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Response to an external field of a system of coupled Kuramoto oscillators SHADI ESMAEILI, Virginia Tech, DARKA LABAVIC, HILDEGARD MEYER-ORTMANNNS, Jacobs University Bremen, MICHEL PLEIMLING, Virginia Tech — Many structures in nature reach spontaneous order and synchrony. The Kuramoto model has successfully explained a vast variety of synchronization patterns observed in nature. We study the response to an external field of a system of Kuramoto oscillators coupled through frustrated bonds. The emerging physical aging in this system is investigated through autocorrelation and response functions. The observed aging phenomena are very robust and show qualitative features that are only weakly dependent on system parameters and on the type of perturbation.

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