

Accepted Manuscript

Bridging the Scales: Continuum-Based Material Constitutive Modeling of Mechanical and Ballistic Test Data from Composites and Fabrics

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PII: S0734-743X(18)30033-2
DOI: [10.1016/j.ijimpeng.2018.05.005](https://doi.org/10.1016/j.ijimpeng.2018.05.005)
Reference: IE 3103



To appear in: *International Journal of Impact Engineering*

Received date: 11 January 2018
Revised date: 11 May 2018
Accepted date: 16 May 2018

Please cite this article as: Alexander J. Carpenter , Sidney Chocron , Charles E. Anderson Jr , Bridging the Scales: Continuum-Based Material Constitutive Modeling of Mechanical and Ballistic Test Data from Composites and Fabrics, *International Journal of Impact Engineering* (2018), doi: [10.1016/j.ijimpeng.2018.05.005](https://doi.org/10.1016/j.ijimpeng.2018.05.005)

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Highlight:

- A new continuum-level material modeling approach for composites/fabrics is presented.
- Model relates stresses/strains between elements, individual laminae, and fibers/matrix.
- The approach can reproduce a composite's response to a variety of stress states.
- Ballistic limits, damage extents, and deflections from composite/fabric targets were also predicted.

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