In[1]:=

In[2]:=

In[3]:= **r := Random[]**

In[4]:= **ri := Random[Integer]**

In[5]:=
disp := Export["t.ps", #, "EPS"] &

In[6]:= **list1 = Table[r, {10 000}];**

In[7]:= **list2 = Table[r, {10 000}];**

In[8]:= **Correlation[list1, list1]**

Out[8]= 1.

In[9]:= **Correlation[list1, list2]**

Out[9]= -0.00625136

In[10]:= **Timing[list1 = Table[Random[], {1 000 000}];]**

Out[10]= {0.078, Null}

In[11]:= **Timing[list2 = Table[Random[], {1 000 000}];]**

Out[11]= {0.078, Null}

In[12]:=
Timing[Correlation[list1, list1]]

Out[12]= {0.188, 1.}

In[13]:= **Timing[Correlation[list1, list2]]**

Out[13]= {0.203, -0.00127612}

In[14]:= **(∗apparently, the longer the list, the smaller is the correlation for a "good" generator∗)**

In[15]:=

In[16]:= **(∗similar with 2−dimensional array∗)**

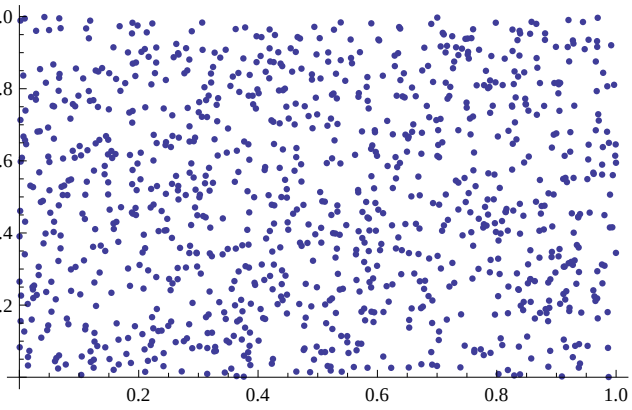
In[17]:= **xylist = Table[{r, r}, {1000}];**

In[18]:= **Correlation[xylist]**

Out[18]= {{1., 0.0336431}, {0.0336431, 1.}}

In[19]:= **ListPlot[xylist]**

Out[19]=



In[20]:= **disp[ListPlot[xylist]](∗no patterns∗)**

Out[20]= t.ps

In[21]:= **(∗now try correlated∗)**

In[22]:= ***a* = .5; event := Block[{rr = Random[]}, {rr, rr + *a* ∗ Random[]}]**

In[23]:= **Timing[xylist = Table[event, {1000}];]**

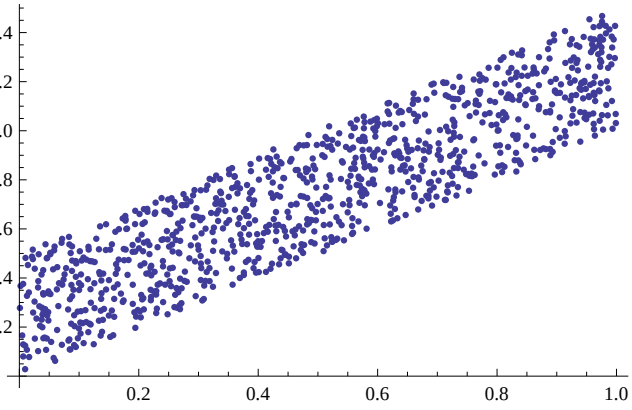
Out[23]= $\{2.75387 \times 10^{-17}, \text{Null}\}$

In[24]:= **Correlation[xylist]**

Out[24]= {{1., 0.895164}, {0.895164, 1.}}

In[25]:= **ListPlot[xylist]**

Out[25]=



In[26]:= **disp[ListPlot[xylist]](∗patterns∗)**

Out[26]= t.ps

In[27]:=

In[28]:= ***a* = .1;**

In[29]:= **Timing[xylist = Table[event, {1000}];]**

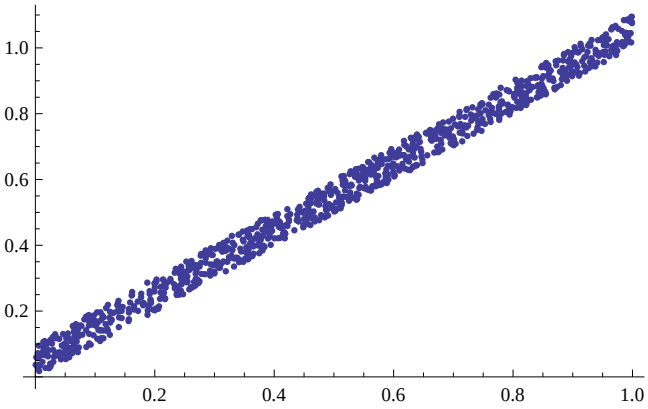
Out[29]= $\{1.35525 \times 10^{-17}, \text{Null}\}$

In[30]:= **Correlation[xylist]**

Out[30]= {{1., 0.994902}, {0.994902, 1.}}

In[31]:= **ListPlot[xylist]**

Out[31]=



In[32]:= **disp[ListPlot[xylist]](∗patterns∗)**

Out[32]= t.ps