



# METALLAGRAM

**LONG ISLAND CHAPTER**



Volume 57 Issue 3

Chapter website: <http://www.matscieng.sunysb.edu/asm/>

**Next Meeting . . . . . Wednesday, November 18, 2015**

**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 Chandrani Roy ... [Chandrani.roy@stonybrook.edu](mailto:Chandrani.roy@stonybrook.edu)**

### **Directions to Old Field Club**

From The Long Island Expressway (495) either direction, take Exit 62 N (Nichols Rd. Rte 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

### **“Phenix -Autonomous Early Wildfire-Seeking Drone”**

*Edward Gildersleeve, Valliappan Lakshmanan, Martin Nunlee, Nicole Pasquino, Geoffery Rippy*

Presently, wildfires are most often detected by manned monitoring stations, aircraft flyovers, or members of public alerting authorities. This design will allow for the detection of wildfires in the early stages of formation without the need for constant human surveillance. Using GPS guided autonomous drones, equipped with emission sensors and infrared cameras, this design will survey a preprogrammed region and report back suspected wildfire locations. This sensor package can be retrofitted to any and all drone applications presently in use for the same monitoring methods.

### **“DoorMann - Automated Car Door Collision Prevention System”**

*Albert Marciniac, Michael Andreassi, Kevin Paray, Devon Bisson, Chiranshu Bhatia*

Opening a car door poses a risk of collision with unknown obstacles in the path of the door's travel. This system will detect obstacles in the path of travel via ultrasonic sensors, and apply a sufficient force to the car door to bring it to a stop before collision occurs. The completed design will be both compact and robust, and be adaptable enough to fit onto any standard car door.

### **“Solar Paneled Air Dispersal Extension (SPADE)”**

*Michelle Duong, Ieisha Hinson, Linda Jin, Donald Liu, Ammarah Zaidi*

Having a car parked in the sun for long periods of time will cause the interior temperatures to rise and become uncomfortable upon entering the vehicle. Through usage of solar panels, fan units, and reflective windshields, it will be able to decrease the temperatures of the vehicle, while also limiting the amount of heat that will enter the vehicle. This extension will be ideal for use on hot days such as the Summer.

### **“Bottle Muncher Can Jammer”**

*Muyiwa Adeyeye, Andy Bertrand, Paula Brugnioni-Cobo, Yi-Hsin Chen, Jason Lai*

Plastic bottle and cans have large volumes that take up a lot of space. Therefore, to maximize the number of plastic beverage bottle and cans in one recycling bin, the Bottle Muncher Can Jammer will crush them with two cylindrical rollers with teeth that will pull the bottle through a narrow slit and crush them to one eighth of their original sizes. This way, the owners can recycle more bottles and cans as well as decreasing garbage bag usage and save money in the long run.

### **“Vox Pump”**

*Skyler Cange, Robert Harmon, Arvind Mangadu, Danny Nghieu, Nicole Vogel*

Most modern bicycle pumps are designed to be externally mounted onto the bicycle frame or the saddle rails, often left exposed where they can be subjected to debris, theft, and damage from impacts. The Vox Pump would reduce these instances from occurring. The Vox Pump is small enough to be mounted inside of a bicycle's seatpost for safe storage. It will have an alarm system that, when armed, will transmit an alert signal to the owner if the bicycle is moved excessively while the owner is away from the bicycle as a theft deterrent system.

(Cont.>)



**RELIACOAT**  
TECHNOLOGIES, LLC

**WANHUK BRIAN CHOI, PH.D.**  
Chief Operating Officer

10 Technology Drive, Unit 3  
East Setauket, NY  
11733-4063, USA

Tel: (631) 739-8818  
Fax: (631) 675-2533  
brian.choi@reliacoat.com  
www.reliacoat.com



3-D PRINTED SENSORS AND ANTENNAS

**JEFFREY BROGAN, PH.D., CEO**

100 North Country Road, Suite #4  
East Setauket, NY 11733  
WWW.MESOSCRIBE.COM TEL: 631 686 5710 EXT. 1#  
JBROGAN@MESOSCRIBE.COM CELL: 631 335 8991

## The Presentations (cont.)

### **“Training Block Sensors”**

*Yunlong Li, Natalia Popova, Thomas Quinto*

Practicing sprinting starts is a time consuming process. The training block sensor system builds on existing training blocks to help the coach collect runners starting reaction time from the first steps reaction, the second steps reaction, and the runner's velocity after the third step. The system's device will collect this data and place it in a table for a quick view, and can graph certain results together for a nice view of tens of data points. The system device allows for as many profiles to match the number of runners on a team, and for quick changing time between profiles using a touchscreen. Once the sensor system is set up a coach can leave the sprinters to practice on their own.

