Z_InverseTransform over translucent background

$$\text{plot}(\text{data}, \text{char}, \text{size}, \text{clr}) := \begin{array}{l} \text{for } k \in 1 \,..\, \text{rows}(\text{data}) \\ \left[r3_k := \text{char} \quad r4_k := \text{size} \quad r5_k := \text{clr} \right] \\ \text{augment}(\text{data}, r3, r4, r5) \end{array}$$

$$\text{appVersion}(3) = \text{"0.98.6179"}$$

$$n := 1 \,..\, 16 \qquad r := 2 \qquad c(x) := \begin{cases} 1 & \text{if } (1 \le x) \wedge (x \le 16) \\ \text{""} & \text{otherwise} \end{cases}$$

$$\alpha := 0.5 \qquad \boxed{\text{Experiment } [0.125, \, 0.25, \, 0.5, \, 0.625, \, 0.75]}$$

$$H(z) := \frac{z + \alpha}{z^2 - z + \alpha} \qquad\qquad Y(z) := \left(\frac{z + \alpha}{z^2 - z + \alpha} \right) \cdot \left(\frac{z}{z - 1} \right) \qquad \boxed{\begin{array}{l} H(z) \text{ impulse perturbation} \\ Y(z) \text{ algo input to } \ldots \text{ Inv}(n, Y) \end{array}}$$

$$H(0) = 1 \qquad\qquad ch(x) := \begin{cases} 1 & \text{if } (0 \le x) \wedge (x \le 16) \\ \text{""} & \text{otherwise} \end{cases}$$
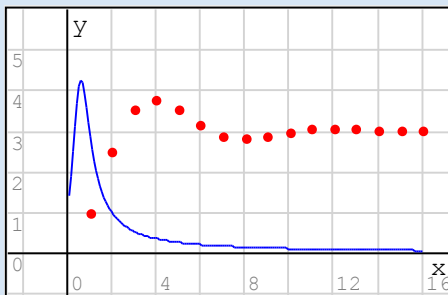
$$\boxed{\text{The inverse Z\_transform in the discrete domain}}$$

$$\text{Inv}(n, Y) := \frac{r^n}{2 \cdot \pi} \cdot \int_0^{2 \cdot \pi} Y(r \cdot \exp(i \cdot \theta)) \cdot \exp(n \cdot \theta \cdot i) \, d\theta \qquad \begin{array}{l} \text{for } j \in 1 \,..\, \text{rows}(n) \\ \quad y_j := \text{Inv}(n_j, Y) \end{array} \qquad \begin{cases} R := \text{augment}\left(n, \vec{|y|}\right) \\ Z := \text{plot}(R, \text{"."}, 14, \text{"red"}) \end{cases}$$

1/1 sanity Mathcad source code	Z_system for inverse transform

$$\begin{cases} H(x) \cdot ch(x) \\ Z \end{cases} \qquad\qquad \begin{cases} H(x) \\ Y(x) \cdot c(x) \end{cases}$$

$$R = \begin{bmatrix} 1 & 1 \\ 2 & 2.5 \\ 3 & 3.5 \\ 4 & 3.75 \\ 5 & 3.5 \\ 6 & 3.125 \\ 7 & 2.875 \\ 8 & 2.813 \\ 9 & 2.875 \\ 10 & 2.969 \\ 11 & 3.031 \\ 12 & 3.047 \\ 13 & 3.031 \\ 14 & 3.008 \\ 15 & 2.992 \\ 16 & 2.988 \end{bmatrix}$$

stretch

fit
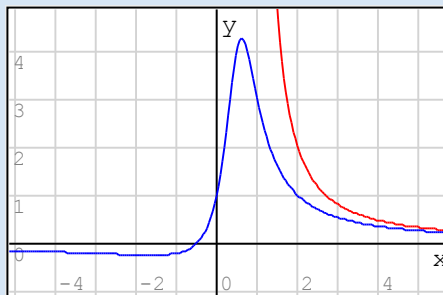
If you want some regions white over the translucent,
click in those regions, set background [254,254,254]
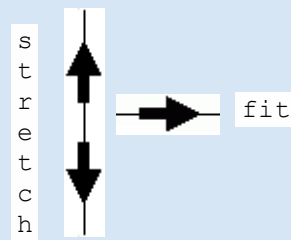
1. Insert Image empty argument
2. size for convenience
3. switch border ON/OFF
4. capture a region, crop image
5. save as *PNG
6. Insert Background
7. Browse from file
8. double click ... done
....
9. addtionally to native
PNG transparency: you can
add/remove luminosity ... How ?
10. copy the captured_cropped
image ... paste in IrfanView.
At this point in Irfanview
11. increase/decrease Gamma.
12. save that new version *.PNG

You can slide whatever you want
in a dead image region. Not like
Formated Label or Translucent .
To acces the inserted stuff, you
must slide the image region.
Very convenient for abstract.
Ideal for creating a cartouche.
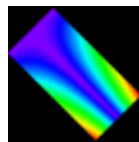
IrfanView is of
exceptional quality
zoom/rotate images.

1. To access X_Y: slide up gray area
   Alternately: delete some dots
   to access X_Y from the RHS click.
2. Click-in gray, background at will

Show/hide input data

Cu resistivity in high induction magnetic field

"unfamiliar Copper Resistivity ....

$$a := 1.454 \cdot 10^{-17} \quad b := 4.437 \quad c := 5.786 \cdot 10^{-7}$$
$$d := 3.292 \quad f := 7.649 \quad g := 5.671 \cdot 10^{-10}$$

$$Cu(T) := g + \frac{a \cdot T^b}{1 + c \cdot T^d \cdot \exp\left(-50^f \cdot \left(\frac{1}{T}\right)^f\right)}$$

"jmG model for Mélanie Mathsoft Collaoratory"
"if you miss ranging y, will crash Smath"
"Cu resistivity in high induction magnetic field"

ITER [Cadarache] Cu Resitivity

Resistivity / [°C]

PROJECT: ITER [Cadarache]
Created : jmGiraud
Dated: 2018_08_03

**brush over
4background**

Create cartouche:
1. Insert image <= menu
2. OFF display input data
3. Click-in2size by handles
4. Brush over4user background
5. Add/slide items to compose
6. White [254,254,254]
7. Black [1,1,1]

Done Smath