- $t_{eq} \ll s < t \Rightarrow \begin{cases} C_x(t,s) = C_x^{eq}(t-s) \\ R_x(t,s) = R_x^{eq}(t-s) \end{cases}$

$$\text{FDT} \Rightarrow \boxed{R^{eq}(\tau) = -\frac{1}{T} \frac{d\,C^{eq}(\tau)}{d\tau}} \; !$$

In the general case?

Def.:

$$X_x(t,s) \equiv \frac{R_x(t,s)}{\frac{1}{T}\frac{\partial}{\partial s} C_x(t,s)} \qquad (\equiv 1 \text{ at equilibr.})$$

fluctuation-dissipation ratio (FDR)

and:

$$X^\infty \equiv \lim_{s\to\infty} \lim_{t\to\infty} X_{x=0}(t,s)$$

X^∞ in some systems:

	$T<T_c$	$T=T_c$	$T>T_c$	
Random walk[+]		1/2		
Free Gaussian Field[+]	–	1/2	1	
d-dim. Spherical Model[+]	0	$\frac{d-2}{d}$	1	$(2<d<4)$
1d Ising-Glauber Chain[+×]	–	1/2	1	
2d Ising Model[+]		0.26(1)		
3d " " [+]		~0.4		

+: Cugliandolo, Kurchan, Parisi '94

+: Godrèche, Luck '99, 2000

×: Zannetti et al. '99