### **“Good Vibrations - Audio to Haptic Feedback Device”**

*Isabelle Cortes, Hannah Leonard, Brian Maddock, Nicole Moro, Madeleine Unger*

Hearing impaired people only recognize sound input though low frequency vibrations. Good Vibrations is a wearable product that recognizes a range of frequencies, which are put into three categories: low, medium, and high. Once the category is determined, the device will produce corresponding light and haptic feedback. This increases safety by alerting the user of danger by transforming audible alarms into vibrations and increases the quality of life by allowing a level of immersion into the surroundings that hearing impaired people may lack.

### **“The Everyday Wheelchair”**

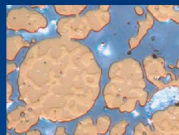
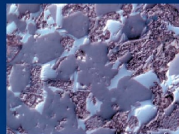
*Thaylor Cacador, Kevin Chow, Tashi Sangpo, Brandon Shafran, Patrick Neville*

The proposed design is a wheelchair which gives the user a comfortable outdoor riding experience while maintaining the great indoor functionality of current wheelchairs. The lever operation will attempt to replicate a rowing motion to utilize a natural motion for extended use. The design will include a third rear wheel with two large front wheels positioned on the frame for optimal weight balance and comfort, a hand operated lever with adjustable height to allow for individual customization, and integrated suspension in the frame positioned by the third wheel.



**Materials Park 2015** (spot the odd man out)

# Carl Zeiss... for all your state-of-the-art Microscopy & Digital Imaging needs



Offering features such as Image Archiving, Grain Size analysis, Dendritic Arm Spacing measurement, Non-Metallic Inclusion, Graphite and more...

Carl Zeiss MicroImaging, Inc.  
Thornwood, NY  
1.800.233.2343  
micro@zeiss.com  
zeiss.com/materials



We make it visible.



**LAWRENCE RIPAК CO., INC.**

NDT • METAL FINISHING

**LAWRENCE RIPAК, JR.**  
President, CEO



Lawrence Ripak Co., Inc.  
165 Field Street  
West Babylon, NY 11704-1299

Office: (631) 694-1818  
Fax: (631) 694-1818  
Email: lripak@ripak.com

**NONDESTRUCTIVE TESTING**

- Magnetic Particle
- Fluorescent Penetrant
- Visible Dye Penetrant
- Contact Ultrasonic
- Immersion Ultrasonic with data acquisition
- X-Ray
- Nital Etch
- Eddy Current

**CLEANING**

- Passivation
- Abrasive Blasting
- Glass Bead Blasting
- Plastic Media Blasting
- Acid Pickle Cleaning
- Alkaline Cleaning
- Parts up to 20' Long

**ANODIZING**

- Boric-Sulfuric
- Chromic
- Sulfuric
- Parts up to 18' Long

**PLATING**

- Titanium-Cadmium
- Cadmium
- Brush Plating

**PAINTING**

- Primers
- Top Coats
- Dry Film Lubricants
- Fuel Tank Coating
- Teflon
- High Temp Primers
- Masking

**SHOT PEENING**

- Automatic and Manual
- Regular & Hard Cast Steel
- Glass Bead
- Ceramic
- Parts up to 8 Feet Long
- Post-Peen Cleaning

**CONVERSION COATINGS**

- Alodine 1200
- Phosphate Fluoride
- Sol-Gel

**OTHER PROCESSING**

- Stress Relieving
- Conductivity Testing
- Hardness Testing
- High Humidity Testing
- Salt Spray Testing



**CLAD METAL SPECIALTIES**

www.cladmetal.com  
1516 Fifth Industrial Court  
Bayshore, New York 11706

*"Your Need Time is our Lead Time"*

Denise Marcoccia  
Vice President

ph 631/666-7750  
fax 631/666-5347  
dmarcoccia@cladmetal.com

A World of  
Engineering & Testing  
Under One Roof™



www.dtb.com

**ATUL GOKHALE PHD**

Chief Metallurgist  
Engineering & Test Division

1195 Church St.  
Bohemia, NY 11716

Direct: (631) 589-6300 x614  
Mobile: (631) 926-0209  
Fax: (631) 589-3648  
E-mail: agokhale@dtb.com

## FORMISANO & ASSOCIATES, INC.

Welding Engineers • Consultants  
Expert Witness • Litigation Support  
QA/QC • Certified Inspection

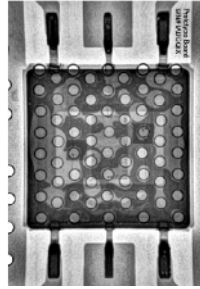
### BARRY FORMISANO, PRESIDENT

Cell: (914) 388-0155  
Email: formisano.assoc@att.net

P.O. Box 324 125 Wolf Road  
Gardiner, NY 12525 Albany, NY 12205  
Phone/Fax: (845) 255-8225 Phone: (518) 925-8306

