



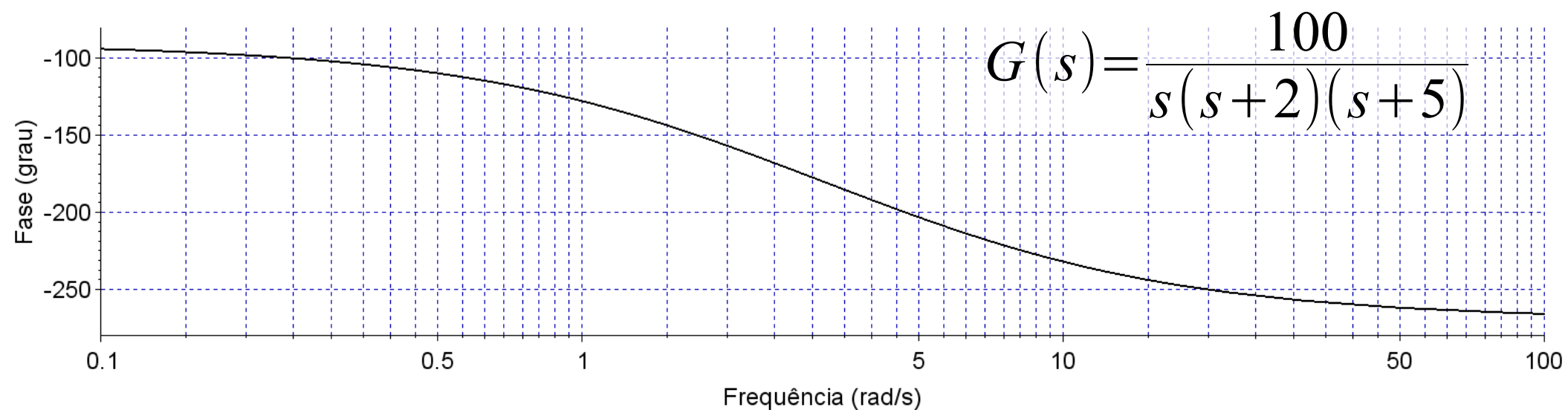
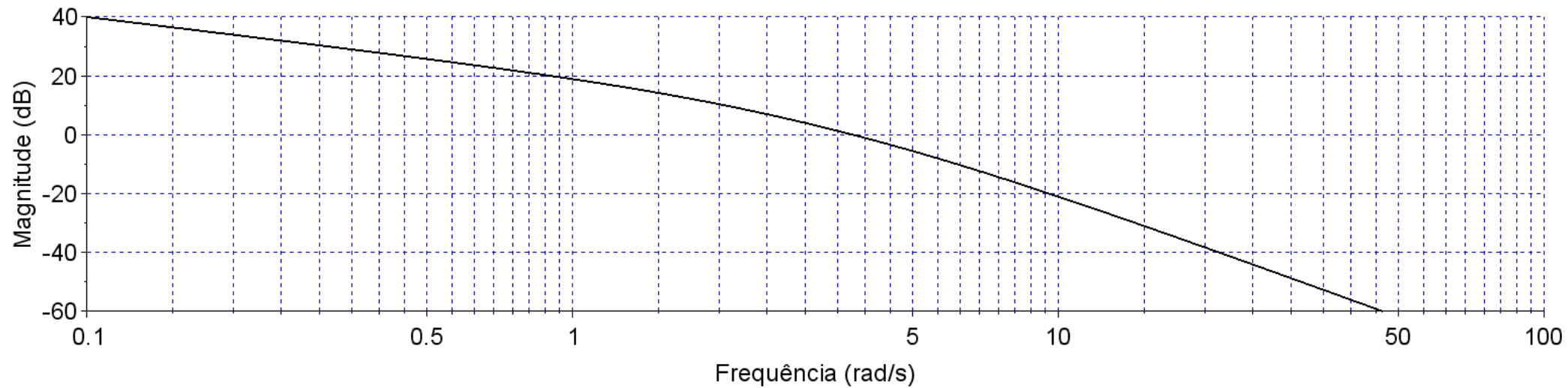
# Controle e Servomecanismo

