

FACULTY MEETING MINUTES**3:00 – 4:15 p.m.****September 11, 2025****FRNY 3059 & Zoom**

Faculty Attending: Agrawal, Bao, Basaran, Beaudoin, Bernal, Chutka, Corti, Hebner, Hibbitts, Iglesia, Li, Liu, Mansson, Martinez, Masuku, Miller Narsimhan, Pol, Ramkrishna, Reklaitis, Ribeiro, Robert, Schultz, Tackett, Wang, Won

Staff Attending: DeLong, Fetter, Gonzalez, Johnson, Moser, Nagy, Raderstorf

The April 22, 2025 faculty meeting minutes were approved with no corrections.

Announcements:

- Justin Peer has joined as the CHE Shipping & Receiving Clerk. His working hours are 8:00 a.m.– 5:00 p.m. at the loading dock.
- For updates of research webpages, and any news items needing advertised, please send this information to Chris Murray.
- 2025 Kelly Lectures Sept. 22-23 (Provost Frank Doyle, Brown University)
 - Faculty Seminar: Sept. 22, 9:00 – 10:15 a.m. FRNY 3059
 - Graduate Seminar: Sept. 23, 3:00 – 4:15 p.m. FRNY G140
 - Banquet: Sept. 22, 6:30 p.m. Jane’s Gourmet Deli & Catering
- The call for nominations for the 2026 Kelly Lecturer will be emailed next week by Joshua Gonzalez. Faculty are strongly encouraged to submit names of desired nominees.
- 2025 Mellichamp Lecture (Prof. Linsey Seitz, Northwestern University)
 - Seminar: Oct. 7, 3:00 – 4:15 p.m. FRNY G140
 - Banquet: Oct. 7, 6:30 p.m. Jane’s Gourmet Deli & Catering
 - Rob Crane, Candidate for 2026 AIChE Board of Directors
- CHE 300 Mentoring; please meet (in-person, remote) with mentees.
- The ChE Safety Committee is organizing a Safe and Sound ChE event on Thursday, Sept. 25, 10:00 a.m. – 2:00 p.m. There will be hands-on activities and information from EHS.

Undergraduate Committee:

1. The Undergraduate Committee met this week and discussed an upcoming issue related to Biology that we will continue to address. Specifically, the Biology course that our undergraduates previously took was canceled a couple of years ago. At that time, the Biology Department allowed our students to take an equivalent course; however, they are no longer permitting this without the required prerequisite. The Biology Department created NBME Bio 230 specifically for our program, and we agreed that it was a good fit for our students. There was also a bio-selective course option to provide additional flexibility, which was more advanced and challenging, though most students chose to take Bio 230. Currently, the Biology Department is reducing course offerings and no longer allowing students outside their department to enroll in certain classes without the appropriate prerequisites. As a result, the only remaining courses available to satisfy the bio-selective requirement are biochemistry courses. Given this situation, we plan to revisit the biology requirement for our program and consider possible replacements for the future. The Undergraduate Office will also need to coordinate with ABE and BME, as this change will have an impact on our students.
2. The ABET visit is scheduled for Sunday, September 28, with Steve R. Duke from Auburn University’s Chemical Engineering Department serving as our program evaluator. Faculty teaching undergraduate courses

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should have received related communication from Karissa. The visit will include a tour of the building and labs on Sunday, followed by meetings with individual faculty, staff, and two IAC members on Monday, as requested by the evaluator. Dr. David Corti reviewed the key areas of evaluator interest, including the assessment and feedback process, procedures, assessment documents, program objectives, course outcomes, and periodic reviews—all topics addressed in recent emails. The evaluator also requested a meeting with the entire senior class, which will be accommodated.

Graduate Committee:

1. The latest project list includes 27 funded and 20 pending projects, which will be distributed to graduate students early next week. The Graduate Committee will discuss the selection process and plans for the remainder of the semester. Due to the delayed release of this list, advisor selection will also be postponed—likely occurring near the end of the semester or just before the start of spring classes. Ideally, selections should be completed before course enrollment to help students choose appropriate electives.

Grad Recruiting Committee:

- Nothing new to report.

