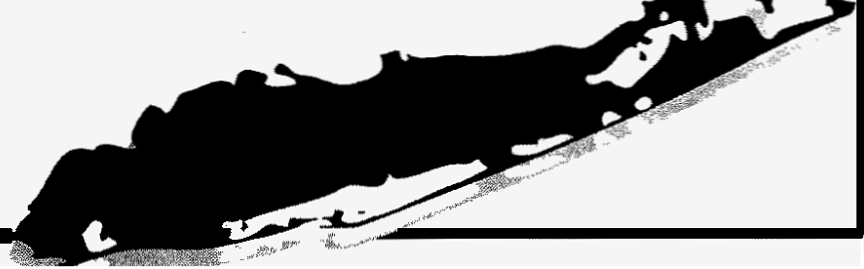




METALLAGRAM

LONG ISLAND CHAPTER



Volume 60 Issue 8

Chapter website: <http://DoL1.eng.sunysb.edu/asm/>

Next Meeting Wednesday, April 17, 2019

Where Old Field Club, East Setauket, NY

******* Student Night *******

Oral and poster presentations by Stony Brook University Seniors

Joint Meeting with ESG/ESM Programs

6 pm...Posters Start 6:00-9:00 pm...Yummy Food

7:30 pm...Two Oral Presentations

Members ... FREE! Guests ... FREE! ASM 25 years ... FREE! Students ... FREE!

Cocktail-party style is three hours long. Included are seasonal fruit and international cheese display, antipasto display, pasta station, and high end passed hors d'oeuvres. Cash Bar.

RSVP to Joann Toye ... Joann.Toye@stonybrook.edu

Directions to Old Field Club

From the Long Island Expressway (495) either direction, take Exit 62 N (Nichols Rd., Rt. 97). Follow Nichols Rd. to the end, turn left onto Rte. 25A, go about one mile. Turn right onto Quaker Path (opposite Stony Brook LIRR Train Station) and stay on Quaker Path north 1.3 miles to fork. Stay left at fork onto Mt. Grey Rd. and follow to West Meadow Rd. Turn left onto West Meadow Rd - the Old Field Club will be on the left, after the tennis courts. Physical address: The Old Field Club, 86 West Meadow Road, East Setauket, New York 11733. Telephone: 631 751 0571. Web site: <http://www.oldfieldclub.com/>.

The Presentations

BAC Alert Watch

John Gomez, Angela Hui, Jakob Reilly, Monika Singh

Roughly a quarter of undergraduate students experience sexual assault throughout their college career. Over half of these cases involve the use of alcohol, by either the perpetrator, the victim, or both. A BAC alert watch, comprising of 1) a means to measure and monitor blood alcohol content (BAC) continuously, and 2) a means to alert the user and designated support systems of the BAC, is proposed to promote bystander intervention, awareness of potentially dangerous situations, and reduce the number of alcohol induced sexual assault cases that occur on campus.

Pill Identifier Device

Elan Bronshtein, Promit Chowdhury, Julia Eng, Sally Phan

Poor medication adherence is an issue for independent seniors due to visual, auditory, and mental degeneration. A pill identifying device is proposed to help patients distinguish between their overabundance of easily confusable medications. This personal-use device will be able to identify a pill, and both audibly and visually communicate information about its use, dose, and side effects. The portable gadget will also be able to alert the patient about administration times to help them adhere to their medication schedule.

Eraser Magician

Pedro Arias, Sonam Tharkay, Zuhair Sattar, Fangzhou Zhang

Many professors find value in writing some concepts out during class. However, copying and erasing the board can take away valuable time from the lecture. The Eraser magician would be able to erase the board automatically without leaving any residue behind while simultaneously making sure it doesn't interfere with the class at hand. The proposed device is comprised of a rail and carriage system to guide the eraser and scanner assembly around the board. A microcontroller is integrated into the system to allow for the user to control the speed and shape the assembly moves around the board. The goal is to be able to erase and scan the whiteboards effectively and at a steady rate.



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The Presentations (cont.)

Emergency Alert Device for the Deaf

Eric Linko, Michelle Niles, Zayyan Swaby, Md. Tahzeeb Tarique

While the average person is arguably unprepared for possibly emergency situations, said unpreparedness is exponentially higher among the deaf community. A wristband that vibrates in response to a signal sent over AM frequencies would aim to assist deaf individuals in recognizing that there is an emergency. The signal would be sent out by a predetermined authority figure, such as a school administrator or a security officer, and would trigger the device to respond by mimicking the S.O.S. Morse code signal (three dots, three dashes, three dots) through vibrations. In addition to its primary function as an AM receiver, it can also function as an AM transmitter for the purpose of transmitting an emergency signal itself. The usage of AM frequencies would be useful in places where cell phone signals are very low, intentionally restricted, or just plain nonexistent.

Conceptual LED Display

Juval Varlack, Albert Xiao, Rudgerry Ribert, Zachari Mantica

Many students pursue degrees in various STEM disciplines. For these students, visualizing 3D Concepts using 2D resources can be quite difficult. Conventional teaching methods rely heavily on planar diagrams and textbooks to study the phenomena. A true 3D visual aid is needed to support these concepts. The proposed device would display static and dynamic 3D images using a very dense LED matrix. Logic boards for input control and a protective casing which will support the display are also needed. The goal is to accurately and effectively display crystallographic and chemistry concepts using 3D images for a classroom size of 1024 square feet.

The Kinetic Charger

Emran Ghous, Nicholas Bradica, Sidhu Pathiyil, Matthew Gardner

During long distance hikes, through-hikers find the need to periodically stop and recharge their devices due to a lack of available power. A portable device is needed which utilizes kinetic motion to charge electronic devices and thus provide hikers with the ability to convert their mechanical energy into electric power. The proposed device would consist of a gear assembly encompassing retractable cables, a generator connected to the gear assembly and a battery. The goal of this device would be to reduce the number of necessary stops that hikers would need to take throughout the course of their trip.

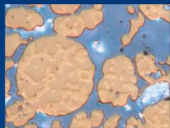
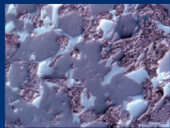
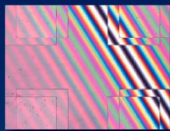
Articulated Camera Arm

Zeyu Chen, Bingxu Jin, Xuxing Zhang

Some researchers utilize macro photography as one of tools to observe samples. Macro photography requires the camera to be static in order to capture a clear image. A regular camera mount occupies much lab space, while current articulated arm mounts often generate significant vibrations during movement; the operator often needs to wait for substantial time for the camera stabilizes. The proposed device is an articulated arm mount with built-in vibration isolators that reduce the vibration transmission and help the camera to stabilize in less than ten seconds. This device is also capable of flexible positioning, ensuring the reaching angle of the camera (45 degree on each direction). Moreover, this device is compact and occupies less lab space.

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50th Anniversary

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 Marcin Kielkerwicz, Oerlikon Metco Patricia Reid, AMETEK Colin Rojas, Oerlikon Metco

All new members, including those who have transferred in from another Chapter, are invited to dine free at a regular meeting of their choice. Please take us up on this offer - come along to the meeting and introduce yourself. This is an excellent way to meet with other Chapter members and to establish new business and social relationships in the area.




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April, 2019 Family Night
Speaker: Susan Kazan
Topic: Forensics of Material science

May, 2019 Plant tour (TBA)

Long Island Chapter Meeting Schedule

Closed for the summer – back in September