TE240

Revisão

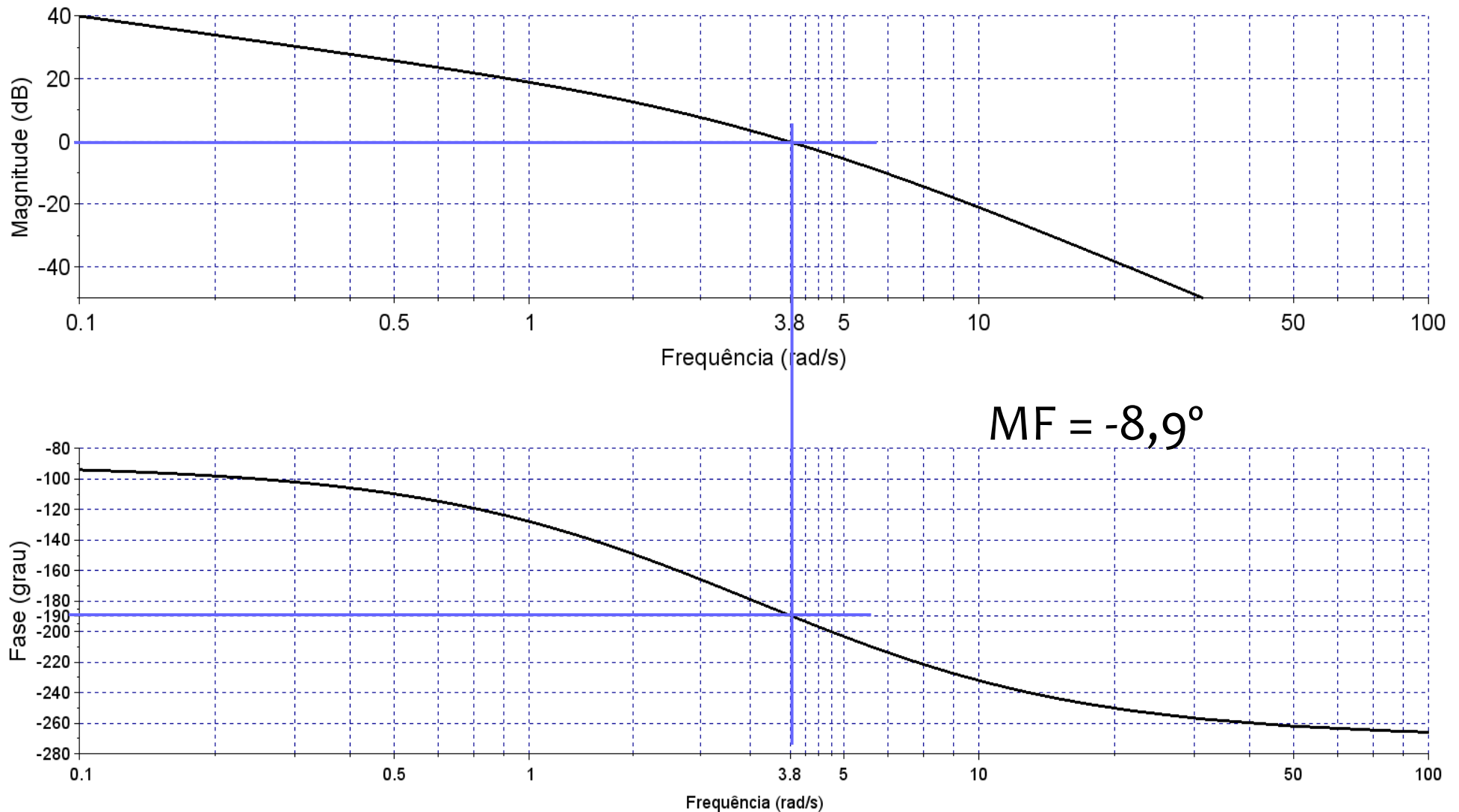
Juliana L. M. Iamamura  
juliana.iamamura@ufpr.br

