Executive Summary:

Middle East Technical Univ. Chapter was established in August 2012 and is part of OSA-SPIE METU Student Chapter, which includes student members from SPIE and OSA. We hold weekly (or twice a week, depending on the midterm schedule) meetings and most activities on Ankara campus of Middle East Technical University.

The purpose of Middle East Technical Univ. Chapter is to support optics students by providing valuable academic resources, facilitating career development through networking opportunities, and representing the study of light to the public.

This year, our chapter organized a company visit to GUNAM in March and ROKETSAN (defense industry) in April. We took lab and production line tour. Before our visit, two of our chapter members started to work in GUNAM and one of our chapter members started to work in ROKETSAN and helped us to organize this event.

Since two of current officers attended SPIE leadership event and one attend FIO (OSA’s annual meeting) as student chapter representative, we have enough knowledge of dealing with difficulties. Also, we are transferring this to other chapter members via weekly meetings.

Contact Information:

For general questions about our chapter, please email our chapter at metuops@gmail.com
Facebook Page: https://www.facebook.com/osa.spie.metu/
Whatsapp: http://chat.whatsapp.com/invite/EwE1ML03LFCJf6ZqbYtpFx (announcements only)
Web site: http://www.physics.metu.edu.tr/osa/ (not currently active, we are looking for web site designer!)

2018 - 2019 Officer Listing:

Gül Erçetin  
President  
4th Year Undergraduate Student  
gul.ercetin@metu.edu.tr

Ece İlkay Sungur  
Vice President  
4th Year Undergraduate Student  
eceilkaysungur@gmail.com
Enes Taştan
Secretary
4th Year Undergraduate Student
enest191@gmail.com

Giray Mecit
Treasurer
1st Year Master’s Student
mecit.giray@metu.edu.tr

2019 – 2020 Officer Listing:

Zeynep Cantürk
President
1st Year Master’s Student
zeynep.canturk@metu.edu.tr

Umut Taylan
Vice President
4th Year Undergraduate Student
umut.taylan@metu.edu.tr
Student and Community Membership

At the time of this report, there are 17 student members affiliated to Middle East Technical Univ. Chapter and there are currently about 25 students involved in OSA-SPIE METU Student Chapter.

<table>
<thead>
<tr>
<th>Name</th>
<th>SPIE Membership Expiration Date</th>
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<tr>
<td>Berat Aytaç</td>
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<td>Zeynep Cantürk</td>
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<tr>
<td>Tarek Elsebaei</td>
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<td>Mertcan Erdil</td>
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<td>Elif Gulen</td>
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<td>Mohamed Najar</td>
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<td>Tuba Önder</td>
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<tr>
<td>Ogulcan Orsel</td>
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<td>Ceren Özsayın</td>
<td>10/24/2020</td>
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<td>Ece Ilkay Sungur</td>
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<td>Umut Taylan</td>
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<tr>
<td>Ulas Topcuoglu</td>
<td>1/15/2020</td>
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<tr>
<td>Elif Cemre Yigit</td>
<td>11/21/2020</td>
</tr>
<tr>
<td>Alim Yolalmaz</td>
<td>10/10/2020</td>
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</table>

Activities Report

End of Semester Lunch
Date/Time/Location: January 18, 2019 from 3-5 pm in Altan Pizza
Participants: 7-student member
Cost: $30

This is our 2018-2019 Fall semester ending lunch. During the lunch, we discussed what we have done and how can we do better. Also, we brainstormed on what we will do next and planned a rough schedule for events in 2018-2019 Spring semester.

Trip to GUNAM (Center for Solar Energy Research and Applications)
Speaker: Prof Dr. Raşit Turan (Director of GUNAM, Middle East Technical University)
Date/Time/Location: March 21, 2019 from 3-5 pm in GUNAM (both in basement of Physics Build and GUNAM building near METU-Technopolis.)
Participants: 20 students (They were mostly undergraduates. 4 people from outside our chapter.)
Cost: $10 (For printings of this event’s announcement posters.)

GUNAM is a research center is a multidisciplinary center of research and development for solar cells. Besides solar cells, GUNAM is interested in photonics and photovoltaics. We, as OSA-SPIE METU Student Chapter, organized a technical trip on March 21 2019. During this trip, Prof. Dr. Raşit Turan, who is director and founder of GUNAM, guided us and gave some information about some devices and fabrication processes in GUNAM’s laboratories. In addition, we had some observations and information about clean rooms. After this information, Mr. Turan took us the new building of GUNAM. In this new center, we had some opportunities to recognize modern devices related to wafer coating and grading devices. This trip got a lot of attention by students especially freshmen because they were curious about laboratories in METU Physics Department particularly GUNAM. The importance of this trip was that we had discovered this field study and future plan relative to our carrier. On the other hand, we had a chance to introduce OSA-SPIE METU Student Chapter to freshmen physics students.

