EURO COIN DIFFUSION

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Euro coins and bills were introduced in twelve EU countries in the beginning of year 2002. All the notes introduced are of the same design, and so are the front sides of the coins. However the backsides of the coins have distinct designs in each country. When people travel within EU countries, they change the Euro coin population in each country they leave or arrive with coins in their pockets. In this study we have modeled the mixing of Euro coins between the EU countries, which have the Euro as their legal currency. We have used data found from the internet as well as Monte Carlo methods to simulate the evolution of Euro coin populations in each country. This study might seem rather unphysical, but in fact this is an example of a diffusion problem, which has been solved using the same technique as many physical diffusion problems, e.g. mixing of liquids on molecular level.

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