# Projeto de um controlador de atraso usando diagramas de Bode

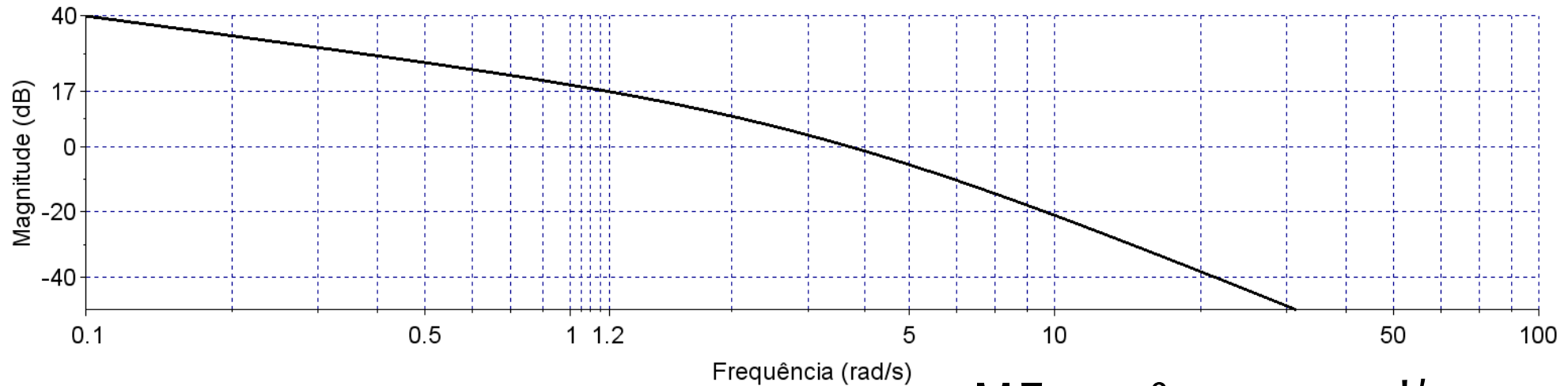


$$G(s) = \frac{100}{s(s+2)(s+5)}$$

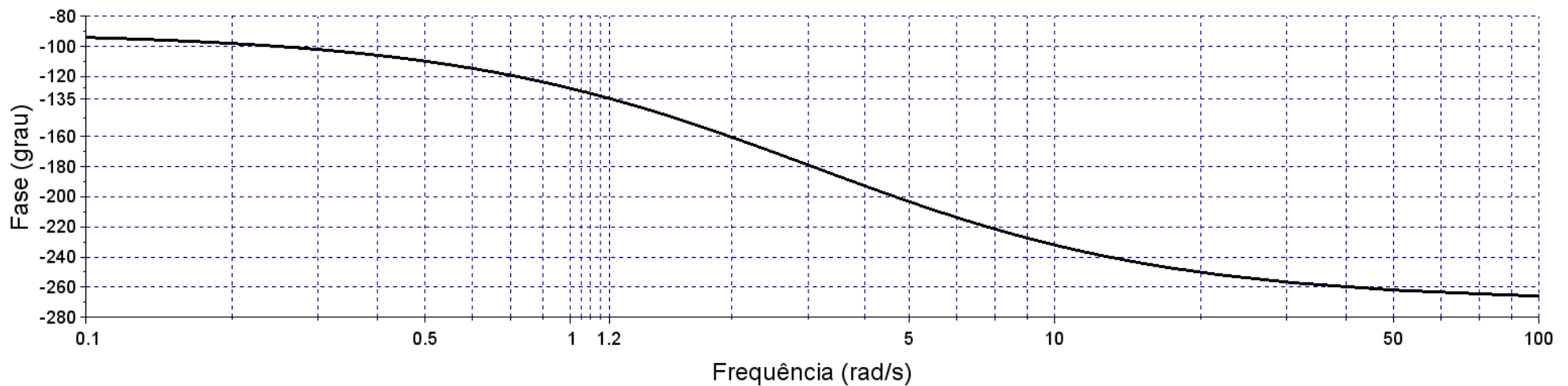
# Projeto de um controlador de atraso usando diagramas de Bode



