

Email Blast for Tech Talk Time – Talk #6

Tech Talk Time – Talk #6 (Understanding Material Deformation and Fatigue Behaviour for Structural Durability)

The Technical Programs Committee welcomes all Members (PEO and OACETT) to join them for this sixth presentation in their continued series of technical talks, provided by various speakers in numerous areas of science, technology and engineering. This talk will be focused on the deformation and fatigue behaviour of materials. Our guest speaker (Al Conle, PhD, P.Eng.) has more than 40 years experience in material deformation and fatigue behaviour, and is a local expert in this field. He will provide an introductory presentation on this very extensive topic, based on his experiences at the Ford Motor Company and in academia. It will include design methods for repeatedly loaded vehicles and structures, as well as a few historical failure events. Additionally, from an analysis perspective, Dr. Conle will describe the material cyclic stress-strain response, plasticity corrections for elastic finite element analysis results, and cycle counting for fatigue damage and life predictions. The key details for the talk include the following points:

Date: Thursday, October 23, 2025

Time: 6:00 to 8:00pm

Location: St. Clair College (Main Building; Windsor Campus)

Room Number: A2204 in Alumni Hall (new Zekelman School Classrooms; see attached map below)

Cost = Free admission!!!

Speaker's Name: Al Conle, PhD, P.Eng.

Title: Adjunct Professor at University of Waterloo; Retired Supervisor of Fatigue Group at Ford Motor Company

Topic: Material Deformation and Fatigue Behaviour

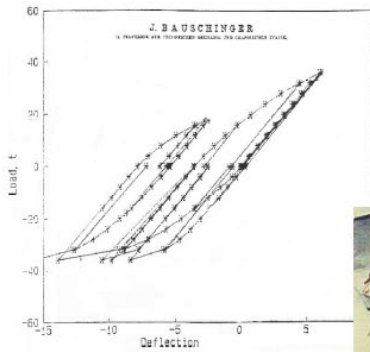
All members, non-members, students, friends and family are welcome to attend. Please register before 12 noon on the date of the event, by using the Eventbrite link (<https://www.eventbrite.ca/e/peo-windsor-essex-chapter-tech-talk-time-talk-6-tickets-1711601669669?aff=oddtcreator>)

NOTE: The classroom at St. Clair College will have limited capacity. A waiting list will be initiated based on the registration numbers. After registering, if you find that your plans have changed and you can no longer attend, please contact us for cancelling your ticket. This will allow us to offer those on the waiting list a ticket to attend. Thanks for being considerate to others who might want to attend!

For any questions regarding the event, please feel free to contact Sean McCann, P.Eng. (spmccann13@hotmail.com or 519-890-7377).

Understanding Material Deformation and Fatigue Behavior for Structural Durability

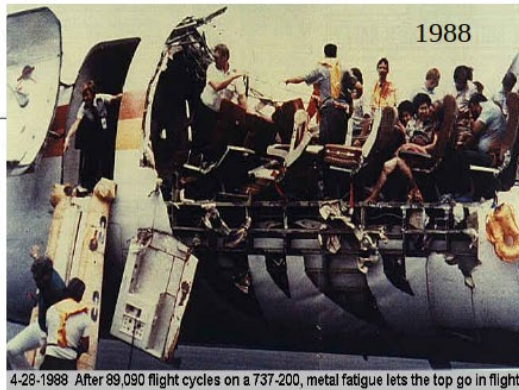
- Al Conle P.Eng.
Adj. Prof. U.Waterloo
Ret. Ford Motor Co.



1879



Johann Bauschinger



4-28-1988 After 89,090 flight cycles on a 737-200, metal fatigue lets the top go in flight.

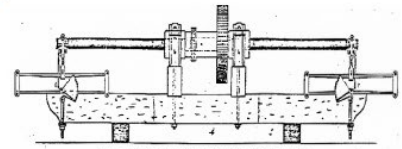


Fig. 1—Wöhler's machine for fatigue testing of railway axles.

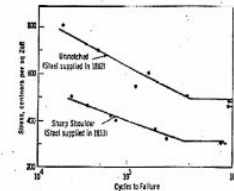


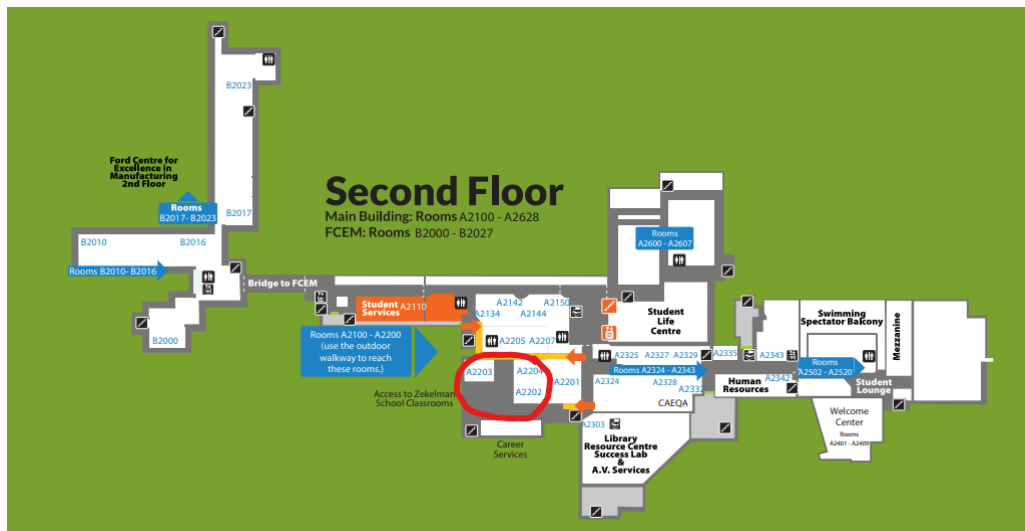
Fig. 2—Wöhler's S-N curves for Enapp axle steel.

1870



August Wöhler

St. Clair College (Main Building; Windsor Campus) Map



Presentation room is A2204 in Alumni Hall (new Zekelman School Classrooms; see red circle on attached map above)