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A unifying framework for understanding many types of fluid mixing, for researchers. Mixing processes occur in many technological and natural applications, with length and time scales ranging from the very small to the very large. The diversity of problems can give rise to a diversity of approaches. Are there concepts that are central to all of them? Are there tools that allow for prediction and quantification? The authors show how a variety of flows in very different settings possess the characteristic of streamline crossing. This notion can be placed on firm mathematical footing via Linked Twist Maps (LTMs), which is the central organizing principle of this book. The authors discuss the definition and construction of LTMs, provide examples of specific mixers that can be analyzed in the LTM framework and introduce a number of mathematical techniques which are then brought to bear on the problem of fluid mixing. In a final chapter, they present a number of open problems and new directions. EAN/ISBN: 9780511243547 Publisher(s): Cambridge University Press Format: ePub/PDF Author(s): Sturman, Rob - Ottino, Julio M. - Wiggins, Stephen

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