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Identification and manipulation of dynamic modes in nematic liquid crystals[1] ZRINKA GREGURIC FERENCEK, TYRUS BERRY, TIMOTHY SAUER, JOHN ROBERT CRESSMAN, George Mason University — We present work identifying and manipulating patterns formed in an electroconvecting nematic liquid crystal. The existence of coherent, temporally and spatially correlated, structures are found in a wide range of driven systems. The development of new experimental and analytical techniques has enabled the identification of these structures and is beginning to elucidate their role in establishing macroscopic behavior. Here we describe an algorithm used to identify and track these structures, and report on the effects of local and global stimulation on their creation and evolution.

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