

# *ForceField:*

*ForceField* is designed to visually demonstrate line integrals to students. It allows the student to see forces traveling along a designated path, the components of that force, and the location of where the force is occurring. The user also has the option of changing the path, the force, and the position at which it occurs.

The user has four options for functions that control the forces and the paths that the force will travel. These choices are found in a window labeled Force Fields and look like the following boxes labeled Forces and Paths. By clicking on the corresponding button in the Forces box, the user will change the function that controls the force vector. The user can change the path that the force will travel by clicking on the correct button also.

paste\_0.tiff ↵

paste\_1.tiff ↗

After the user has chosen the path and force, the slider can be clicked on and dragged to change the x-coordinate, and thus, the force and place on the path where the force will occur will change. As the slider is moved, the user can visually see the force moving along the path. The force is dark gray while the direction vector is light gray. Also, there are text fields that display the x and y components of the forces, the total work done by the force as it travels, and the coordinates of the location of the force.

For more information regarding this application or other *RoseApps* consult *About IFYCSEM* in the directory *Other Information* in the *Documentation (Help)* browser.