COMPUTER VISION

EXERCISE 1



chakoelside

(3) To prove:
$$(f * g) * h = f * (g * h)$$

$$\Rightarrow f(t) * (g(t) * h(t))$$

$$= f(t) * \int_{-\infty}^{\infty} h(u)g(t-u)du$$

$$= \int_{-\infty}^{\infty} f(v) \int_{-\infty}^{\infty} h(u)g(t-v-u)dudv$$

$$= \int_{-\infty}^{\infty} h(u) \int_{-\infty}^{\infty} f(v)g(t-u-v)dvdu$$

$$= \int_{-\infty}^{\infty} h(u) (f * g)(t-u)du$$

$$= ((f * g) * h)(t)$$

$$= ((f(t) * g(t)) * h(t)$$

Was Du bist, ist Gottes Geschenk an Dich. Was Du aus Dir machst, ist Dein Geschenk an Gott. Hans Urs von Balthasar

Thus, associationty for continuor care is proved.