Faculty Search Committee:

1. Even though the department is in a transition period, faculty hiring should continue to be considered as opportunities arise. One immediate topic is the Advanced Chemistry Initiative, a cluster hire involving Pharmacy, Chemistry, Chemical Engineering, and Biology. Jianguo Mei chairs the search committee and has requested one or two faculty representatives from each participating department. Research focus areas include Advanced Chemical Synthesis, Catalysis, Process Chemistry and Chemistry Enabling Technologies, AI & Automation, and Advanced Metrology & Process Quality Assurance (see the attached document Faculty Cluster Hire in Advanced Chemistry for details). The faculty agreed that the School should participate, and Drs. Xiaoping Bao, David Hibbitts, and Vilas Pol volunteered to serve. Dr. Corti will submit the volunteer names to the committee, with the expectation that one or two will be selected.
2. An informative discussion was held regarding the document titled “Talent-Based Hiring for COE in 25–26: 4 Steps in Looking for Top Talent.” The initiative formerly known as Moveable Dream Hire has been renamed Talent-Based Hiring, and this ongoing opportunity is especially important given recent faculty departures. Dr. Corti emphasized that faculty should identify key research areas first, then specific candidates—ideally distinguished scholars, though exceptional junior faculty should not be excluded. The Dean has requested a list of potential candidates from our School, with a goal of finalizing it by the end of the semester or early next year. Discussion at the October faculty meeting will focus on determining priority areas, with additional meetings scheduled if needed to ensure sufficient discussion time.

Meeting was adjourned at 4:13 p.m.

Synergistic Faculty Recruitment Initiative in Advanced Chemistry from Science and Engineering to Technology

Purdue University Main Campus | Indianapolis and West Lafayette, IN

Tenure-Track/Tenured Faculty Positions at Assistant and Associate Ranks

OR

Tenure-Track/Tenured Faculty Positions at Associate and Full Ranks (with Named Professorships Available for Outstanding Candidates)

Purdue University invites applications for multiple tenured or tenure-track faculty positions as part of a multi-department strategic faculty recruitment initiative in **Advanced Chemistry, Science and Engineering**. This strategic initiative will help position Purdue as a global leader in clean and sustainable chemistry innovations for onshoring critical chemicals and materials for pharmaceutical manufacturing and beyond.

This initiative will drive innovation at the interface of **chemistry, chemical engineering, biochemistry and computing**, aiming to:

- Advance chemical and biochemical processes that are safe, efficient and costs effective.
- Enable onshoring of pharmaceutical production through safe, clean, efficient technologies
- Integrate transformative business strategies into more efficient manufacturing models

Participating departments include: Chemistry, Biochemistry, Chemical Engineering, and Medicinal Chemistry and Molecular Pharmacology.

Areas of Research Focus

We invite applications from scholars working in the following areas, as well as related or emerging fields that complement the cluster's interdisciplinary goals:

1. Advanced Chemical Synthesis, Catalysis, Process Chemistry and Chemistry Enabling Technologies

- Earth-abundant catalysts and inherently clean chemical processes to replace expensive, scarce, and/or toxic metals used in the synthesis of chemical and drug molecules
- Enzymatic catalysis, electrocatalysis, photocatalysis,

- Continuous flow chemistry for safety, efficiency, and scalability by enabling precise control of reactions in continuous systems, reducing waste and improving yields.
- Inherently clean chemical and pharmaceutical processes
- Thermal hazard and process safety advancements via reactor engineering
- Innovations that redefine chemical manufacturing and critical materials sourcing

2. AI & Automation

- Predictive modeling for chemical design
- Robotic platforms for chemistry discovery
- Self-optimizing reactors for waste reduction in continuous flow systems
- AI for material selection, synthesis design, and laboratory orchestration
- Data Driven Optimization for closed loop synthesis
- AI for material selection, synthesis design, and laboratory orchestration
- AI guided identification and design of biosynthetic pathways and metabolic engineering

3. Advanced Metrology & Process Quality Assurance

- Process analytical technologies (PAT) and precision instrumentation
- IoT-enabled control systems and digital twins
- AI-driven real-time anomaly detection and predictive maintenance

Faculty Responsibilities

- Establish a vigorous, externally funded research program
- Contribute to the education and mentoring of graduate and undergraduate students
- Collaborate across disciplines to solve complex global sustainability challenges
- Translate discoveries into scalable industry practices and leadership strategies

Strategic Advantages at Purdue

Faculty hired under this initiative will join a vibrant ecosystem of interdisciplinary centers and institutes, including:

