



# ENGINEERED RESIDUAL STRESS IMPLEMENTATION (ERSI) WORKSHOP 2018

**Date:** September 13 – 14, 2018

**Location:** Weber State University's Center for Continuing Education,  
775 University Park Blvd., Clearfield, UT 84015

## Thursday September 13 Agenda:

07:00-07:30 Arrive, Breakfast

07:30-07:45 Welcome

- *Dr. Scott Carlson, Mr. Robert (Bob) Pilarczyk, Mr. Dallen Andrew*

### Presentations by Leads Covering Progress:

- 25 min Presentation with 15 mins for Discussion

07:45-08:00 **Integrator Review – Programmatic Overview and Roadmap**

- *Dr. T.J. Spradlin (USAF – AFRL)*

08:00-08:40 **Residual Stress Process Simulation**

- *Mr. Keith Hitchman (Fatigue Technologies Incorporated (FTI))*

08:40-09:10 **Quantification of Residual Stresses Through Measurement Techniques**

- *Dr. Adrian DeWald (Hill Engineering, LLC.)*

09:10-09:50 **Fatigue Crack Growth Methods with Inclusion of Residual Stresses**

- *Mr. Robert (Bob) Pilarczyk (Hill Engineering, LLC – Utah Branch.)*

09:50-10:00 *BREAK*

10:00-10:40 **Verification and Validation of Analytical Methods Through Test**

- *Dr. Tom Mills (Analytical Processes/Engineering Solutions, Inc. (AP/ES))*

10:40-11:20 **Effects of Engineered Residual Stresses on Non-Destructive Inspection**

- *Mr. John Brausch (USAF – AFRL)*

11:20-12:00 **Quality Assurance and Data Management for the Inclusion of Residual Stresses**

- *Dr. Carl Magnuson (Texas Research Institute/Austin, Inc.(TRI-Austin))*

12:00-13:20 LUNCH

13:20-14:00 **Uncertainty Quantification and Risk Analysis with the Inclusion of Residual Stresses**

- *Mr. Lucky Smith, Ms. Laura Domyancic (Southwest Research Institute (SwRI))*

14:00-15:00 **Open Discussion**

15:00-17:30 **Breakout Discussions (Block 1)**

- *Analytical Methods for Residual Stress Integration into Fatigue Predictions and Testing and Validation of Analytical Methods Combined*

- *Residual Stress Process Simulation*

- *Impact of Deep Residual Stress on Non-Destructive Inspection (NDI) Methods*



## Friday September 14 Agenda:

07:00-07:30 Arrive, Breakfast

07:30-10:30 **Breakout Discussions (Block 2)**

- *Residual Stress Measurements*
- *Analytical Methods for Residual Stress Integration into Fatigue Predictions and Testing and Validation of Analytical Methods Combined*
- *Quality Assurance and Data Management*
- *Risk Analysis and Uncertainty Quantification*

10:30-13:00 **Open Discussion and Lunch** (*Lunch to be provided by Hill Engineering – Utah Branch*)

- *Review*
- *Future Planning*
- *Governance*
- *Funding*

1300 **We Bid You Adieu and Thank You!**