

# Folk Theorem For 2-player Prisoner's Dilemma

G:

		II	
		C	D
I	C	2, 2	0, <u>3</u>
	D	<u>3</u> , 0	<u>1</u> , <u>1</u>

- Static NE: (D, D)

- Payoffs

$$u_i(D, D) = 1$$

- Consider any feasible payoff combination  $X = (x_1, x_2)$  such that  $x_i > u_i(D, D)$  for  $i = 1, 2$
- Then the Folk Theorem says  $\exists$  some  $\underline{\delta} < 1$  such that  $\forall \underline{\delta} \leq \delta \leq 1$ , there is a NE of  $G(\infty, \delta)$  for which the average discounted payoffs are  $X = (x_1, x_2)$ .