- **Purdue Institute for Drug Discovery**
- **Center for Analytical Instrumentation Development (CAID)**
- **William D. and Sherry L. Young Institute for the Advanced Manufacturing of Pharmaceuticals**
- **Dane O. Kildsig Center for Pharmaceutical Processing Research (KCPPR)**
- **Dauch Center for the Management of Manufacturing Enterprises (DCMME)**

[James Tarpo Jr. and Margaret Tarpo Department of Chemistry](#) at Purdue University is a global leader in cutting-edge research, education, and innovation, renowned for its Nobel Prize-winning advancements in organic chemistry and top-ranked analytical chemistry program. It pioneers transformative work in green synthesis, catalysis, and pharmaceutical applications, contributing to real-world chemical, pharmaceutical and materials development. The department's entrepreneurial success is underscored by drug discovery initiatives generating hundreds of millions in royalties. State-of-the-art facilities like the AI-Guided Drug Discovery and Automation Center, High Throughput Experimentation Catalysis Center, Center for Autonomous Materials Discovery, and High Throughput DESI Facility leverage artificial intelligence, robotics, and automation to redefine scientific exploration. These resources position Purdue at the forefront of sustainable chemistry, advanced materials, and next-generation pharmaceutical technologies, fostering collaboration across academia and industry to address global challenges.

Purdue's [Davidson School of Chemical Engineering](#) has demonstrated excellence in the development of continuous flow chemistry for pharmaceutical compounds (Nagy, Reklaitis), and sourcing critical materials for defense applications through the Purdue Energetic Research Center (PERC; director: Beaudoin) and for national security interests (rare earth elements: Wang). ChE also has world-class research teams that develop heterogeneous catalysts (Gounder, Greeley, Hibbitts, Iglesia, Miller, Ribeiro), enzymatic catalysts (Morgan, Ramkrishna) and electrocatalysts (Greeley, Tackett) for sustainable chemistry, including research through the \$55M NSF ERC on Innovative and Strategic Transformation of Alkane Resources (CISTAR; director: Ribeiro). Purdue ChE is also the headquarters for the Purdue Process Safety and Assurance Center (P2SAC; co-directors: Basaran, Mentzer) that performs research focused on process safety improvements in various industries, particularly for reaction chemistries practiced in the pharmaceutical sector, which is heavily represented in P2SAC's industrial consortium. The School has also launched a new professional MS program on Pharmaceutical Engineering in Indianapolis and West Lafayette, in partnership with Chemistry and other units on campus.

Housed in Purdue's College of Pharmacy, the [Borch Department of Medicinal Chemistry and Molecular Pharmacology](#) offers a unique multidisciplinary and collaborative environment with synergistic strengths in molecular pharmacology, neuroscience, cancer biology, immunology/infectious diseases, medicinal chemistry, chemical biology, drug design, systems biology, and computational chemistry. Extensive opportunities for collaboration also exist within a vibrant community of scientists in the Colleges of Agriculture, Engineering, Health and Human Sciences, Science, and Veterinary Medicine. The Department is highly engaged in collaborative research initiatives led by the Life Sciences Institutes, including the Purdue Institute for Integrative Neuroscience (PIIN), the

Purdue Institute of Inflammation, Immunology and Infectious Disease (PI4D), the Purdue Institute for Drug Discovery (PIDD), the Purdue Institute for Cancer Research (PICR), and the Regenstrief Center for Healthcare Engineering (RCHE).

Qualifications

- A Ph.D. in chemistry, chemical engineering, biochemistry, or a related discipline by the start of the appointment
- A record of research excellence and productivity commensurate with rank
- Demonstrated potential or record of interdisciplinary collaboration and impactful scholarship
- Commitment to inclusive teaching and mentorship

Outstanding candidates may be considered for named or distinguished professorships.

Application Process

To apply, please submit a cover letter, CV, research statement, teaching statement, and contact information for at least three references. Review of applications will begin on June 11, 2025 and continue until positions are filled. Applications should be submitted at:

[Insert application portal link or Purdue Careers link]

A background check is required for employment in this position.

Ideally there should be 5 links behind so they can choose to apply to specific units under this search – this is how we did the computes searches with CS and ECE

Purdue University is an equal opportunity/equal access university.

