

# Geant 4

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## **Symmetric branches of Geant4: How the medical and aerospace user communities bring common issues and solutions to the simulation toolkit**

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Geant4 has long moved beyond its original problem domain of High Energy Physics. Similarities in the user requirements of the aerospace and the medical communities have brought valuable new features to both domains. From the aerospace community, advances such as the Geant4 General Particle Source and improved CAD to GDML geometry pathways have found users in radiation therapy. From the medical community, advances such as simplified scoring and new volume rendering tools have found users in aerospace. Common interests in lower-than-HEP energies and smaller-than-HEP distance scales enable additional valuable synergy. Beyond the technical issues of this fruitful symmetry, there are also sociological issues, ways in which aerospace and medical collaborations have much in common with each other but not so much in common, and hence different needs from, the HEP community where Geant4 began.

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