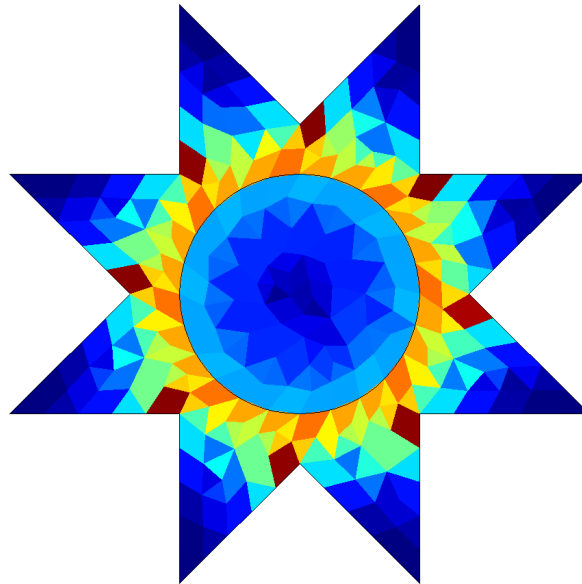**Worksheet 6 - Cordero, Maric, Seravalli**

1.c.3 - temperature gradient

1.c.4

The temperature gradient in the inner edges is higher than in the other parts of the model. Therefore, those parts contain more information than areas with a lower gradient. Hence a deeper analysis should be applied in order to properly understand the behaviour of those points. This is performed by refining the grid in these critical areas.
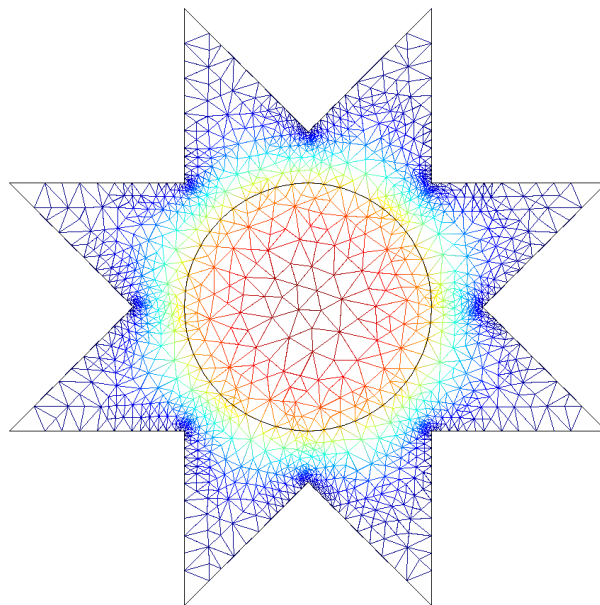
1.c.6 - Heat flux
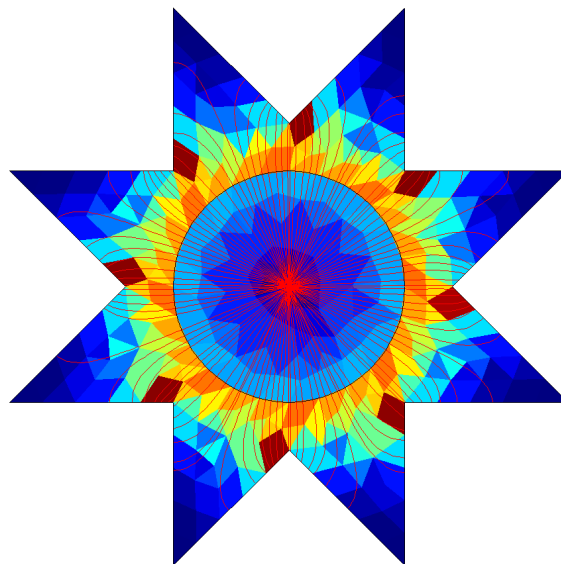
1.c.9

# of elements	468	1872	7488	29952	119808	479232	1916928	error
value of the integral (*e5)	6.447	6.656	6.801	6.898	6.961	7.000	7.026	out of memory

1.d.3

# of elements	1608	6432	25728	102912	411648	1646592	error
value of the integral (*e5)	6.886	6.938	6.801	6.981	6.012	7.033	out of memory

1.e.3 - Wire frame of adaptive mesh

The automatic refinement creates a higher concentration of elements in the areas with a higher amount of change in order to gather more precision (???).
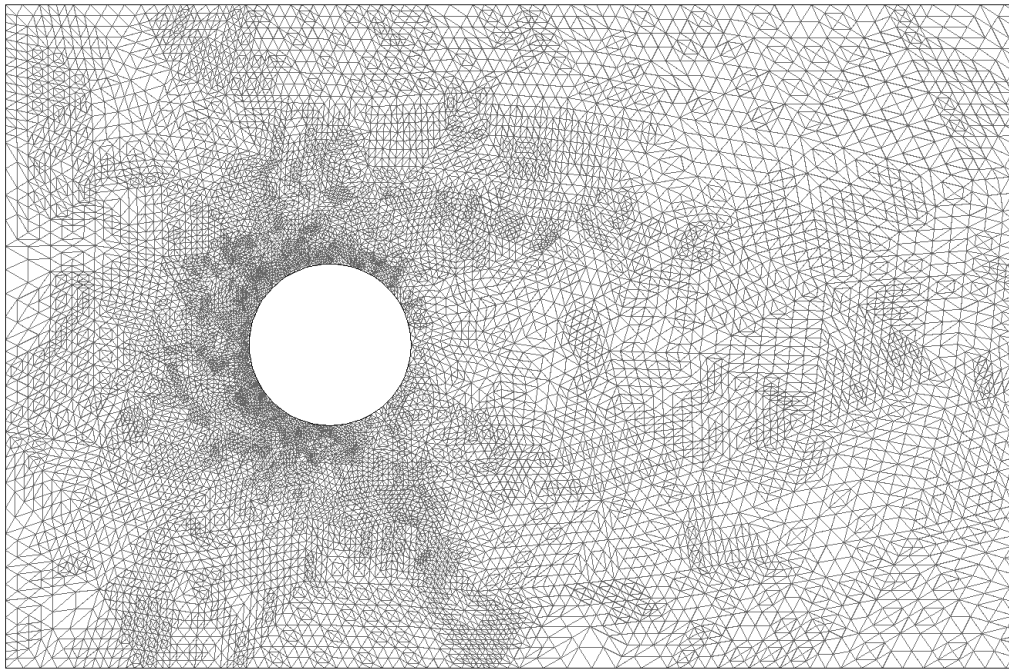
1.e.5