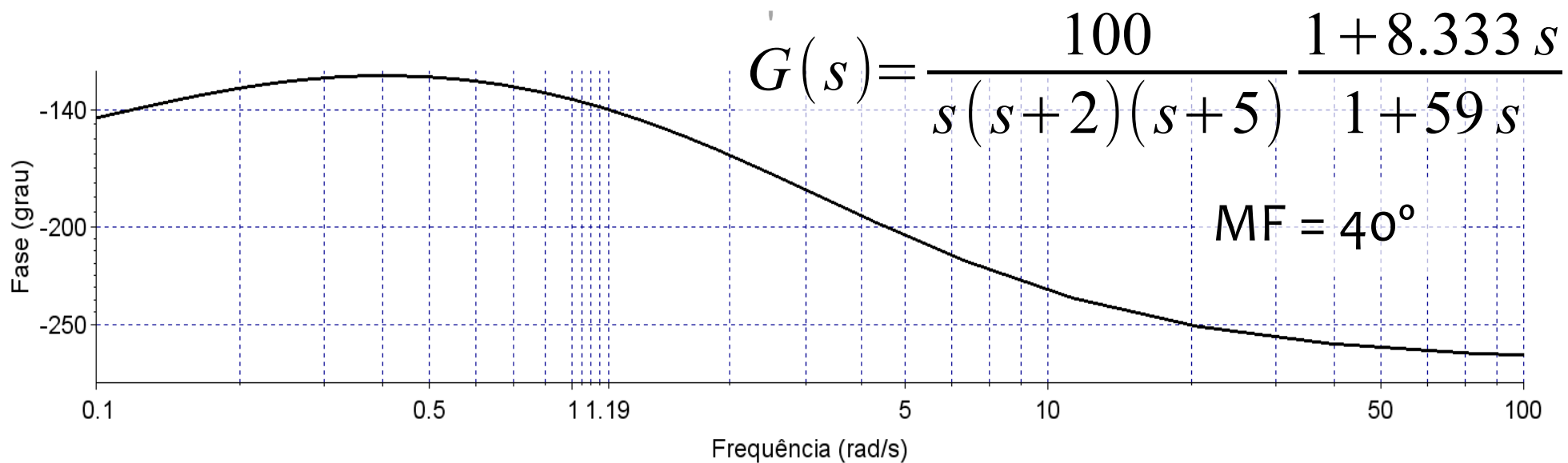
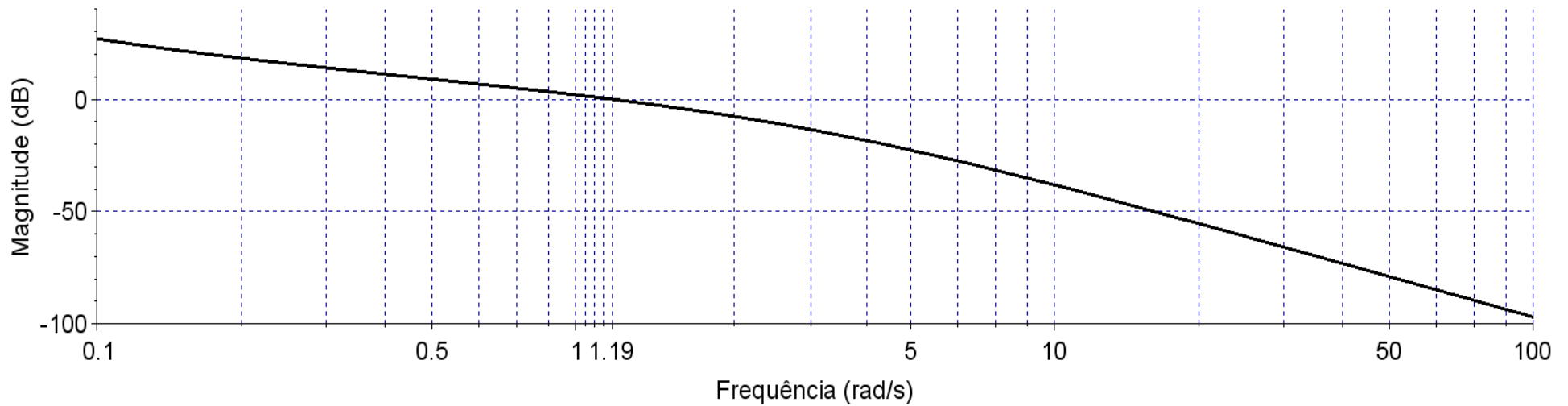
# Projeto de um controlador de atraso usando diagramas de Bode



