

## AFGROW Workshop 2023

# AFGROW Future Development

James Harter, Alex Litvinov  
LexTech, Inc .

# Unfinished Items from Workshop 2022 To Do List

Scale: 10 most important

Countersunk hole solution (10)

Oblique/Part Through Corner Cracks at Hole (10)

Add the ability to use mm in model geometry input (7)

Implement the full r/t range for the corner crack/through crack at hole solution option in AFGROW (8)

Ability to click on status view item to open the appropriate dialog. (8)

Add a stiffened panel solution? (4) (Bulging factors)

Update advanced double corner crack solution with the latest FE data (7)

Create a paper to explain how to determine spectrum severity in collaboration with HE(4)

Access retardation metadata via COM Interface (5)

Incorporate Effective width in the bearing beta calculation (5) (Add check box to update bearing load case width)

Make changes to allow the use of spectra with three load channels (8.5)

# Spectrum Manager Future Development Plans

- Spectrum cycle counting (rain flow ASTM E1049 and range pair) user discretion (own risk) (7)
- Option to build spectrum from smaller blocks than sub-spectrum
- Option to output spectrum max-min data in a single column or line
- Improve sub-spectrum creation capability

# Other Requests

- Develop a Handbook of FEA models in AFGROW (8.5)
- Print Vroman increment value at the end of the output, may be add the summary of the prediction enhancement (issue tracker) (8.5)
- Add preferences in the status tree view (9)
- Add preferences to the output file (9)
- Show initial and final crack sizes after prediction is done (1)
- Create the ability for a plugin to call and modify any AFGROW K solution. (Requested by Scott Prost-Domasky, APES, Inc.) (1)
- Better “correlation” between crack initiation and growth (9)
- Send events from plugin to the notification list (8)
- Develop a post-processing application/web application (6)
- Switch to a new Visual Studio (10)
- Add a crack to a hole using popup menu (6)
- Add a vertical offset to a centered embedded crack (1)
- Correction for small crack growth rate (0)
- When right-clicking on the life plot legend, save data in hours if applicable (8)
- Spectrum database similar to the crack growth rate database (7.5)
- Track total damage for each growth rate bin in the crack growth rate chart (4)
- AFGROW doesn't update output screen sometimes (for small crack growth or limited # of passes) (10)
- Add new Special Case with optional crack on the near side of each adjacent hole (TBD)