Rutina Autocorrelation (1)

```
Autocorr[Serie_] := (
  Dim = Length[Serie];
   EP = Abs[Fourier[Serie]]^2;
   AC = Chop[InverseFourier[EP]];
   AC = (AC / Abs[AC[[1]] - Mean[AC]]);
   AC = AC - Mean[AC];
   ;)
```

Rutina Autocorrelation (2)

```
Autocorr[SerieBis_] := (
  Serie = (SerieBis - Mean[SerieBis]) / StandardDeviation[SerieBis];
  DDDim = Length[Serie];
  AC = Table[{τ, Serie.RotateLeft[Serie, τ] / DDDim}, {τ, 0, IntegerPart[DDDim / 2]}]
  ;)
```

Rutina Cross-correlation (2)

```
Crosscorr[Serie1_, Serie2_] := (
  Serie1Bis = (Serie1 - Mean[Serie1]) / StandardDeviation[Serie1];
   Serie2Bis = (Serie2 - Mean[Serie2]) / StandardDeviation[Serie2];
   DDDim = Length[Serie1];
   CC1 =
    Table[{τ, Serie1Bis.RotateLeft[Serie2Bis, τ] / DDDim}, {τ, 0, IntegerPart[DDDim / 2]}];
   CC2 = Table[{τ, RotateLeft[Serie1Bis, τ].Serie2Bis / DDDim},
     {τ, 0, IntegerPart[DDDim / 2]}];
   ;)
```

Graficar

```
Autocorr[FragX]
ACx = AC;
Autocorr[FragY]
ACy = AC;
Autocorr[FragZ]
ACz = AC;
```

```
τMin = 1; τMax = 200;
FragACx = ACx[[τMin ;; τMax]];
FragACy = ACy[[τMin ;; τMax]];
FragACz = ACz[[τMin ;; τMax]];
FigACx1 = ListLinePlot[FragACx, PlotStyle → Blue];
FigACy1 = ListLinePlot[FragACy, PlotStyle → Orange];
FigACz1 = ListLinePlot[FragACz, PlotStyle → Red];
FigAC = Show[FigACx1, FigACy1, FigACz1, PlotRange → All, ImageSize → 800, Frame → True,
  FrameLabel → {{"C(τ)", None}, {"τ (0.01 s)", None}}, LabelStyle → 16, AspectRatio → 1 / 4]
```