MF =  $45^\circ$  em 1,2 rad/s



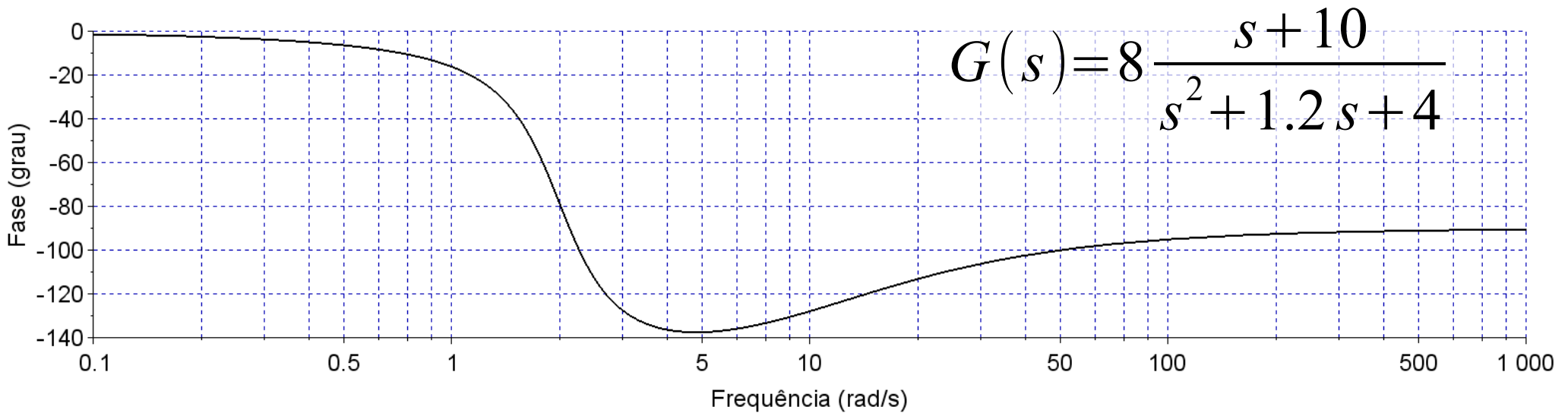
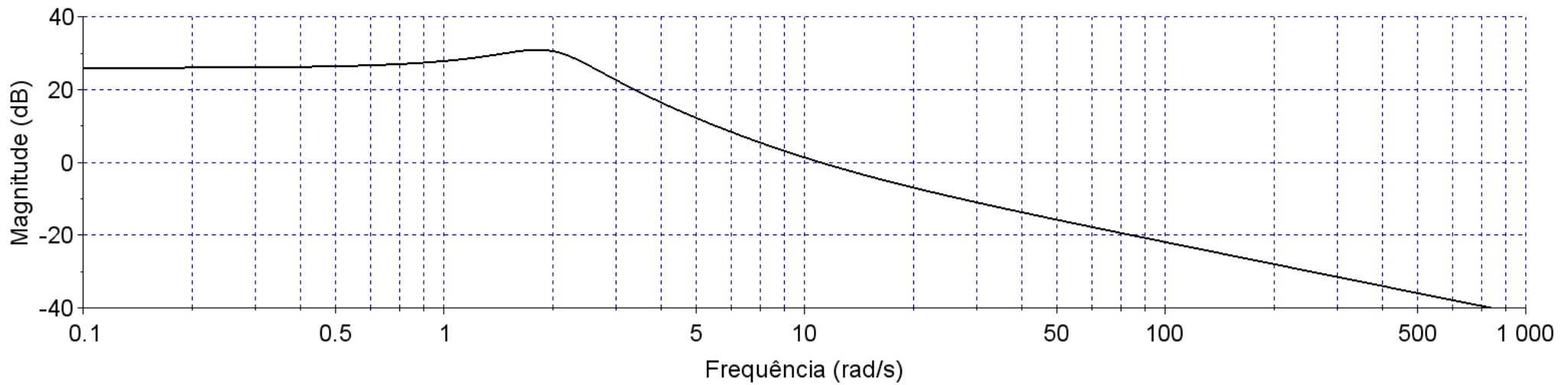
# Projeto de um controlador de atraso usando diagramas de Bode



