

MAP BUILDING LASER BASED

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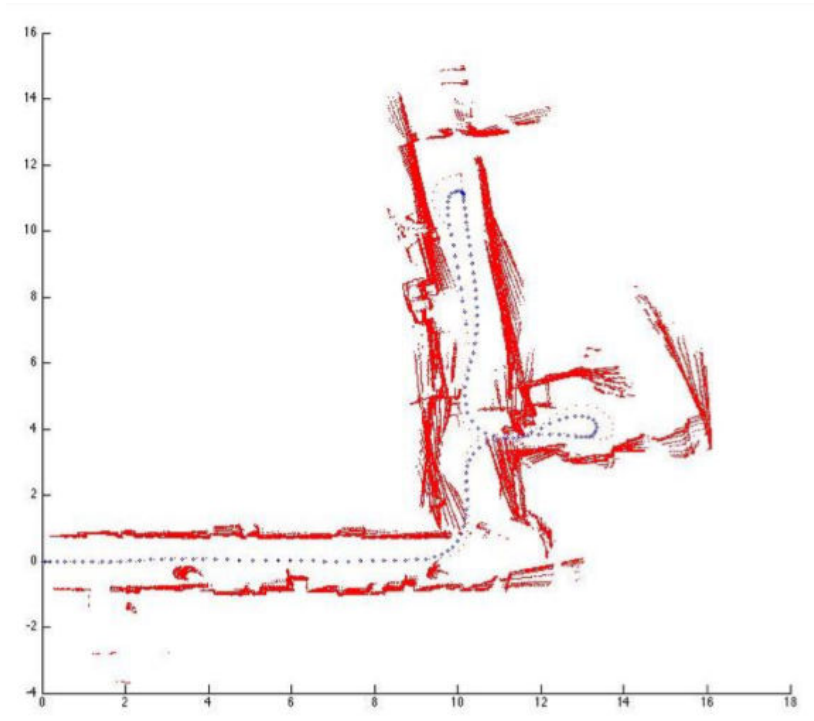
Link: <https://drive.matlab.com/sharing/a98e15cb-6fdb-4c78-a9c9-590d4af22899>

Upload a pdf file of a estructure Live Script file to recreate the following results based on the 'Sensors_Data.mat' that you will find in:

"... MATLAB Drive/Robotica_23_24_1Q/10_Laser Sensors"

Review: *Help_Laser_Todo.mlx* it has the main concept to deal with laser data

Remember the pdf header: Authors, Team and the shared Link to your '.mlx'.



```
load ("Sensor_Data.mat")

count = 1;
m = size(pose_laser_data);
for i=1:m(1)
    for j=1:(m(2)-1)
        if pose_laser_data(i, j)/1000 > 0
            alpha = (j-1) * 0.3515 * pi/180;
            incr = 20*i;
            angl_laser = alpha - 122*pi/180;
            dist_laser = v(incr);
            if alpha <= 240/2
                alpha = dist_laser + angl_laser ;
            else
                alpha = dist_laser - angl_laser;
            end
        end
    end
end
```

```

        x_l(count) = x(incr) + pose_laser_data(i, j)/1000 * cos(alpha);
        y_l(count) = y(incr) + pose_laser_data(i, j)/1000 * sin(alpha);
        count = count + 1;
    end
end
end

figure
Laser_mapped_x = x_l;
Laser_mapped_y = y_l;

scatter(Laser_mapped_x, Laser_mapped_y, 0.7, '.', 'MarkerEdgeColor', 'g')

```