Talent based hiring for COE in 25-26. 4 steps in looking for top talent

Finding

Name and info submitted (survey, drop in)

Feedback from DFB within 1 week

More info needed

Yes, DFB contacts head

Maybe
Doubtful

Rolling all year, push for Aug-Sept.

Ready

Head initiates interaction (seminar, conference, etc.)

Head informally gets faculty feedback

If faculty are broadly supportive
Head reports to COE
Or not

Act ASAP feedback with 90 days

Aim

CV and nomination checked by MDH committee
Approved or not

Memo prepared by COE

Sent to Provost for
Yes. No

To provost within 3 weeks of faculty feedback

Fire

Recruiting visit including COE, outside school

Goes well

Extra visit if needed

Offer made

On campus recruiting within 90 days of Provost ok

Engineering faculty,

I want to follow up on my message from Tuesday and address Purdue Engineering's approach to **talent-based hiring**. We want to bring **established scholars and exceptional rising stars** to Purdue in areas where a great colleague will be the spark that ignites even higher performance of Purdue. A broad search for talent needs grass roots faculty buy-in, and that starts with getting people *you* recommend; the future colleagues *you* want to work with and that *you know* will elevate Purdue. There will be two approaches to getting those contacts this year:

1. A quick survey ([click here](#)) where we ask for the external scholar's name and link to a bio, examples of prior external recognition, and a short description of the evidence and area where the scholar is doing exceptional work. This could take many forms, for instance an example impressive and highly cited paper, a link to a keynote presentation at a conference, or a recent start-up success would help us see how the individual will help raise our profile (and how we can help raise theirs). I will reach out to you and the head of the potential unit within a week of a nomination with feedback.
2. Since 2018 the COE ADF has welcomed drop in visits for "Talent Search Thursdays", and this year will continue the tradition with a little twist. I'll be at Saxby's in the basement of Armstrong Hall on most Thursday mornings from 9:00 - 10:00 for drop in discussions of this (or any other topic you might want to bring up).

While the college will be doing some broad, disciplinary-spanning advertised searches, your contacts and experience will be crucial in identifying leaders that want to be part of our team through talent-based hiring. 400+ sets of eyes is better than just a few. Talent-based searching will be active all year, but we hope for a very strong push at the start of the year.

When we say talent-based hiring, we mean identifying faculty, researchers, and leaders that either (1) have already been recognized with pinnacle recognitions in the field, or (2) we can demonstrate with evidence that their current successes at their career level and their trajectory is truly exceptional. We're looking for faculty that are clearly out-performing others in the field at their current rank.

I'm sure each school is mobilizing its own efforts to find the best candidates for talent-based hiring, but we also know the interdisciplinary ties are crucial to most successful hires. So please use one of these two ways to provide your input. Regarding the drop-in, there are a few Thursdays (like EAPC meeting days) where I can't be there, so if you want to check ahead of time send me or Shawn Flora (florask@purdue.edu) a note. Of course, if this time doesn't work just reach out and we'll find a time that does, or that link above works any time.

Looking forward to hearing from you,

Dave

(Aug 28, 2025)

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David Bahr
Senior Associate Dean for Faculty, College of Engineering

Engineering Head Colleagues,

At dinner last night with the president, all the Deans were asked to present their current (beginning) list of proposed talent based hires. The modern form of faculty hiring at Purdue University is now talent based search, replacing the old, traditional topic based search, of which only a handful are being permitted across the University.

In my discussions with some of the heads questions have been asked about how many talent based search nominations to put forward from their Unit. Dave will be in touch with you, but here are some guiding principles:

1. While each School can present their prioritized list, the length of the mutually approved list will vary by needs of/ or commitments made to each unit, and of course depending on the excellence of the proposed names. Dave will discuss with each of you on what our expectation on the length of your list is.
2. In all cases, please do not simply pass on to Dave recommendations from your faculty; we expect the Heads to use their judgement on the level of excellence behooving a School that is hungry and ambitious to move up the rankings. As such please (a) feel free to say No to some nominations and encourage/help your faculty to go back and think of stronger candidates, use Academic Analytics to identify nominations and suggest to faculty etc (b) prioritize among the nominations you receive and only forward names you feel comfortable forwarding with your name behind it.

Arvind Raman
John A. Edwardson Dean and Robert V. Adams Professor
College of Engineering, Purdue University