

We are pleased to present the following speaker for our December 5th Meeting

Rapid Evaluation of Energy Absorbing Materials for Head Borne Impact Protection

John Weber, PhD

Senior Engineer, Advanced Engineering
Group

Gentex Corporation

Abstract

As researchers continue to improve our understanding of the factors contributing to Traumatic Brain Injury (TBI) due to blunt impacts to the head, the protective helmets used to prevent these injuries must adapt to evolving performance requirements. A critical

factor in the impact performance of any helmet system is the material composing the energy absorbing (EA) liner. There are a plethora of existing EA materials and new materials are continuously being synthesized and marketed for use in EA liners. Evaluating EA materials to find the optimal material can be resource intensive both in terms of time and cost with no guarantee of performance improvement. This talk will detail the finite element analysis performed to address this problem as well as the parallel physical testing used for validation

Biography

John Weber is a senior engineer in the Advanced Research and Development department at Gentex Corporation. John

has spent the past seven years breaking both virtual and physical composite structures to better understand how they respond to dynamic loads. John earned a mechanical engineering degree from Texas A&M University followed by a PhD in mechanical engineering and Post-doctoral research at the University of Auckland. John breaks helmets at an alarming rate in the pursuit of improving blunt impact energy attenuation of both ground and aircrew helmet systems.

Meeting Details

Please note that our meeting locations vary this season. December's meeting will be held at Bridgewater Manor.

See next page



Directions to Bridgewater Manor

Meeting Details

Place: Bridgewater Manor, Bridgewater, NJ;
(908) 658-3000 Time: 5:45 – 8:30 pm

Cost: \$30.00 at the door. Free for students.
Cash, check and PayPal options are available.
This meeting is open to all SAMPE members,
spouses, guests and other interested parties.
For reservations or questions, please contact
Megan Casey at mbc872@gmail.com by noon
Wednesday before the meeting. Meal options
are available.

Directions to Bridgewater Manor:

From I-287 north, take exit 22A (206 south).
Go thru two lights, Bridgewater Manor is on
right. From I-287 south, take exit 22. Make
right at end of ramp. Make next left, a
jughandle to cross 202/206 to go south on
202/206. Go thru three lights, Bridgewater
Manor is on the right



2019 – 2020 Meeting Schedule

September 12, 2019 – Giuseppe Palmese,
Drexel University

September 23-26, 2019 – CAMX, Anaheim CA

October 3, 2019 – Joe Abrantes, Evonik Corp.

November 7, 2019 – Yuebin Guo, Rutgers

December 5, 2019 – John Weber, Gentex

February 6, 2020 – TBD

March 5, 2020 – TBD

April 2, 2020 – Students Night (at Rutgers)

May 7, 2020 – TBD

May 4-7, 2020– SAMPE 2020, Seattle WA

June 19, 2020 – 2nd Annual NJ Additive
Manufacturing Symposium, at Rutgers Weeks
Engineering Building

New Jersey Chapter

Executive Board

BENJAMIN M. RASMUSSEN CHAIR

Russell Caspe
Gentex Corporation
570-282-8588
rcaspe@gentexcorp.com

TREASURER

Megan Casey
Total Cray Valley
610-427-3534
mbc872@gmail.com

SECRETARY

Amir Islam
Bally Ribbon Mills
610-845-2211
amirislam@ballyribbon.com

PROGRAMS

Howard Kliger
732-469-6330
hskliger@comcast.net

MEMBERSHIP

Melissa Jaime
Vertellus LLC
973-440-2872
mjaim@vertellus.com

STUDENTS

Joe Abrantes
Evonik Corporation
732-981-5246
joe.abrantes@evonik.com

ADVISORS-AT-LARGE

John F. Osterndorf
973-248-5885
jfo0956@gmail.com

Louis A. Pilato
Pilato - Consulting
732-469-4057
lapilato@optonline.net

DIRECTOR

Borys Schafran
Jayhawk Fine Chemicals Corporation
620-210-4006
borys.schafran@jayhawkchem.com

New Jersey Chapter

Past Chairs, SAMPE Fellows and Senior Honorary Members

CHAPTER CHAIRS

1977 – 1978 Raymond F. Wegman
1978 – 1979 William J. Russell
1979 – 1980 Michael Michno
1980 – 1981 Fred H. Ancker
1981 – 1982 Natalia Chujko
1982 – 1983 Robert J. Narsavage
1983 – 1984 Richard W. Reiter
1984 – 1985 Howard S. Kliger
1985 – 1986 John Burlage
1986 – 1987 John F. Osterndorf
1987 – 1988 Thomas J. Green
1988 – 1989 Harry S. Katz
1989 – 1990 Benjamin M. Rasmussen
1990 – 1991 Harry Tenney
1991 – 1993 Louis A. Pilato
1993 – 1994 John Burlage
1994 – 1995 Richard A. Walther
1995 – 1996 Frans van Antwerpen
1996 – 1997 Kathleen A. Froelich
1997 – 1998 Gail D. DiSalvo
1998 – 1999 Ash Chopra
1999 – 2013 Benjamin M. Rasmussen
2013 – 2018 Borys F. Schafran
2019 - Russell Caspe

