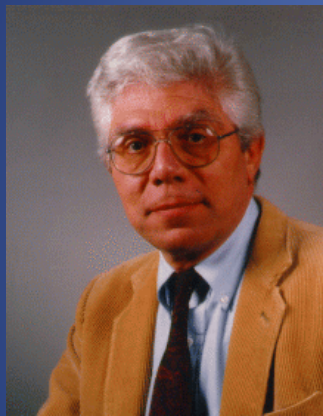


NSF Workshop on the Emerging Applications and Future Directions of the Boundary Element Method

September 1-3, 2010



Pioneers in Early BIE/BEM Research in the US



Frank J. Rizzo
U Washington
U Kentucky
Iowa State U
U Illinois



Thomas A. Cruse
Boeing
CMU
Pratt & Whitney
SwRI
Vanderbilt U
AFRL



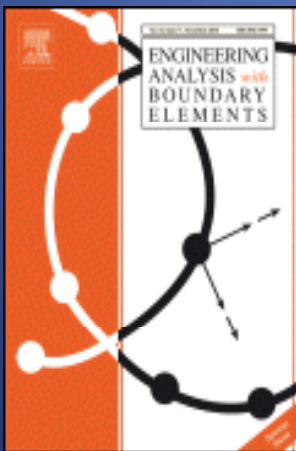
P. K. Banerjee
U Wales, UK
SUNY - Buffalo



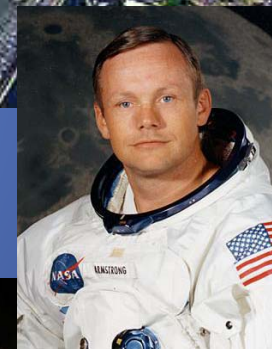
Subrata Mukherjee
Cornell U

BEM Conferences and Journals

- IABEM Conference (Next one, 2011, Italy)
- Int. Conference on Boundary Elements and Other Mesh Reduction Methods (Annual)
- Int. Conference on Boundary Element Techniques (Annual)
- USNCCM, WCCM, etc.



Welcome to Ohio!







THE UNIVERSITY OF AKRON



NSF WORKSHOP ON THE EMERGING APPLICATIONS
AND FUTURE DIRECTIONS OF THE BOUNDARY
ELEMENT METHOD



WELCOME

TO THE

NSF BEM WORKSHOP

AT

THE UNIVERSITY OF AKRON

September 1-3, 2010

Akron, OH











Boundary Integral Equations

Key Points:

- 1 INTERIOR and EXTERIOR 'off-boundary' equations are simple to derive, non-singular
- 2 Boundary equation: Limit to the boundary
- 3 Singular equation \Rightarrow Hypersingular equation

Boundary Limit:

- Mathematically rigorous, no CPV or Hadamard Finite Part
- Does the limit exist and can we compute it?



Talk Overview: Part II

- › Interface and Multi-zone
- › Error Estimation and Adaptivity
- › Fracture Analysis
- › Non-homogenous Media
- › Boundary Element Analysis (BEAN) Program















Student Poster Competition Winners

Zhangli Peng, University of California San Diego

Sofie Leon, University of Illinois

Han Tran, University of Texas at Austin

