2023 APS Fellows Nominated by the DBIO unit:

Olga Dudko. The University of California, San Diego Citation: "For using nonequilibrium statistical mechanics theory to model the response of biomolecules, macromolecular complexes, chromosomes, and viral envelopes to forces, thus providing a framework to identify and characterize biological processes from kinetics experiments."

Thomas Gregor, Princeton University & Institut Pasteur

Citation: "For the development of the fruit fly embryo as a physics laboratory, uncovering unexpected precision in the control of gene expression and the flow of information through genetic networks, illuminating the physics of fundamental cellular processes."

Gregory J Stephens, VU Amsterdam & OIST Graduate University

Citation: "For foundational contributions to the new field of the physics of animal behavior, and especially for understanding the statistical structure and the dynamics of behavior of a nematode, *C. elegans*."

Roya Zandi, University of California, Riverside

Citation: "For the application of fundamental theories of elasticity, electrostatics, and phase transitions to elucidate unique physical phenomena arising in viral capsid formation, notably the origin of icosahedral symmetry, the role of disclinations, and the branched topology of RNA genomes."

Early Career Award Selection Committee

2022 Committee Membership: Raghuv eer Parthasarathy (2021, 2022, 2023, Chair in 2022), Bill Bialek (2021, 2022), Michael Desai (2022, 2023), Ross Jennifer Ross (2 years) (2021, 2022), Arpita Upadhyaya (2021, 2022), Cheung(Ex officio)

This is a unit level award that was created in 2021. It is expected that the Operating procedures will need refinement over the next several years. As a unit-level award, the Executive Cmte can alter the eligibility and procedures with a simple vote. No other APS approval is required. This award is not mentioned in the bylaws. It is expected that this will change if/when the award becomes a APS-level award. A description of the award is found here:

<https://engage.aps.org/dbio/honors/prizes-awards/dbio-early-career-award>

2022: The committee met on Wednesday Sept. 7, and had had several email discussions in the months prior about methodology, including scoring rubrics and criteria. Like last year, the committee emphasized work done during the candidate's independent career, originality of the research, impact on the field of biophysics, and citizenship / activity in the biological physics community. The committee also considered diversity and adversity, noting especially the candidate statements. Also like last year, the committee felt that the award should be targeted towards faculty who are truly early career, i.e. pre-tenure or five years from start of independent position. All applications were reviewed by each committee member (except in cases of conflict).

The meeting followed the assignment of numerical scores by each committee member based on the following criteria (the same as last year): Originality of research (1-5), Impact of research (1-5), Citizenship in the scientific community (1-5), Diversity /

Adversity (yes/no) (0/1). All scores were shared prior to the meeting, and served as the starting point of discussion.

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.
- The committee would like to note that it deeply impressed by all the applicants, and we suggest that in DBIO's communications with those who weren't selected, it be conveyed that they are warmly invited to apply again next year (assuming eligibility).
- 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.
- We also note that one very strong candidate is at a primarily undergraduate institution, and has nonetheless been able to conduct an impressive research program. We suggest that DBIO may wish to consider a separate award for candidates at primarily undergraduate institutions, or two tracks of this award. (We are aware of the [APS undergraduate institution prize](#), which is APS-wide, and not early-career.

Note: This is not a unit-wide award, so the APS will not announce our selection with other society-wide awardees in their news release. Therefore, the news of our selection was not embargoed. The Unit Chair can inform the awardee about the selection. The APS can send thank-you letters to the other applicants who were not selected before the announcement of the award. The Committee Chair can request to customize the thank-you letters encouraging applicants to apply again next year.

2023 Recipient: Sujit Datta, Princeton

"For creative experiments and insightful analyses of bacterial dynamics and organization, and for inspiring the community to engage with these complex systems."

DBIO Travel Awards Selection Committee:

2022 Committee membership: Ashkar (Chair), Forde, Marzen, Nourmohammad
One Early Career member on this committee.

In 2022, the DBIO Execomm decided to expand the eligibility of the DBIO travel awards to

Students, postdocs, or early career faculty, as well as the number of travel awardees per year. DBIO Chair (Cheung) charged the Travel Award Committee Chair (Ashkar) to establish the procedures to select awardees and the form of the applications.

