



Student Chapter Annual Report 2019
University of Dayton

Officers

Position	Name	Member #	Email
President	Mallik Mohd Raihan Hussain	3746683	hussainm1@udayton.edu
Vice President	Yunyang Li	4118266	liy105@udayton.edu
Treasurer	Yining Liu	3666338	liuy39@udayton.edu
Secretary	Xiaowei Ge	4150580	gex002@udayton.edu
Advisor	Imad Agha	1012684170	iagha1@udayton.edu

Member List: 31

	Name	Expires
1	Jordan Adams	11-Oct-19
2	Muhammad Alam	28-Aug-19
3	Hammid Al-Ghezi	13-Feb-19
4	Joshua Burrow	4-Oct-19
5	Hongwei Chen	16-Nov-19
6	Xuesong Gao	18-Oct-19
7	Xiaowei Ge	12-Sep-19
8	Rudra Gnawali	7-Oct-19
9	Pengfei Guo	12-Jun-19
10	John Hennen	29-Dec-18
11	Runzi Hou	8-Nov-19
12	Mallik Mohd Raihan Hussain	11-Feb-20
13	Elforjani Jera	9-May-19
14	Farzia Karim Nishu	28-Aug-19
15	Ankita Khanolkar	11-May-19
16	Sarah Krug	5-Oct-19
17	Roseanna Lawandi	26-Sep-19
18	Yuwen Li	12-Sep-19
19	Yunyang Li	17-Jul-19
20	Yining Liu	28-Aug-19
21	David Lombardo	19-Nov-19

22	Dinesh Mirando	3-Feb-19
23	Andrew Reinhardt	5-Sep-19
24	Eddie Ruff	25-Jan-19
25	Michael Settle	13-Feb-19
26	Gary Sevison	14-Oct-19
27	Shuo Sun	29-Dec-18
28	Eric Turner	29-Sep-19
29	Yimin Zang	22-Jan-19
30	Sichao Zhou	30-Aug-19
31	Haowen Zhou	11-Oct-19

Alumni Roster: 1

Name	Company	Graduation Date
Michael Amonson	Boeing Defense, Space and Security	November 2017

2018 Activities

Academic Activities/Technical Talks

- **Student Presenting Optics Research Training Symposium (SPORTS)**

Overview: It is without a doubt that presentation and debate skills for scientists are just as important as the science. Recently, our members requested an opportunity to prepare for conference oral presentations and the MS and PhD defenses, so we created SPORTS! SPORTS is a student run symposium held bi-weekly for members to practice and master oral presentation skills with a chance to win up to \$100. This year we had 14 students present on various optics and photonics research areas. Each member received peer feedback and a score based on ..., ..., and ... to determine a 1st (\$100) and 2nd (\$50) place prize winners. Pizza and wings were served for lunch at each event to increase student participation. Each session served as both a recruiting professional development event.

Name list of every symposium:

January 26, 2018 Zairui (Jerry) Li, Pengfei Guo, Eric Turner

February 10, 2018 Ankita Khanolkar, Mallik Hussain

February 24, 2018 Joshua A. Burrow, David Lombardo

March 9, 2018 Andy Reinhardt, John Hennen

March 23, 2018 Farzia Karim, Partha Banerjee (Guest talk)

April 13, 2018 Yunyang Li, Xiaowei Ge

April 20, 2018 MD Shah Alam, Sarah Krug



- **Coffee Talks**

Every other week during the fall semester, we held seminars, called ‘Coffee Talk’, and invite professors to present their knowledge on latest research topics over coffee and light refreshments. This promoted our learning in a friendly environment. We had (on an average) 15 attendees per seminar.

September 11, 2018

Prof. Andrew Sarangan: “Next-gen automotive display technology & electro-optics”

September 25, 2018

Prof. Partha Banerjee: “Fingerprints and optics: elementary, my dear Watson!”

October 9, 2018

Prof. Chenglong Zhao: “Additive micro/nano-manufacturing & my personal view on research”

October 23, 2018

Prof. Mikhail Vorontsov: “Laser material processing: subtractive, additive and destructive”

November 6, 2018

Prof. Joseph Haus: “The process of discovery: a personal perspective on the production of new knowledge”

November 20, 2018

Prof. Edward Watson: “Lidar: from ‘What’s the buzz’ to ‘How low can you go?’”

