



**FIG. 2.** Reservoir computing (RC) as defined in Eq. (4), including a randomly selected  $d_r \times d_x$  read-in matrix,  $\mathbf{W}^{in}$  from  $d_x \times 1$  states vector  $\mathbf{x}$ , a randomly selected  $d_r \times d_r$  inner layer recurrence matrix  $\mathbf{A}$  for inner states  $d_r \times 1$  vector  $\mathbf{r}$ , and the  $d_x \times d_r$  trained readout matrix  $\mathbf{W}^{out}$ .