Committee Chair has requested the APS to establish a web based application (a word template is here [w DBIO Travel Award Form_Updated.docx](#)) for applicants in replacement of the submission by emails.

1. Applicant Qualifications:

- a. Applicant can be a graduate or undergraduate student, postdoctoral researcher, or early career faculty.
- b. Applicant must be the first author of a contributed paper (talk or poster) in a session sponsored by DBIO at the March Meeting. Applications will be evaluated based on merit, with specific attention to applicants with strong financial needs or from underrepresented and historically marginalized groups.
- c. Applicant and advisor (with the exception of early career scientists), domestic or foreign, must be members of DBIO, not just of the APS. New members can sign up and are encouraged to do so before Dec. 31 for verification purposes (it is only \$8 for APS members to become also DBIO members!).
- d. Applicant cannot be a former recipient of the award.
- e. Applicants (students or postdocs) must use the online application website to submit an application and request a letter of support from research advisor

2. Committee Responsibilities:

- a. Committee will set a deadline for the travel award that aligns with the abstract submission deadline for the annual APS March Meeting. Solicitations will be made by the Sec/Tres with reminders about submitting abstracts.
- b. Applications will be shared by the APS point-of-contact with the committee chair and will be distributed to the rest of the committee, with clear instructions for COI and for a deadline for application reviews.
- c. Committee will rank applications by mid-December.

- d. The ranked list will be sent to Sec/Tres to check DBIO status of applicant (and advisor).
- e. Committee will finalize the list of awardees by early January.
- f. Committee chair should send the list of awardees to APS to be published on the award webpage.
- g. Committee chair should contact session chairs before the APS March Meeting to encourage the announcement of the travel awards while introducing awardees before their talks.

Names of the awardees in 2023:

Postdocs: Helen Ansell (Northwestern U.)

Graduate students: Atreya Dey (U. Texas Austin), Louis González (U. Pittsburgh), Sebastian Gonzales La Corte (Princeton), Arthur Hernandez (UC Santa Barbara), Euan Joly-Smith (U. Toronto), Gülce Kardes (U. Colorado Boulder), Zoë Lange (Goethe U.), Daniel Swartz (MIT), Nganfo Willy Aniset (U. Dschang)

Undergraduate students: Emmy Blumenthal (Boston U.), Alexander Clark (UC Riverside), Ashley Martinez (North Arizona U.)

[Award for Outstanding Doctoral Thesis Research in Biological Physics Selection Committee](#)

2022 Committee Members: Peleg (Chair), Gopinathan, Marzen, Mugler

The committee Chair consults the previous year's committee Chair for information from last year's selection process and the criteria used.

The committee Chair consults the DBIO by-laws for the list of criteria and shares it with the committee members before any review of the applications. Committee also reviews the Unconscious Bias Resources made available by the APS.

The 2022 committee consisted of two early career members, one mid-career member, and one senior member. Following the APS guidelines, the committee Chair abstained from scoring nominations and would have intervened only as a possible tiebreaker, which was unnecessary. In 2022 Unit Chair Margaret Cheung received a note from the APS that the Doctoral Thesis Award Selection Committee should install a vice chair who will serve again as Chair in the following year.

The committee members were all asked to rank the applications before the deliberations meeting which took place on July 21 2022, 1-2pm MT. Committee members were asked to report any conflict of interest before reviewing applications. There were no conflicts declared. 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 the recipient of the 2023 DBIO Dissertation Award.

DBIO members were messaged by e-mail and in the annual business meeting and urged to nominate strong, diverse candidates.

2023 Awardee:

Dr. Jonathon Yuly Princeton University

"For showing that a universal free energy landscape underpins near-reversible electron bifurcation reactions and assures their high efficiency for transducing energy without short-circuiting, thus addressing a central puzzle in molecular bioenergetics that had persisted for over 50 years."