SAMPE FELLOWS

Fred H. Ancker
Harry S. Katz
Dr. Howard S. Kliger
Dr. Frank K. Ko
Robert Pickney
Dr. Louis A. Pilato
Leonard Poveromo
Raymond F. Wegman
Charles Weizenecker
Dr. Carl H. Zweben

SENIOR HONORARY MEMBERS

Richard G. Adams
Gail DiSalvo
Edward A. Gallagher
Robert Golick
Harry Katz
Howard S. Kliger
Charles N. Muldrow
John Osterndorf
Louis A. Pilato
Benjamin M. Rasmussen
William D. Timmons
Raymond F. Wegman
Charles Weizenecker

SAMPE Best Chapter Award Winner:

1990, 1991, 1992, 1993, 1995, 1996, 1997, 1998,
1999, 2000, 2001

SAMPE Chapter Service Excellence Award Winner:

2002, 2003, 2004, 2005, 2006 (award retired
after 2006)

SAMPE Chapter Sponsored Conferences:

ISSE – 1990 (Anaheim), 1994 (Anaheim),
1996 (Anaheim), 1998 (Anaheim), 2002 (Long Beach)

ISTC – 1981 (Mt. Pocono), 1989 (Atlantic City),
2006 (Dallas), 2009 (Wichita), 2012 (Charleston)

ISEC – 1994 (Parsippany)

SAMPE Center of Excellence for Additive
Manufacturing 2018

Chapter Sponsors

Airtech International, Inc.

Tony Constantino
5700 Skylab Road
Huntington Beach, CA 95647
714-899-8100
Fax: 714-899-8179
tconstantino@airtechintl.com
www.airtechintl.com

Bally Ribbon Mills

Dr. Amir Islam
23 North 7th Street
Bally, PA 19503
610-845-2211
amirislam@ballyribbon.com

Broadview Technologies, Inc.

Jason Tuerack
7-33 Amsterdam Street
Newark, NJ 07105
973-465-0077
jtuerack@broadview-tech.com
www.broadview-tech.com

Coast Line International

Patrick McMenanin
200 Dixon Ave
Anityville, NY 1170
631-226-0500
patrickm@coast-lineintl.com

Evonik Corporation

Jose Abrantes
2 Turner Place
Piscataway, NJ 08854
732-981-5246
joe.abrantes@evonik.com

Fabric Development Inc.

Mary P. Shafer
1217 Mill Street
Quakertown, PA 18951
215-536-1420
mshafer@fabricdevelopment.com
www.fabricdevelopment.com

General Magnaplate

Edmund Aversenti
1331 US Route 1
Linden, NJ 07036
908-862-6200
eaversenti@magnaplate.com
www.magnaplate.com

Gentex Corporation

Russell Caspe
PO Box 315
Carbondale, PA 18407
570-282-8588
rcaspe@gentexcorp.com

Jayhawk Fine Chemicals Corp.

Borys Schafran
8545 SE Jayhawk Drive
Galena, KS 66739
620-210-4006
borys.schafran@jayhawkchem.com
www.jayhawkchem.com

Kenrich Petrochemicals

Salvatore Monte
PO Box 32
Bayonne, NJ 07002
201-823-9000
sjmonte@4kenrich.com

Novoset LLC

Dr. Sajal Das
87 Main Street,
Peapack, NJ 07977
908-470-4200
www.novoset.com

Vertellus LLC

Melissa Jaime
1705 US Highway 46, Suite 1A
Ledgewood, NJ 07852
973-440-2872
mjaim@vertellus.com
www.vertellus.com



Sponsor of the Month: Jayhawk Fine Chemicals Corporation (now part of the CABB Group)

The CABB Group is a leading custom manufacturing supplier to the fine chemicals industry.

Jayhawk Fine Chemicals Corporation is now part of CABB's Custom Manufacturing Business Unit, a strategic partner to companies in the agrochemical, electronics, healthcare and specialty sectors, providing building blocks, active ingredients and advanced intermediates.

Jayhawk offers project-based custom manufacturing services as well as a portfolio of made-to-order catalog products. The U.S. production site complements CABB's existing operations in Pratteln, Switzerland and Kokkola, Finland.

Catalog products include a family of thermoset additives sold under the JAYHAWK brand. Dianhydrides, led by JAYHAWK BTDA, find daily use as epoxy thermal curatives and co-monomers for polyimide synthesis. They are a key enabler of smartphone technology, automotive electronics and advanced composites. Crosslinkers, including 2-Allylphenol and Ortho Di-allyl Bisphenol A, are creative building blocks for hybrid resin development.



For more information,
please contact:

Borys Schafran
Jayhawk Fine Chemicals
8545 SE Jayhawk Drive
Galena, KS 66739

620 210 4006

borys.schafran@jayhawkchem.com

www.jayhawkchem.com

Instagram: [@jayhawkfinechem](https://www.instagram.com/jayhawkfinechem)