

# Ottavio Caligaris

Full professor

✉ cal@sv.inge.unige.it

☎ +39 019 219 45112

☎ +39 3207982143

## *Education and training*

1978

### **Laurea in Matematica**

Semigrupperi lineari e non lineari in spazi di Banach

Universita' di Genova - Genova - IT

## *Academic experience*

1994 - ONGOING

### **Professore Ordinario**

Universita' di Genova - Genova - IT

1992 - 1993

### **Professore Sraordinario**

Universita' di Torino (sede di Alessandria) - Alessandria - IT

1990 - 1991

### **Professore straordinario**

Universita' di Cagliari - Cagliari - IT

1980 - 1990

### **Professore Associato**

Universita' di Genova - Genova - IT

1978 - 1980

### **Assistente Ordinario e Professore Incaricato**

Universita' di Genova - Genova - IT

1975 - 1978

### **Assegnista**

Universita' di Genova - Genova - IT

1974 - 1975

### **Borsista CNR**

Universita' di Genova - Genova - IT

## *Teaching activity*

My teaching activity is focused on Mathematical Analysis as the main tool inescapable for scientific and technical studies.

I have mainly taught courses in Classical Mathematical Analysis which are preparatory to Engineering studies together with more advanced courses dealing with mathematical modeling and applications.

### ***Research interests***

- Variational Convergences
- Sufficient conditions for the minimum of an integral functional in infinite dimensional spaces
- Necessary conditions for the minimum of an integral functional in infinite dimensional spaces
- Extension of an integral functional defined on the space of absolutely continuous functions to the space of bounded variation functions and characterization of such extension.
- Multiobjective Optimization problem
- Characterization of the semicontinuity of an integral functional defined in infinite dimensional space.
- Multidimensional integral functionals and reduction to one-dimensional integral functionals on infinite dimensional spaces;
- Existence and unicity of solution for abstract differential equation through necessary conditions for the minimum of an integral functional.
- Existence and unicity of solution for partial differential equation through necessary conditions for the minimum of an integral functional.
- Mathematical modeling: numerical resolution of differential equations to partial derivatives; application of Neural Networks for surface approximation and time series study.