“Ask Courses to Us” Workshop
Date/Time/Location: April 3, 2019 from 5-7 pm in Cavid Erginsoy Seminar Room, Physics Dep.
Participants: 25 students (They were mostly undergraduates. 10 people from outside our chapter.)
Cost: $20 (For printings of this event’s announcement posters and snacks & beverages)
On April 3, we organized a workshop event called “Ask Courses to Us”. In this event, we got together some senior physics student and we asked to talk about elective physics courses that they took it. The aim of this event is that to give some information freshmen, sophomore and junior physics students about elective and restricted elective physics courses and overall core of physics. In addition to that, we intended them to discover their own areas of interest.

Trip to ROKETSAN
Date/Time/Location: April 19, 2019 from 2-6 pm on campus of ROKETSAN in Ankara
Participants: 4 students (They all are members of the chapter.)
Cost: $20 (For transportation)

ROKETSAN, was founded on 14 June 1988 by the decision of the Defense Industries Executive Committee for the purpose of “Establishing a leading institution in the country for designing, developing and manufacturing rockets and missiles”. We only visited optical coating and production lines of the company and got information about their abilities on optics, what and how they do optics in their company. We also had chance to meet founder of our OSA Chapter. Due to privacy issues, we were not allowed to take photos.

3rd Photonics Day
Date/Time/Location: May 18, 2019 from 10 am-6 pm in Cavid Erginsoy Seminar Room, Physics Dep.
Speaker: Prof. Dr. Hamza Kurt (TOBB University of Economics and Technology)
Speaker: Assoc. Prof. Dr. Asaf Behzat Şahin (Ankara Yıldırım Beyazit University)
Speaker: Prof. Dr. Ali Serpengüzel (Koç University)
Speaker: Dr. Melek Erol (TÜBİTAK Marmam Research Centre)
Speaker: Assoc. Prof. Dr. Göksel Durkaya (İncek Nano Teknoloji & PSARON HTI & Atılım University)
Speaker: Hakan Cemözkarar (Esen Systems) (Former Chapter Officer)
Speaker: Koray Eken (FiberLAST)
Participants: 70 people (50 outside our chapter and 10 of those outside of our university)
Cost: $250 (Giveaways, snacks, soft beverages and ID badges)

This is our premier event to celebrate the International Day of Light (IDL) in our university (We wanted this event to be in weekends to suits everyone’s schedule and this causes 2-day delay). Topic of this year’s Photonics Day was “science in industry and industry in science”. Thus, invited speakers comes different areas in science and technology. During the lunch break, we played KHET 2.0 with both attendee and speakers.
**First Meeting**  
**Speaker:** Chapter Officers  
**Date/Time/Location:** October 1, 2019 from 5-7 pm in p250, Physics Dep.  
**Participants:** 35 students (30 outside our chapter)  
**Cost:** $60 (For snacks, pizza and refreshments.)

We organized an introductory meeting to introduce our chapter. We talked about what we had done and what would we do, our future plans as well as student grants. This meeting became very impressive event because the participation was very high with 30 students. We offered pizzas and soda in the introductory meeting. 10 of non-members become our member.

**Adaptive Optics Laboratory**  
**Speaker:** Dr. Tenay Saguner Rambaldi.  
**Date/Time/Location:** October 3, 2019 from 6-7 pm in p7, Physics Dep.  
**Participants:** 35 students (20 outside of our chapter)  
**Cost:** $20 (For snacks and refreshments.)

This is the first seminar in the series of introducing METU Physics Laboratories in 2019-2020 Fall semester. In this seminar, we have Assoc. Prof. Sinan Kaan Yerli and Dr. Tenay Saguner Rambaldi. In this talk, we learned about the new lab in our department, Astronomical Optics and Instrumentation Laboratory. We have learned what is astronomical optics and how its
instrumentation is done. Dr. Rambaldi gave us a small lecture about astronomical instrumentation. We also learned about how astronomical data is acquired and how it is analyzed. Information about new East Anatolia Observatory (DAG) also given.

