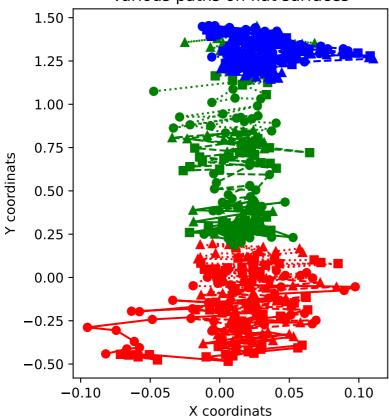Various paths on flat surfaces