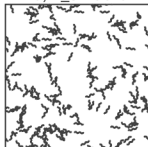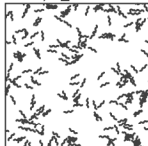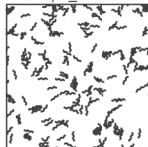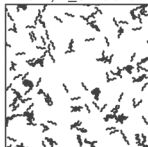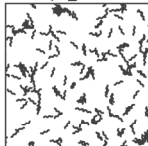r=0, v_s =3e-02   r=0.2, v_s =3e-02   r=0.4, v_s =3e-02   r=0.8, v_s =3e-02
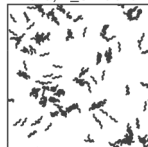
r=0, v_s =5e-02   r=0.4, v_s =5e-02   r=0.8, v_s =5e-02