“Developer’s Wish List”

Future Perspectives for OpenSees

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Key Questions / Wish List

- Future Perspective “past PEER”
  - Commercialization vs. Public Domain
  - Research versus Production tool
  - Links to alternative pre- and post-processors

- Technological Features
  - Element & Material libraries
  - Solution algorithms
  - Probabilistic analysis

- Developer Tools / Classes
  - Matrix vs. Vector vs. Tensor classes
  - Compatibility between these classes

- Documentation
  - Completeness?
  - Technical / mathematical details

- Next Steps
Future Perspective “past PEER”

- Commercialization vs. Public Domain
  - primarily R&D tool for NEES
  - goal is useful technology for industry (long term)
- Research versus Production tool?
  - starts migrating into practice with Ph.D. students
- Links to alternative pre- and post-processors

Others

Coding experience: ~ 5+
- Functions to access complex data (more than 50)

Technological Features

- Element & Material libraries
  - shear-wall element is needed (RC) verification is under development/implementation in progress
  - axisymmetric elements are missing (?)
- Solution algorithms
  - shell (MATLAB)
  - C. Filippin triangle needs linking
- Probabilistic analysis
  - concrete model w/ dynamic strain-rate effects on strength (cumulus tensor response)
  - damage models (2D, 3D under development)

Others
Developer Tools / Classes

- Matrix vs. Vector vs. Tensor classes
  
  $\text{tensor} \rightarrow \text{matrix} \rightarrow \text{tensors conversion}$

- Compatibility between these classes

- Others
  
  Remove Element for excavation (available)

Documentation

- Completeness?
  
  $\Rightarrow$ lag behind code development

- Technical / mathematical details
  
  $\text{equation}$, $\text{reference}$

- Credit for contributions

- Others
  
  - HTML (or others) in CVS
  
  - Users/contributors add own example website w/details
Next Steps

- Coordination between developers (?)
  
  *Forums work great*

- Public wish list (?)

- Others

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*a BIG Thank You*

*to the organizers of this exciting seminar*