

Newsletter At-A-Glance:

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- Customer Research Highlight - Characterizing Viscoelastic Behavior of Magnetorheological Elastomers
- Online WinTest® Training

ElectroForce Webinar: Introduction to Fatigue Testing

What is mechanical fatigue and why is it important?

Join us for the first ever TA ElectroForce webinar! Troy Nickel, Product Manager for ElectroForce, will explore the role of mechanical fatigue when characterizing materials and structures that undergo repeated or cyclic stress conditions. He will also identify a few real world examples of how

mechanical testing can help understand and predict fatigue behavior. Following the presentation, there will be time allocated to answer your questions. The webinar will be broadcast in two time slots, Wednesday, September 7 at 10:00 AM CDT (UTC-5:00), and Thursday, September 8 at 1:30 AM EDT (UTC-4:00).

Register for the Wednesday, September 7 broadcast [here](#).
Register for the Thursday, September 8 broadcast [here](#).



WEBINAR
Live & Interactive
Introduction to Fatigue Testing
Presented by:
Troy Nickel, TA ElectroForce
Sept. 7, 2016 | 11:00 AM EDT (UTC-4:00)
Sept. 8, 2016 | 1:30 AM EDT (UTC-4:00)
Register Today!

Introducing Mynde Nielsen, Xiaoming Wang, and Luis Morales

ElectroForce welcomes new additions to Worldwide Sales and Applications teams

We are excited to introduce you to three new members to the ElectroForce team. Mynde Nielsen and Xiaoming Wang have joined our global sales team, and Luis Morales is our newest applications engineer.



Mynde Nielsen holds a degree in Chemical Engineering from the University of Illinois-Urbana, and joins the TA ElectroForce team with extensive experience in mechanical properties testing in a wide range of materials and applications. Mynde is passionate about serving her customers with the same reliability and performance they expect from our instruments. Mynde will

be supporting the southeast United States region including Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, and Tennessee.

CURRENT PROMOTIONS

Upgrade and Save!



Upgrade to TA ElectroForce technology and save up to 25% off!

[More Info](#)

Academic Matching Grant Program



Add \$20,000 to the value of your new laboratory equipment grant.

[More Info](#)

UPCOMING CONFERENCES

TERMIS AP
September 3-6



"Personalized Medicine Through Tissue Engineering and Regenerative Medicine" is the theme for this year's TERMIS-AP meeting taking place in Tamsui Township, Taiwan from September 3rd to the 6th.

Xiaoming Wang joins our sales team following ten years at ChinaVision (Group) Co., Ltd. He began his career at ChinaVision by providing technical support for their customers. For the past seven years, he has been responsible for selling mechanical test instruments, polymer processing equipment, and polymer material characterization instruments in northern China. Xiaoming holds a bachelor's degree from the Beijing Technology and Business University where he majored in Polymer Materials and Engineering. He will be supporting our customers in southwest and northern China.

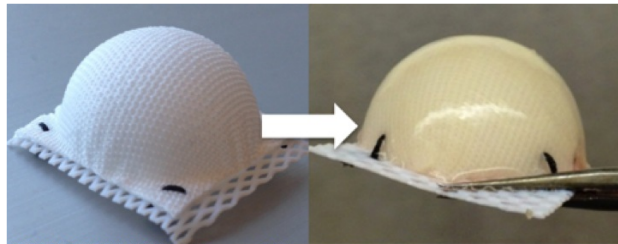


Luis Morales joins us as an applications engineer in our Minnesota office and will primarily focus on supporting our biomaterials and tissue engineering customer segments. Already holding a bachelor's degree in Biomedical Engineering, Luis recently graduated with his master's degree in Biomedical Engineering from the University of Minnesota. While in

graduate school, Luis was part of a tissue characterization lab where he focused on soft tissue biomechanics, and used an ElectroForce Planar Biaxial test instrument to characterize the mechanical properties of intercostal tissues for the development of surgical training simulators.

Customer Research Highlight - Tissue-Engineered Alternative to Arthroplasty

Research out of Cytex Therapeutics and Washington University advances the possibility of tissue-engineered joint resurfacing



We would like to extend our congratulations to Dr. Farsh Gulak, Dr. Brad Estes, Dr. Frank Moutos, and their colleagues at [Cytex Therapeutics](#) and Washington University as they recently garnered significant media attention for their ongoing research to advance a tissue-engineered joint resurfacing solution. Combining a patented woven scaffold technology with stem cells and gene therapy, the group has developed an anatomically shaped tissue-engineered cartilage that has the potential to eliminate the need for traditional joint replacement solutions and provide a longer term biologic solution that will adapt with the patient. Their latest publication, *Anatomically Shaped Tissue-Engineered Cartilage with Tunable and Inducible Anticytokine Delivery for Biological Joint Resurfacing*, is available free online through the Publications of the National Academy of Sciences of the United States of America (PNAS).

[Click here](#) to read the free publication.

Watch a recent interview with Dr. Gulak on Fox 2 in St. Louis [here](#).

Customer Research Highlight - Characterizing Viscoelastic Behavior of Magnetorheological Elastomers

Recent publication explores the effects of acetone on the

Stop by our exhibit and learn about BioDynamic perfusion-only and mechanical stimulation bioreactors for three-dimensional constructs.

Frontier Biomechanical Challenges in Cardiovascular Physiopathology September 8-9



At the beginning of September, the University of Palermo will host the [Frontier Biomechanical Challenges in Cardiovascular Physiopathology](#) symposium. Keynote presentations will explore advances in cardiovascular biomechanics and future clinical therapies.

12th Thermoplastic Elastomers Conference Sept. 21 -22, 2016



Akron, OH will host the [12th Thermoplastic Elastomers Conference](#) on September 21st and 22nd. Visit the [TA ElectroForce](#) table to learn how ElectroForce technologies are used to characterize these materials.

The Composites and Advanced Materials Expo (CAMX) Sept. 27 -29, 2016



[CAMX](#), held in Anaheim, CA, will explore the use of composites and advanced materials in a variety of applications, including transportation, aerospace, & medical,

viscoelastic behavior of MREs.

Smart materials are materials that can change properties in a controlled fashion when



experiencing an external stimulus. One such example is magnetorheological elastomers (MREs) which change mechanical properties when in proximity to a magnetic field. While MREs have some advantages over magnetorheological fluids, they also have their own challenges, particularly pertaining to mechanical performance.

Research by Dr. Lizhi Sun and Robbie Damiani, from the University of California, Irvine, was recently published in the International Journal of Damage Mechanics. The paper, titled *Microstructural characterization and effective viscoelastic behavior of magnetorheological elastomers with varying acetone contents*, explores the effect an additive has on the mechanical properties of an MRE.

To access the abstract and publication, [click here](#).
Learn more about ongoing research from Dr. Sun's lab at UCI [here](#).

Online WinTest® Training Schedule

Sign up now to reserve your spot for the next training session

To deliver on our promise of Above & Beyond™ support, we continue to offer free online WinTest training for all of our customers. This is a great opportunity to train new users on the basic features of WinTest software, or to give yourself a quick refresher if you haven't used WinTest recently. The next opportunity to participate in an online training session will be this Monday, August 29th.



Register for Monday's online training [here](#).

among others. Visit the TA Instruments booth and learn how ElectroForce technologies support research of these materials.

