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Spotlight on *Structures*



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Volume 31 of *Structures* (June 2021) is now available to read at www.sciencedirect.com/journal/structures/vol/31.

Editor-in-Chief, Leroy Gardner, has selected a paper on fatigue analysis of wire arc 3D printed components as his 'Featured Article' from this issue. The article will be available free of charge for six months.

Editor-in-Chief's Featured Article

Fatigue analysis of wire arc additive manufactured (3D printed) components with unmilled surface

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Abstract

First investigations have been carried out on the characterisation of the as-welded surface roughness of unmilled wire arc additive manufactured (WAAM) components, followed by an experimental determination of the fatigue strength.

Subsequently, randomly based finite-element (FE) simulations are carried out to expand the findings. The statistical characteristics of the surface provide the input values for the Monte-Carlo (MC) simulation. Here, the fatigue strengths of single-wire and multiple-wire welded components have been compared applying the effective notch stress concept performing over 2200 simulations. Finally, a fatigue detail classification for surfaces of WAAM components is given following the principles of EN 1993-1-9.

→| Read the full paper at <https://doi.org/10.1016/j.istruc.2021.01.068>

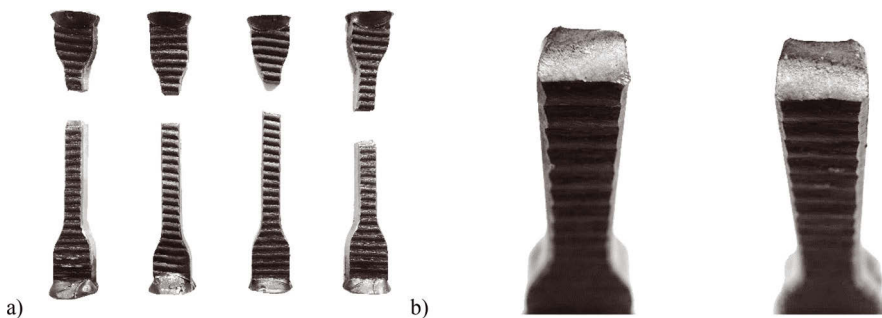
Call for papers

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Authors are invited to prepare an abstract of 200–300 words, and submit this to the Conference Editor, Prof. Alphose Zingoni of the University of Cape Town, via email (alphose.zingoni@uct.ac.za).

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