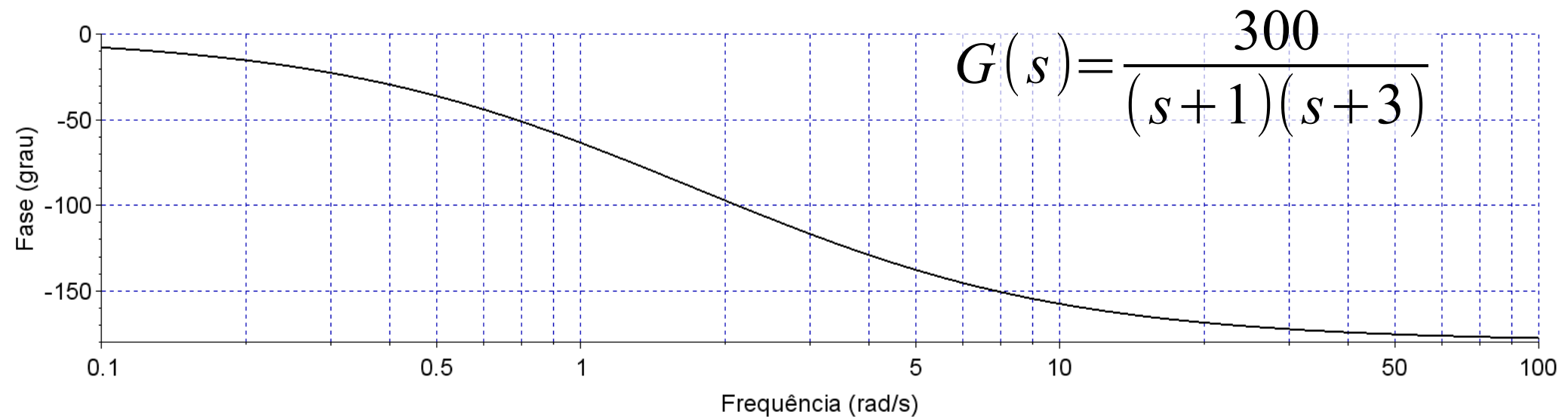
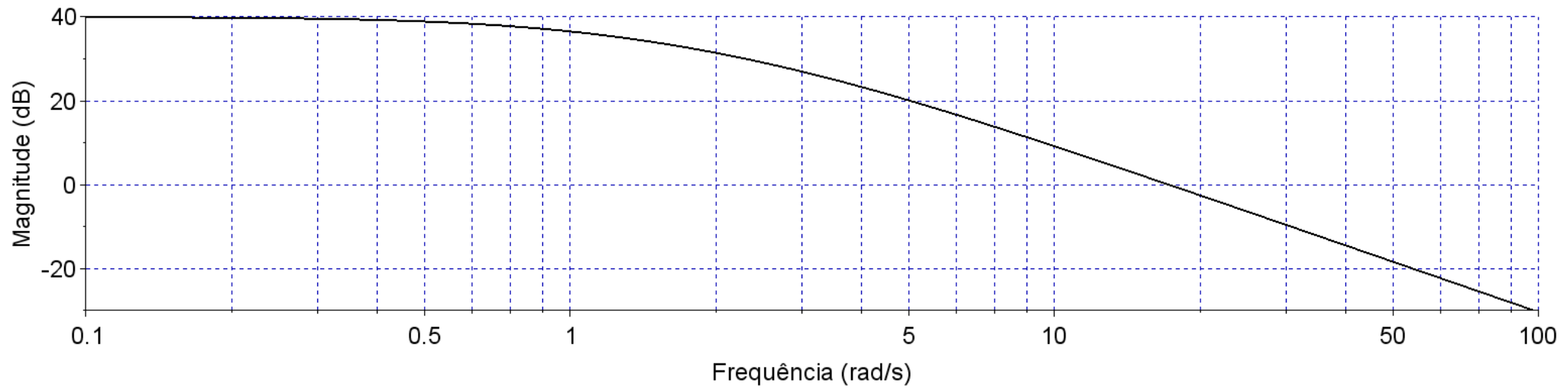
$$G(s) = \frac{100}{s(s+2)(s+5)} \frac{1+8.333s}{1+59s}$$

