

# Process Modeling for Metal Forming Die Stress Analysis

Industry leaders have known for years that traditional methods of designing and troubleshooting tools and dies are not competitive. The cost and time associated with die failure is not a “cost of doing business”. Forging and heading tool and die costs typically range from 5 - 15% of total sales when all of the cost elements are included. Improvements made in tooling performance go straight to the bottom line!

Simulation is used to help “connect the dots” between the theory of tooling failure and practical production issues. Die life is related to stresses. This workshop teaches the fundamentals of stress analysis, failure modes and interpreting simulation results. This will help engineers and designers improve tool life before the dies are manufactured!

The 23<sup>rd</sup> offering of this workshop will be conducted at SFTC in Columbus, OH. Professor Joe Domblesky, John Walters and Jim Miller are the instructors. Fundamentals and the application to industrial problems are emphasized. A wide range of cases involving significant life improvement are discussed. An optional third day DEFORM training course on die stress analysis simulation setup will also be offered.



**Itinerary:** - overview - industrial examples - stress and strain - elastic & plastic deformation - analysis methods - die failure fundamentals - interobject interactions - die wear - thermal fundamentals & applications - interference theory & applications - troubleshooting die problems - material selection - practical analysis considerations -

**Logistics:** Die Stress Analysis Workshop - August 20 & 21, 2019 - 8:30 a.m. to 4:30 p.m. - SFTC Office -  
- DEFORM Die Stress Training - August 22, 2019 - 8:30 a.m. to 4:00 p.m. - SFTC Office -  
- enrollment limited to first 20 applicants - lunch will be provided - DEFORM training presented by SFTC staff -

For **registration information**, contact:

Caryl Gatton - SFTC - (614) 451-8330 X-100 - [cgatton@deform.com](mailto:cgatton@deform.com)

For **technical information on course content:**

John Walters - SFTC - (614) 451-8323 - [jwalters@deform.com](mailto:jwalters@deform.com)

Jim Miller - SFTC - (614) 451-8330 X-108

Prof. Joseph Domblesky - Marquette - (414) 288-7832 - [joe.domblesky@marquette.edu](mailto:joe.domblesky@marquette.edu)

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- ~ Die Stress Workshop fee: \$875 / person - prepaid.
- ~ DEFORM Training fee: \$250 / person - prepaid.
- ~ The Die Stress Workshop fee is \$950 / person for payments received after the workshop starts.
- ~ A \$50 per person credit is applicable for 2 or more prepaid attendees from the same company.
- ~ Attendees are responsible for all travel expenses.
- ~ 100% refund will be made for cancellations two weeks before the workshop. A \$100 administrative fee will be deducted for cancellations before the first day. No-shows or cancellations afterwards are responsible for the full registration fee.
- ~ SFTC reserves the right to cancel or reschedule this workshop without any penalty for travel or lodging costs. If cancelled, fees will be refunded.
- ~ Information on available lodging near the office will be included with the registration confirmation.

**Mail or fax registration to:** **Caryl Gatton**  
**Scientific Forming Technologies Corporation**  
**2545 Farmers Drive - Suite 200 - Columbus, Ohio 43235**  
**Tel: (614) 451-8330 x100 Fax: (614) 451-8325**

## Registration Form

Company Name: \_\_\_\_\_

Attendee Name: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Phone: (\_\_\_\_)\_\_\_\_ - \_\_\_\_\_ X- \_\_\_\_\_ Fax: (\_\_\_\_)\_\_\_\_ - \_\_\_\_\_

e-mail: \_\_\_\_\_

[ ] Check Enclosed Total Amount Enclosed: \$ \_\_\_\_\_

[ ] Bill Company P.O. Number: \_\_\_\_\_

[ ] Credit Card - instructions will be provided

Attending: [ ] Die Stress Analysis Workshop [ ] DEFORM Training