	variable intensive	variable extensive	raideur	inertie	éq couplées		d'Alembert $\frac{\partial}{\partial x}\frac{\partial}{\partial t} = \frac{\partial}{\partial t}\frac{\partial}{\partial x}$	$c = \sqrt{\frac{\text{raideur}}{\text{inertie}}}$	$Z = u/i = \text{inertie} \times c = \text{raideur}/c = \sqrt{\text{raideur} \times \text{inertie}}$
électricité (coax)	u	i	$1/\Gamma$	Λ	$\frac{\partial u}{\partial x} = -\Lambda \frac{\partial i}{\partial t}$ (maille)	$\frac{\partial u}{\partial t} = -\frac{1}{\Gamma}\frac{\partial i}{\partial x}$ (noeuds)	$\frac{\partial^2}{\partial x^2} - \Lambda\Gamma\frac{\partial^2}{\partial t^2}$	$\sqrt{\frac{1}{\Lambda\Gamma}} = \sqrt{\frac{1/\Gamma}{\Lambda}}$ $= \frac{1}{\sqrt{\varepsilon_0\varepsilon_r\mu_0}}$	$\Lambda c = \frac{1/\Gamma}{c} = \sqrt{\frac{\Lambda}{\Gamma}}$ $Z = \sqrt{\Lambda \, 1/\Gamma}$ $= \sqrt{\frac{\mu_0}{\varepsilon_0\varepsilon_r}}$
mécanique (corde)	F_y	v_y	T_0	μ	$\frac{\partial F_y}{\partial x} = -\mu\frac{\partial v_y}{\partial t}$ (PFD)	$\frac{\partial F_y}{\partial t} = -T_0\frac{\partial v_y}{\partial x}$	$\frac{\partial^2}{\partial x^2} - \frac{\mu}{T_0}\frac{\partial^2}{\partial t^2}$	$\sqrt{T_0/\mu}$	$\mu c = \frac{T_0}{c} = \sqrt{\mu T_0}$
Méca Flu Acoustique (compressé)	P_1	v_1	$1/\chi_S$	ρ_0	$\vec{\nabla} p_1 = -\rho_0 \frac{\partial \vec{v}_1}{\partial t}$ (Euler)	$\frac{\partial p_1}{\partial t} = -\frac{1}{\chi_S}\vec{\nabla}\cdot\vec{v}_1$	$\begin{cases}\vec{\Delta} \\ \Delta\end{cases} - \rho_0\chi_S\frac{\partial^2}{\partial t^2}$ vectoriel	$\sqrt{\frac{1}{\rho_0\chi_S}} = \sqrt{\frac{1/\chi_S}{\rho_0}}$	$\rho_0 c = \frac{1/\chi_S}{c} = \sqrt{\frac{\rho_0}{\chi_S}}$
OEM	E_x	B_y/μ_0 H	$1/\varepsilon_0$	μ_0	(MF) $\vec{\nabla}\wedge\vec{E} = -\frac{\partial \vec{B}}{\partial t}$ soit $\vec{\nabla}\wedge\vec{E} = -\mu_0\frac{\partial \vec{B}/\mu_0}{\partial t}$	(MA) $\vec{\nabla}\wedge\vec{B} = \varepsilon_0\mu_0\frac{\partial \vec{E}}{\partial t}$ $\vec{\nabla}\wedge\vec{B}/\mu_0 = \varepsilon_0\frac{\partial \vec{E}}{\partial t}$	$\vec{\Delta}$ $\frac{\partial^2}{\partial z^2} - \varepsilon_0\mu_0\frac{\partial^2}{\partial t^2}$	$\sqrt{\frac{1/\varepsilon_0}{\mu_0}} = \sqrt{\frac{1}{\varepsilon_0\mu_0}}$ $3 \cdot 10^8 \text{ m}\cdot\text{s}^{-1}$	$Z = \mu_0 c = \frac{1}{\varepsilon_0 c}$ $Z_0 = \sqrt{\frac{\mu_0}{\varepsilon_0}} = 377\,\Omega$

	e_p	e_c	J	amplitude	éq constitutive associée
électricité	$\frac{1}{2}\frac{u^2}{1/\Gamma} = \frac{1}{2}\Gamma u^2$	$\frac{1}{2}\Lambda i^2$	$u\, i$	$i = \frac{dQ}{dt}$	$u = -\frac{1}{\Gamma}\frac{\partial Q}{\partial x}$
mécanique	$\frac{1}{2}\frac{F_y^2}{T_0}$	$\frac{1}{2}\mu v_y^2$	$F_y v_y$	$v_y = \frac{\partial y}{\partial t}$	$F_y = -T_0\frac{\partial y}{\partial x}$
Acoustique	$\frac{1}{2}\frac{P_1^2}{1/\chi_S} = \frac{1}{2}\chi_S P_1^2$	$\frac{1}{2}\rho_0 v_1^2$	$P_1 \vec{v}_1$	$\vec{v}_1 = \frac{\partial \vec{\xi}}{\partial t}$	$P_1 = -\frac{1}{\chi_S}\frac{\partial Q}{\partial x}$
OEM	$\frac{1}{2}\frac{E^2}{1/\varepsilon_0} = \frac{1}{2}\varepsilon E^2$	$\frac{1}{2}\mu_0\left(\frac{B}{\mu_0}\right)^2 = \frac{B^2}{2\mu_0}$	$\vec{E}\wedge\frac{\vec{B}}{\mu_0}$ $(E_x, B_y/\mu_0)$	$\vec{A} = \frac{\partial}{\partial t}$? $\vec{E}_\perp = \frac{\partial}{\partial t}(-\vec{A}_\perp)$	$\frac{\vec{B}_\perp}{\mu_0} = -\frac{1}{\mu_0}\vec{\nabla}\times(-\vec{A}_\perp)$