ASM INTERNATIONAL
The Materials Information Society
LONG ISLAND CHAPTER

METALLAGRAM

Volume 54 Issue 8 Chapter website: http://www.matscieng.sunysb.edu/asm/

Next Meeting . . . . . Wednesday, April 17, 2013

Where . . . Old Field Club, East Setauket, NY

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

Final Senior Design Results

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 high-end passed hors d'oeuvres, fruit and cheese station, mini pastries, coffee, tea, juice and soda. Cash bar.

RSVP to Chandrani Roy CHROY@notes.cc.sunysb.edu

Jenny Powell, Joseph Vierling, Josef Gaster - *"Kinetically Powered Heated Gloves"*

In any cold weather situation it becomes important to protect the body's extremities from exposure and keep them comfortable. Traditional heated gloves rely solely on battery power or chemical heating, and are therefore limited to the life of the battery or to the chemical reaction. In an attempt to reduce battery waste and lengthen the use cycle of the heated gloves, a combination of a self-inductor coil and a magnet with a rechargeable battery circuit can be used. The inductance coil will harness the kinetic energy of the wearer and supply it as electrical energy to power the heating coils.

Ryan Killian, Pallavi Kundu, Michael Miller - *"Improved Wireless Waterproof Headphones"*

Our senior design plan is to design a headphone/earphone set that is wireless, waterproof, and aesthetically pleasing. This headphone will be used primarily under low-pressure situations. The headphone will be designed to receive an FM radio signal to play music/sounds from sources including MP3 Players, laptops, and radio stations. The headphone will run on a rechargeable lithium-ion battery and will have an estimated life span of 2000 hours.

Gerard Harley, Greg Smith, Binal Sheth, Devin Feeney - *"Portable Water Filtration System"*
Water contamination can cause widespread disease and death in areas of the world with poor access to potable water. People in areas without a supply of clean water either in remote locations, disaster zones, or undeveloped areas need an effective and efficient way to treat their water. Our goal is to create a low cost and portable water filtration system to be used by individuals or small groups when there exists a need to filter local water.

Thomas Fann, Phil Bryan, Cathy Chan, Elaina Anderson - *"Methane Extraction System"*
Domestic water wells near hydraulic fracturing sites often have high levels of methane contamination. Methane is safe to consume, however in levels over 1%, the probability of asphyxiation and household explosions rapidly increases. This system is designed to sense the amount of methane in the water and subsequently remove the contaminant before the water exits the faucet.

Collin Olson, Mike Inglima, James Ging, Agnes Hur - *"Low Cost Point-of-Use Water Filtration System"*
A low cost water filtration system is being designed for single families in impoverished areas. The filter will focus on removing particulate matter, volatile organic compounds (VOCs), and heavy metals; contaminants most commonly responsible for causing adverse health effects. Cloth, charcoal and chitosan filters will be used as filters, and solar panels will aid in extending the lifetime of the filters.

Eric Chung, Amey Mohite, Alvin Chun, Crystal Yu - *"Pump-Filtration System by Multi-step Process"*
Recent advances in water filtration have created new and exciting prospects for drinkable water delivery system to many countries. Combination of easy accessible materials enables high quality filtering and optimization of multiple processes and techniques used in intricate water treatment system. Traditional water pump, specifically linear-type positive displacement pumps have potential to be improved in terms of its cost efficiency by instead, using reciprocating-type pump. In summary, the combination of the current techniques into highly compatible multistage system is producing increased efficiency in water delivery and filtration.

Erik Perez, Edema Oviawe, Carlos Vasquez-Ortiz, Seemab Yousuf - *"Emergency Water Desalination System"*
Safe drinking water is extremely limited or non-existent after an emergency situation when people are stranded at sea or only have access to the ocean. In order to address this need, we are converting saltwater to portable drinking water. This process usually requires a large-scale desalination plant and plenty of dependable electrical power--neither of which is available in this type of situation. By using a compact reverses osmosis desalination system we will provide a portable solution that can be attached to a typical safety flotation devices or emergency kits and provide about a bottle of drinkable water.

Luis Inamagua, Sergio Arauz, Timon Sewpal - *"Integrated Child Car Seat"*
The basis of our design is to integrate a child safety seat into an adult car seat. The seat will differ from conventional car seats by providing proper side and neck restraints while still employing the recommended five point safety harness system for a child under the age of 8. The use of power seat technology will enable the adult seat to convert into a child seat with the push of a button.

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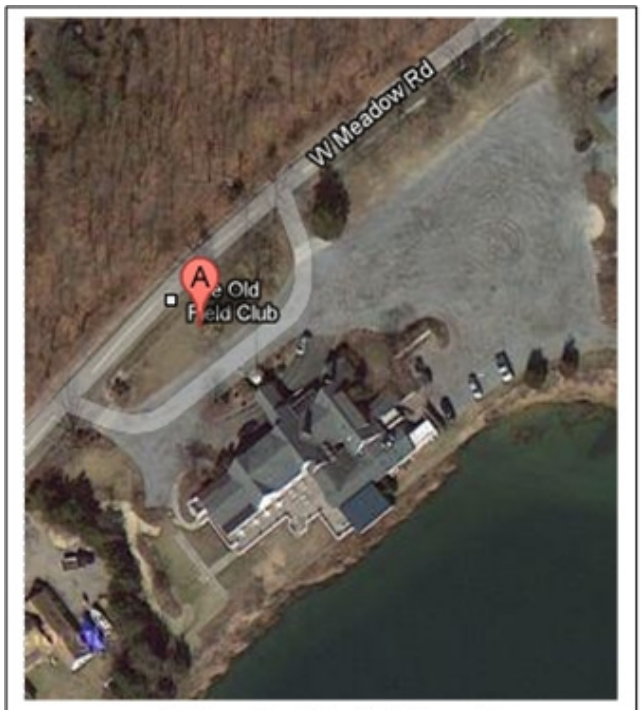
Directions to Old Field Club

From The Long Island Expressway (495) either direction:
Exit 62 N (Nichols Rd. Rte 97). ***Take 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). Take Quaker Path north 1.3 miles to fork. Stay left at fork onto Mt. Grey Rd. Take Mt. Grey to West Meadow Rd. and 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: http://www.oldfieldclub.com/



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Long Island Chapter Meeting Schedule

Metro NY-NJ Chapter

(website www.asminternational.org/portal/site/metronynj/)
(contact: Rich Lynch @ 201-891-8399)

Apr. 24, 2013 **Awards and Family Night**
Place: L'Affaire, Mountainside, NJ
Speaker: Matthew B. Walsh, Port Authority of New York 7 New Jersey
Subject: Storm Surge Impacts on Port Authority Structures

May 21, 2013 **Plant Tour (TBD)**

Long Island Metal Workers Society

(website http://www.limws.org)

2012-2013 CHAPTER OFFICERS

[( ) – term expires]

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