Outreach Activities/Demonstrations

- **Techfest 2018**

February 16-17

Each year, Sinclair Community College sponsors a weekend outreach event that allows schools and businesses in the Dayton area to demonstrate the use of science and technology within their fields of expertise. The event is geared mostly towards elementary and middle school students and their families. The University of Dayton’s Electro-Optics Department and SPIE/OSA Joint Student Chapter annually hosts an exhibit table at this event. We demonstrated some uses of light in technology, including examples of polarizers and diffraction gratings as well as a display related to fiber optics. This year we demonstrated simple ideas of optics e.g. optical fiber, lenses, polarizers, modulation/demodulation. There were approximately 75 exhibits, 36 speakers, and 2,400 registered students (NOT including their parents) at the 2018 Techfest. The SPIE ‘Optics Outreach Kit’ will be very useful for TechFest 2019.



Professional Development Activities

- **Proposal Writing**

February 15-16, 2018

The workshop given by Prof. Andrew Sarangan is primarily for engineering graduate students preparing a summer research proposal (GSSF). Contents include how to structure your proposal, how to write to different audiences, the Heilmeyer's Catechism, ethics and conflict of interests, and how proposals are reviewed.



- **IONS conference**

This year, the chapter co-hosted an IONS conference with Purdue University that consisted of posters and oral presentations from student attendees, invited speakers, industry panels, an exhibition and many opportunities for the chapter members to network and expand their professional mettle in optics and photonics. We were proud to host several international students representing China, Brazil, Germany, Czech.



Social/Networking/Recruitment Activities

- **Officer Meeting**

January 18, 2018

This meeting officers and advisors from the OSA/SPIE chapters met to discuss the IONS conference details and SPORTS.

Every two weeks from February 14, 2018

This meeting officers and advisors from the OSA/SPIE chapters met to discuss the IONS conference details

October 20, 2018 (Election)

This meeting was scheduled to elect new officers, amend the chapter constitution, and encourage more students to participate in the student chapter and join SPIE and OSA. Cookies and punch were provided to boost attendance. The officers elected this year included Mallik Mohd Raihan Hussain as president, Yunyang Li as vice president, Yining Liu as treasurer, and Xiaowei Ge as secretary.

November 01, 2018

Officers and advisors from the OSA/SPIE chapters met to discuss knowledge transfer and ideas about activities for the coming year.

November 16, 2018

Discussed the deadlines for SPIE/OSA activities, the Ohio optical alliance and holiday party.

- **Pi day party**

March 14, 2018

- **New Academic Year Social and Happy hour for EOP students**

Sep 1, 2018

we held an annual welcome party for the newly admitted students and new chapter members. Everyone from the department participated in the welcome party. \$150 for food.

- **Fall Hike**

The hike was held in Sugarcreek Metro Park under the guidance of Prof. Joseph Haus. Chapter members took care of transportation which resulted into a good turnout for a weekend hike.



- **Holiday party**

December 8, 2018

A potluck dinner was held to celebrate Christmas, the New Year, and the end of the semester. Chicken wings and drinks were provided by the student chapter. Attendees provided sides and desserts. Approximately 30 students, faculty, and family attended.



Activities that Build Industry Connections

- **Silfex Tour**

Silfex Company visit- About 12 students visited a local glass company and learned a lot about the manufacturing technique of optical elements like lenses, prisms etc., lunch boxes were provided. \$100



- **IONS Conference**

The IONS conference also had industry panel sessions. We had 5 panel members at each leg of the conference. At the University of Dayton end we had representatives from big optics companies e.g. Altos Photonics, Thorlabs, Applied Optimization, Optonicus, Air Force Research Lab. Several companies participated in the industry expo.

Tentative 2019 Activities

Academic Activities/Technical Talks

- **Visiting lecturer**

Dr. Andrea Armani accepted our invitation for a technical talk on 28 February 2019. We will apply for 'SPIE Visiting Lecturer Grant' separately.

Estimated Attendee: 30

Estimated cost: \$100 (for pizza and light refreshment)

- **Students Presenting Optics Research Training Symposium (SPORTS)**

Every other week during the Spring 2019, we will hold a seminar, called SPORTS (Student Presenting Optics Research Training Symposium) and invite grad and Ph.D. students to present their work in a friendly environment open to all. SPORTS will announce one 'best presenter award' voted by the presenters (funded by OSA). The SPIE grant is for light refreshment.