## WALDVOGEL METALLURGICAL, INC.

MATERIALS ANALYSIS - FAILURE ANALYSIS - MATERIALS TESTING



**ELECTRONIC DEVICE FAILURE ANALYSIS**  
**PRECISION METALLOGRAPHIC ANALYSIS**  
**IMMEDIATE TURNAROUND**

TELEPHONE: 516-564-7839  
FAX: 516-485-2039  
CELLULAR: 516-967-8576  
E-MAIL: waldvogelmet@verizon.net

## L. I. T. Labs, Inc.

Metallurgists/Analysts



Chemical Analysis Mechanical Testing  
Metallography Metallurgical Failure Analysis  
Expert Testimonies Welder's Qualifications  
Weldability Evaluations

### T. Rao Tipirneni, President

97 Marcus Boulevard P: 631-643-6792  
Hauppauge, NY 11788 F: 631-643-5628  
[www.litlab.com](http://www.litlab.com) [rao@litlab.com](mailto:rao@litlab.com)

Specialists in Aerospace Materials Testing Since 1985

## STONY BROOK

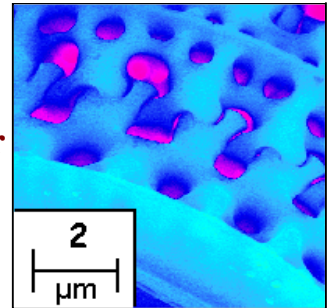
STATE UNIVERSITY OF NEW YORK

**University/Industry  
Partnering Together**

**Your samples-Our SEM**

We also have OM, XRD,  
RP, and much more.....

Dr. Jim Quinn  
631-632-6663 or 8495  
[james.quinn@stonybrook.edu](mailto:james.quinn@stonybrook.edu)



**MetLab**  
Corporation

**FREE SHIPPING & 10% OFF**

call 1-800-828-6866 for more information



**FOR ALL YOUR METALLOGRAPHIC NEEDS SINCE 1968**

[www.metlabcorp.com](http://www.metlabcorp.com)

1-800-828-6866



**Solutions for  
Materials Preparation,  
Testing & Analysis**



**For more information,  
contact:**  
Scott Prenovitz  
(508) 361-8451  
scott.prenovitz@buehler.com



**BUEHLER**  
An ITW Company  
41 Waukegan Road • Lake Bluff, IL 60044  
(847) 295-6500 • www.buehler.com



**Struers Inc.**  
24766 Detroit Road  
Westlake, OH 44145-2525  
Direct/fax 203.380.0563  
Telephone 440.871.0071 ext 867  
Fax 440.871.8188  
www.struers.com • lservino@struers.com

**Luca A. Servino**  
Account Representative  
New England

### Long Island Chapter Meeting Schedule

**Dec. 9, 2015**      **Topic: Art Materials**  
**Speaker: John Twilley**  
**Location: Pollo Rico, Centereach**

**January ??, 2016**      **Joint meeting with LIANS**  
**Speaker: tbd**  
**Location: Pollo Rico, Centereach**

**February 17, 2016**      **Topic: Welding Materials**  
**Speaker: Clement Marmorat, SBU**  
**Location: Pollo Rico, Centereach**

### Metro NY-NJ Chapter

(<http://www.asminternational.org/web/metro-ny-nj-chapter/home>)

**November 17, 2015**      **Topic: Plasma Nitriding Ferrous & Ti alloys**  
**Speaker: Edward Rolmski**  
**Location: Meson Madrid, Palisades Park, NJ**

### Long Island Metal Workers Society

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

**No events listed**

### 2015-2016 CHAPTER OFFICERS

**Chairman**  
Jim Quinn - (631) 632-6663, Stony Brook University

**Vice Chairman**  
Ken Trelewicz - (631) 244-6238, Dayton T. Brown Inc

**Secretary**  
Mike Guggenheim – (631) 643-6792  
Long Island Testing Lab., Inc.

**Treasurer**  
Peter Indrigo - (631) 589-6666. Unitron Ltd.

**Executive Committee Members**

Atul Gokhale, Dayton T. Brown  
(631) 926-0209 x614

Dan Migliorino, ReliaCoat Technologies  
(631) 739-8818

Collin Olson, D’Addario

Jake Ranneklev, Burton Industries  
(631) 643-6660

Rao Tipirmeni, Long Island Testing Laboratories Inc.  
(631) 643-6792,

James Waldvogel Waldvogel Metallurgical Inc.  
(516) 564-7839

Al Wirth, Retired  
(516) 333-7429

**ADVISORY**  
Biays Bowerman - (631) 344-2946  
Brookhaven National Laboratory




**Peter D. Indrigo**  
Senior Vice President  
peterd@unitronusa.com

73 Mall Drive, Commack, New York 11725  
www.unitronusa.com  
Phone: 631-543-2000  
FAX: 631-589-6975