# of elements	3285	7732	17468	38241	82092	173281	363736	754146
value of the integral (*e5)	6.946	7.012	7.041	7.056	7.063	7.064	7.067	7.067

1.f.3

# of elements	22060	48422	102909	221254	473280
value of the integral (*e5)	7.078	7.073	7.071	7.069	7.069

compare results with other parts?? what should we write here??

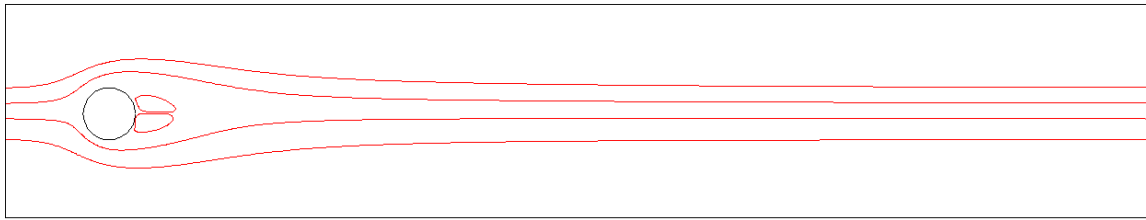2.b.1

2.b.2.a - velocity field
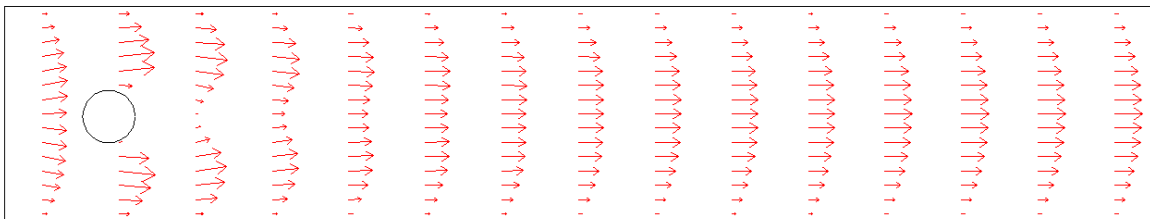
2.b.2.b - velocity field stream line
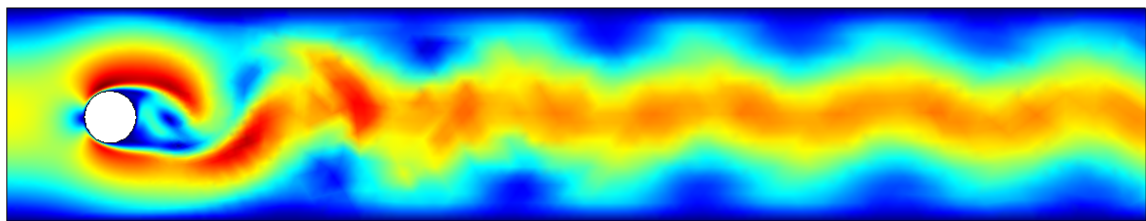

2.b.3
pressure up stream: 0.132313 Pa
pressure down stream: 0.014688 Pa

2.b.4
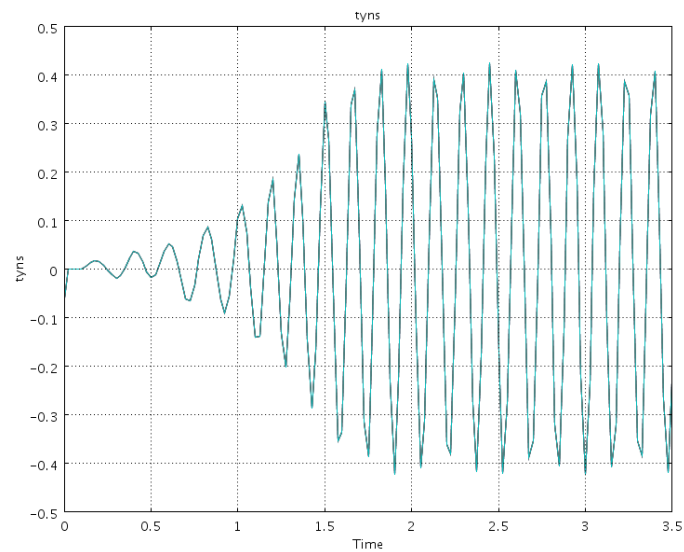force in x: -0.011136
force in y: -2.263198e-5

2.c.4/5 - flow field at t=3.5

2.c.6 - Frequency

Frequency: 6.33 Hz

2.d.7/8 - distribution of temperature