

Please fill out the enclosed registration form and fax it to 966-1-467-9141 or e-mail it to [sprc@ksu.edu.sa](mailto:sprc@ksu.edu.sa)

**Name:** -----

**Occupation:** -----

**Institution:** -----

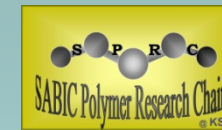
**Phone number:** -----

**e-mail:** -----

**Mailing address:** -----  
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Seminar fee is 4500 SR which includes the seminar booklet in an elegant briefcase, refreshments, & lunches.

For more information please contact:  
Dr. Rabeh Elleithy @ 467-6747



The SABIC Polymer Research Chair (SPRC)

&

Center of Excellence for Research in  
Engineering Materials (CEREM)

@

King Saud University

Present

A 3-day Intensive Seminar on

# **FAILURE PREVENTION AND ANALYSIS OF POLYMERS AND ELASTOMERS**

At the Faculty of Engineering  
King Saud University

**5 – 7 April 2010**

Presented by

Dr. Paul Gramann  
University of Wisconsin-Madison &  
The Madison Group

## First day

09:00-09:30	Registration
09:30-10:40	Introduction to Failure Analysis
10:40-11:00	Refreshment
11:00-12:15	Mechanisms of Failure
12:15-01:30	Prayer and Lunch
01:30-02:30	Viscoelasticity
02:30-03:30	Relaxation and Creep

## Second day

09:00-10:30	Polymers and Elastomers
10:30-10:45	Failure Due to Material Effects
10:45-12:15	Failure Due to Processing Effects
12:15-01:30	Prayer and Lunch
01:30-02:30	Failure Due to Design Effects
02:30-03:30	Failure Due to Environmental Effects

## Third day

09:00-10:00	Testing and Characterization
10:00-11:00	Failure Prevention
11:00-11:20	Refreshment
11:20-12:20	Case Studies; Material
12:20-01:30	Prayer and Lunch
01:30-02:30	Case Studies; Application
02:30-03:30	Case Studies; Processing and Design
03:30-04:00	Closing Session

## Paul Gramann, Ph.D.

*Adjunct A. Professor*

**University of Wisconsin-Madison**

*President*

**The Madison Group**



- Paul received his Ph.D. from the University of Wisconsin in 1995.
- He is currently the President of The Madison Group, a consulting company to the plastics industry, which is in its 17<sup>th</sup> year of business.
- In 2003 he became an Adjunct Professor at the Mechanical Engineering Department of the University of Wisconsin-Madison.
- His current duties beyond running the company involve the design and failure analysis of thermoset and thermoplastic parts. He is the Chair of Failure Analysis Group of the Society of Plastics Engineers.
- He is a co-editor of the *Injection Molding Handbook* that was published by Hanser Publishers in 2001 and 2008 and has been translated to Chinese and Russian.
- He is also a co-author of the book *Compression Molding*, which was published in 2003.
- He is currently writing the 2<sup>nd</sup> edition of the book *Failure Analysis and Prevention*.