

**CASE WESTERN RESERVE UNIVERSITY**  
**DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING**

*Presents*

**THE 2023 HIGLEY LECTURE**

Frank Rausche, Ph.D., *Class of '70*, and Garland Likins, *Class of '73*

Date: Friday, May 5<sup>th</sup>, 2023

Lunch: 12:00pm

Seminar Time: 12:45pm – 2:00pm

Location: Nord Hall, Room 356

*A reception, which will be held at 3:30pm in the Geotech Lab, Room 286, Bingham Bldg.*

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***From University Research to Application***

**Abstract:** During the past 6 decades, developments in measurement technology and computing capabilities have made it possible to greatly improve the condition and performance assessment of subsurface structures. The history of two real time measurement-based methods will be presented which made the successful journey from an idea to a prototype and then to daily applications at the construction site. In both cases, one a Case School of Engineering success story, university faculty and students made possible an increase of quality and efficiency of deep foundation construction, resulting in revolutionary changes in the foundation industry with exciting job opportunities for young civil engineers.



Frank Rausche, Ph.D., class of '70 was a key member of the research team at Case Western Reserve University which developed the Pile Driving Analyzer® System including CAPWAP®. He was also the principal author of GRLWEAP. These new

tools were essential to the founding of Pile Dynamics and GRL Engineers, Inc. As partner in both firms and president of the latter company, Dr. Rausche as a former P.E. consulted on construction sites across the United States and the World, and further developed these and other testing systems for the quality assurance of deep foundation elements. He has authored a large number of papers in the area of pile testing and analysis, contributed to numerous patents and actively participated in several professional associations.



Garland Likins, class of '73 is the President–Emeritus of Pile Dynamics, Inc., a manufacturer of quality assurance products for deep foundations. He was a licensed Professional Engineer in Ohio and a former principal of GRL Engineers, Inc., providers of deep

foundation testing services. In his 52 years since participating in the original dynamic pile testing research at Case Western Reserve University, Garland has performed countless field tests and directed the development of several field-testing devices for deep foundations. He has authored over 100 publications and several ASTM standards, been instrumental to many changes in highway specifications and The International Building Code, and has been active in deep foundations trade organizations such as ADSC, DFI and PDCA.

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