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**Yuri Luchko\*** (luchko@beuth-hochschule.de), Beuth University of Applied Sciences Berlin,  
Department of Mathematics, 13353 Berlin, Germany. *Subordination principle for the  
time-space-fractional diffusion-wave equation.*

In this talk, a subordination principle for the solution operators to a family of the linear multi-dimensional space-time-fractional diffusion-wave equations is addressed. These equations are obtained from the diffusion equation by replacing the first order time-derivative by the Caputo fractional derivative of order  $\beta$ ,  $0 < \beta \leq 2$  and the Laplace operator by the fractional Laplacian  $-(-\Delta)^{\frac{\alpha}{2}}$  with  $0 < \alpha \leq 2$ . First, a special representation of the fundamental solution to these equations is obtained in form of a Mellin-Barnes type integral. This representation is then employed for derivation of a subordination formula that connects the solutions to the space-time-fractional diffusion-wave equations with different orders  $\alpha$  and  $\beta$  of the fractional derivatives. (Received January 09, 2021)