$$MF = 40^\circ$$

# Diagramas de Bode

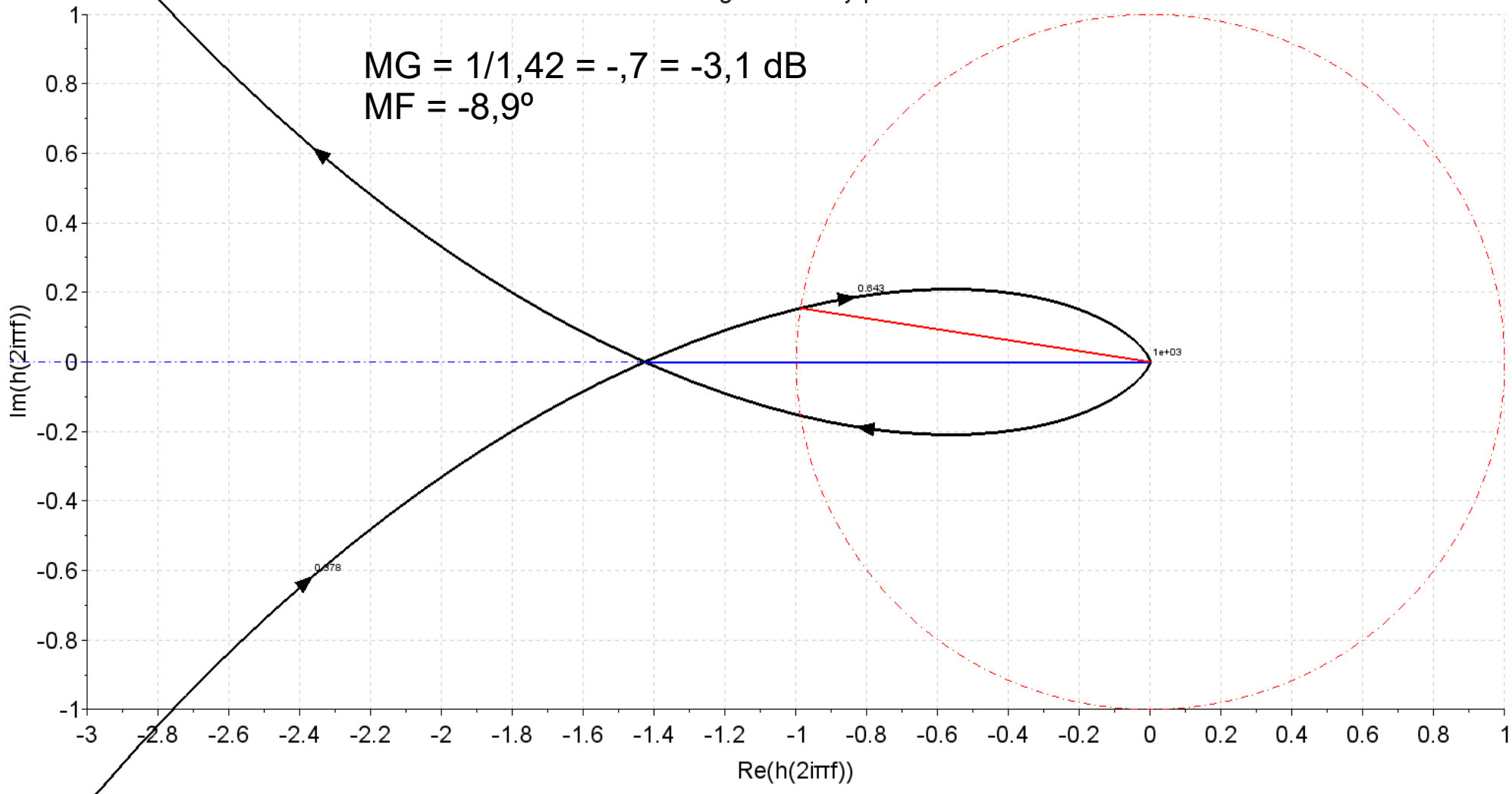


# Projeto de um controlador de avanço utilizando diagramas de Bode



