

CONVOLUTION OPERATIONS IN CURVE AND SURFACE MODELING

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Motivated by the need to develop empirical models of cured composite laminated parts, convolution-based techniques of smoothing curve and surface models have recently been investigated. These convolution operations for tensor product splines have been found to be very effective, not only for building the intended models, but also for modeling tooling and machining. The technique so far appears to be very promising, and it appears to offer the potential to solve some of the data complexity issues that arise in the practical modeling of real world manufactured parts. This talk will describe the investigations that have so far been performed and offer ideas for further development