Estimated Attendee: 20/session Estimated cost: \$120 (\$30/session x 4 sessions)

Outreach Activities/Demonstrations

- **TechFest 2019**

The chapter officers will volunteer for 'TechFest 2019' on the weekend of February 16-17, 2019. The theme of TechFest is to encourage the youth to follow a career path in STEM. The chapter will host a booth containing hands-on optics demos that explore basic ideas of lasers, polarization, diffraction, optical modulation-demodulation, fiber optics and other concepts to engage and inspire the grade schoolers. The 'Optics Outreach Kit' that we received from SPIE will help us in this regard. Estimated Attendee: 2400 students Estimated cost: \$50 (Handouts and giveaways)

- **National Science Olympiad**

We plan to coach the regional grade schooler for the optics part of the National Science Olympiad 2019 (May 31-June 1, 2019). We will try to form a tradition of coaching during NSO events. The grant will pay for the handouts, giveaways and light refreshments during coaching sessions and meetings.

Estimated Attendee: 20 Estimated cost: \$100

Professional Development Activities

- **Workshop**

Dr. Isaiah Hankel of 'Cheeky Scientist' accepted our invitation for a workshop on 'Networking: An Art and Science', 'Resumes & Transferable Skills' and 'Interviewing'. Expected schedule is August 2019. The grant will provide light refreshment for the attendees.

Estimated Attendee: 50 Estimated cost: \$100

- **Recruitment lecture**

We plan to bring in Mr. Tony Amarel, a senior recruiter of OpticsProfessionals LLC and advise us on the professional attributes that attracts most recruiters. Estimated Attendee: 50 Estimated cost: \$30 (for pizza and light refreshment)

Social/Networking/Recruitment Activities

- **New School Year Kickoff Meeting**

We hold an annual welcome party for new department students and new chapter members. This kickoff event is traditionally focused on new member recruitment. Estimated Attendee: 30
Estimated cost: \$150 (for pizza and light refreshment)

- **Spring/Fall picnic**

Following our department's long tradition, we will arrange two hikes (Spring and Fall) and picnics in 2019. The hikes and picnic provide a family-environment that helps our recruitment process. Estimated Attendee: 10-15/event Estimated cost: \$100 (for food and light refreshment)

- **Holiday Social**

A potluck dinner will be held to celebrate Christmas, and the end of the semester. Chicken wings and drinks were provided by the student chapter. Estimated Attendee: 30 Estimated cost: \$150 (for wings, fruits and light refreshment)

Activities that Build Industry Connections

- **Company tour**

We will arrange a field trip to a local company, 'Resonetics', specialized in optical manufacturing. Mr. Kevin Hartke, the CTO of 'Resonetics', will take lead on this tour. The grant pays for the transportation. We will need two vans. Estimated Attendee: 20 Estimated cost: \$50

- **Book-drive building**

We plan to arrange an alumni get-together in August 2019. We are also initiating a 'book-drive' to reuse books donated by the alumni. We are expecting alumni from big photonic industries e.g. Apple, GlobalFoundries, Lumiled to participate in this event. Estimated Attendee: 20 Estimated cost: \$150 (for pizza and light refreshment).

2018 Finances

Funding

Date	Amount	Source
N/A	0	OSA Activity Grant
N/A	0	SPIE Activity Grant
12/10/2018	100.56	IONS Conference Grant

Expenses

Date	Expense	Events
1/20/2018	13.14	Officers Meeting
1/26/2018	46.56	SPORTS 1
2/10/2018	43.96	SPORTS 2

2/14/2018	25.64	Officers Meeting
2/22/2018	180	Travel grant to chapter president for conference
2/24/2018	35.98	SPORTS 3
3/9/2018	36.46	SPORTS 4
3/14/2018	130.87	Pi day party
3/23/2018	40.75	SPORTS 5
4/11/2018	5.9	Officers meeting
4/13/2018	40.26	SPORTS 6
4/20/2018	37.46	SPORTS 7
4/20/2018	286.5	Chapter T-shirt ordering for officers
7/23/2018	73.55	Officers meeting
9/1/2018	63.9	Happy hour for EOP students
	210.88	New Academic Year Social
10/20/2018	69.69	Officers election party
12/10/2018	205.49	Holiday party

Beginning Balance: 1446.43

Total Expenses: 1546.99

Borrowed (from IONS account): 100.56

Ending Balance: 0