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xinyun zhu* (zhu_x@utpb.edu), Odessa, TX 79762. *Solvability for a discrete fractional mixed type sum-difference equation boundary value problem in a Banach space.* Preliminary report.

In this paper, by means of Darbo's fixed point theorem, we establish the existence of solutions to a nonlinear discrete fractional mixed type sum-difference equation boundary value problem in a Banach space. Additionally, as an application, we give an example to demonstrate the main result. (Received August 09, 2020)