Erasmus Workshop
Speaker: Zeynep Kılıç
Speaker: Umut Gökdemir
Speaker: Berat Yenilen
Speaker: Tarek Elsebaei
Date/Time/Location: October 10, 2019 from 6-7 pm in p7, Physics Dep.
Participants: 35 students (23 outside of our chapter)
Cost: $20 (For snacks and refreshments.)

Our first student workshop was about Exchange programs and we had four students from the Physics department at Middle East Technical University who had the opportunity to join the Erasmus exchange program and we had learned more about their experiences abroad. The discussion was more on the application procedures, transferring credits of courses taken, doing an internship in a European country, and financial supports and grants provided by the Erasmus program. We had four of our friends who have been to Germany and Sweden and they talked about their life there too.

The speakers were:
Zeynep Kılıç: Senior student in the Physics department, METU. Zeynep explained more about lifestyles in Umea, Sweden and student activities during her exchange period.
Umut Gökdemir: Senior student in the Physics department, METU. Umut talked about Regensburg University in Germany and explained Visa Application and other procedures to get there.
Berat Yenilen: Senior student of Computer Engineering and Physics at METU. Berat had the opportunity to join the Erasmus internship program to work in HQS Quantum Simulation Company in Karlsruhe, Germany. His speech about his Internship in the field of research and development was an inspiration to other students to get ready for working in the industry after their graduation.
Tarek Elsebaei: Graduate student in the Physics department. Tarek talked about his Erasmus Exchange at Umea University in Sweden and how to choose courses that are most beneficial to METU students.

The workshop event ended with questions and answers section where students asked many questions regarding the application procedure and living expenses abroad.
Photoshop Workshop

**Speaker:** Elif Cemre Yiğit (BSc student in Physics Department)

**Date/Time/Location:** October 18, 2019 from 6-7 pm in p436, Physics Dep.

**Participants:** 6 students (All are members.)

**Cost:** $5 (For snacks and refreshments.)

In this event, we tried to learn Photoshop to make a poster for our upcoming events. Elif Cemre Yiğit member and designer of posters in our society tried to teach us Photoshop during this workshop.

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Thermally and Optically Stimulated Luminescence Laboratory

**Speaker:** Professor Dr. Enver Bulur (Middle East Technical University, Physics Dep)

**Date/Time/Location:** October 24, 2019 from 6-7 pm in p7 Physics Dep

**Participants:** 10 students (5 outside of our chapter)

**Cost:** $20 (For snacks and refreshments.)
This is the second seminar in the series of introducing METU Physics Laboratories. In this seminar, we have Prof. Enver Bulur from the Physics Department in METU as our speaker. He has talked about his research area and his laboratory Thermally and Optically Stimulated Luminescence Laboratory. We have learned about different types of luminescence and the physics behind them. We also learned about the capabilities of the laboratory. In addition, he brought some items with him to show as an example for chemical luminescence.

Optical Design Industry in Turkey
Speaker: Namık Açan (current he is giving Optical System Design course in METU Physics Dep.)
Date/Time/Location: October 31, 2019 from 6 – 8 pm in p7, Physics Dep.
Participants: 25 people (12 students outside of our chapter and 5 people coming from optics industry.)
Cost: $20 (For snacks and refreshments.)

This seminar, we had the opportunity to listen to one of the most skillful optic design engineers in Turkey. Namık Açan is the consultant of many optic design companies in Turkey and even outside Turkey. He opened our eyes to life after graduation and the requirements needed to start working as an optical engineer after graduation.
LaTeX Workshop
Speaker: Giray Mecit (MSc student in Physics Department)
Date/Time/Location: October 31, 2019 from 6 – 8 pm in p7, Physics Dep.
Participants: 15 people (8 outside of our chapter, 1 outside of our university)
Cost: $20 (For snacks and refreshments.)

In this event, basics of LaTeX is covered. We have analyzed examples LaTeX codes covering text based report, how to insert an image to the report, how to use referencing, how to type equations with ease, how to draw electrical circuits, how to draw figures (like a figure explaining Snell’s law).

Treasurer's Report

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* Anticipated funding amounts based on chapter budget and last year’s costs/incomes.

**Conclusions and Recommendations**

This year, we have started to organize workshops and we will continue since workshops take more students' attention. We have started to plan a new annual event about Women in Science. We are thinking about that event with our woman professors mostly in our department and other departments and universities. This year, we tried to increase the number of our member. We also tried to reach freshmen physics students. As a chapter, we plan to attend the annual national optics, electro-optics and photonics workshop.

METU Physics Society invited us to collaborate to their future event called “A Student Conference on Climate Change and Renewable Energy at Ankara”. We are planning to use our visiting lecturer grant for this event.