Harmonic analysis
Singular integrals

- Recalls on Fourier transform and convolution

- The Hardy-Littlewood maximal operator

  The Lebesgue derivation theorem.

- Principal values – Some Fourier transforms

- The Calderón-Zygmund theory

  Hilbert and Riesz transforms.

- The Littlewood-Paley theory

- Higher Riesz transforms

  Spherical harmonics

  Non-smooth kernels.

- BMO and H^1.

- Interpolation

  The Marcinkiewicz interpolation theorem.

  The Riesz-Thorin interpolation theorem.

  Real and complex interpolation with BMO.

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