

1124-46-404

**Yunyun Yang\*** ([yunyun.yang@mail.wvu.edu](mailto:yunyun.yang@mail.wvu.edu)), West Virginia University, Institute of techno,  
Department of mathematics, 405 Fayette Pike, Charleston, WV 25136, and **Ricardo Estrada**.

*Distributions in space with thick points.*

The theory of thick distributions in dimension one was initially introduced to deal with the occurrence of a distributional singularity on the boundary of a domain of integration. We introduced a similar theory in higher dimensions [?], yet the approach was quite different: we considered asymptotic expansions of test functions. I will explain the motivations of our work. I will present the construction of the new spaces, I will present several important examples of thick distributions, including the “thick delta functions”. In the end I will briefly discuss the relation to asymptotic analysis. This is a joint work with my thesis advisor Ricardo Estrada. (Received September 13, 2016)