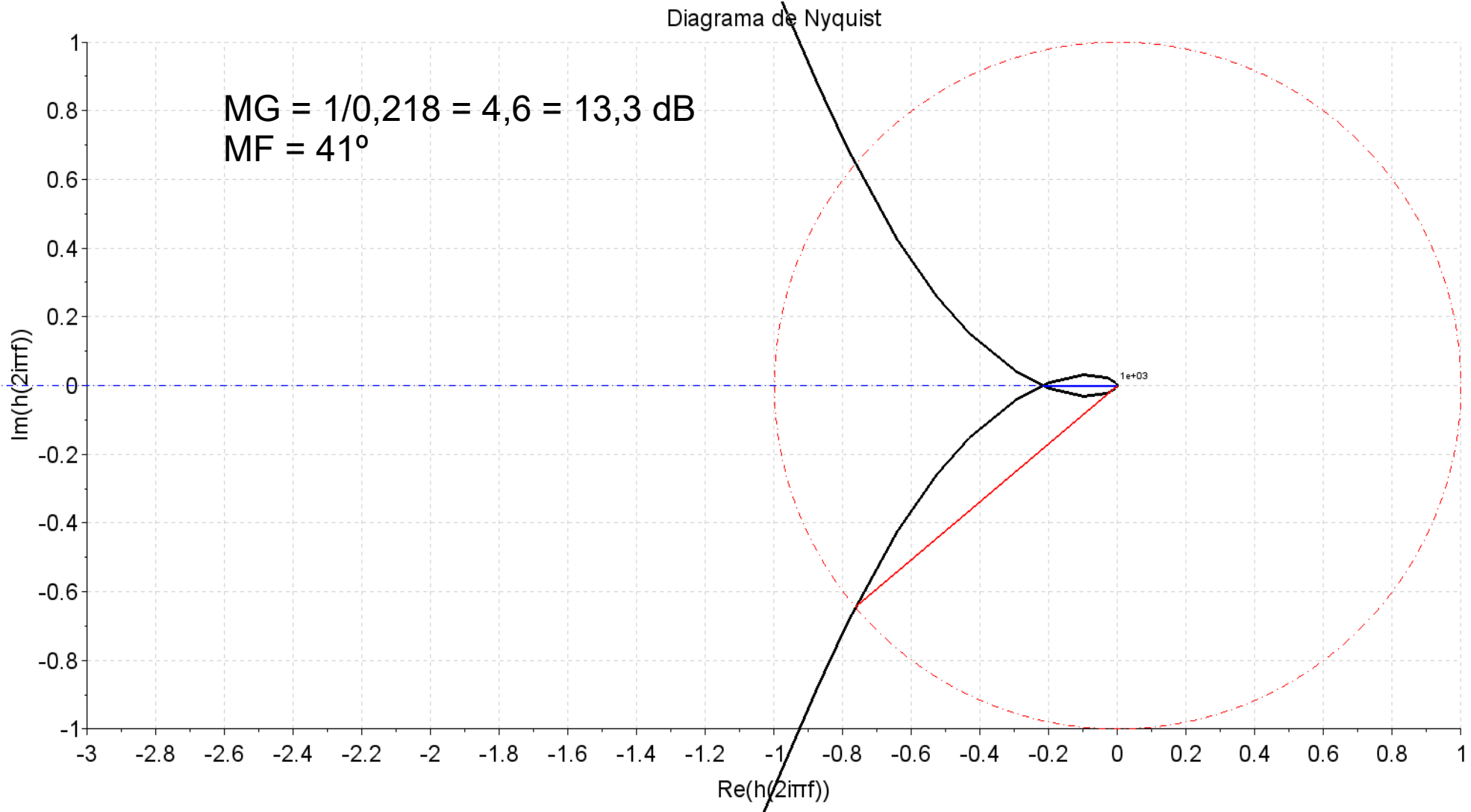
# MG e MF usando Nyquist

Diagrama de Nyquist





# MG e MF usando Nyquist



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