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Sommario/riassunto

"With the advent of more affordable, higher resolution or innovative data acquisition techniques, chemical analysis has been using progressively advanced signal and image processing tools. Indeed, both specialities (analytical chemistry and signal processing) share similar values of best practice in carrying out identifications and comprehensive characterizations, be they of chemical samples or of numerical data. Signal and image processing, for instance, often breaks down data into atoms, molecules, with specific decompositions and priors, as common in chemistry. Many problems in chemical engineering can be addressed with classical or advanced methods of signal and image processing, through topics such as chemical analysis leading to PARAFAC/tensor methods, hyper spectral imaging, ion-sensitive sensors, artificial noise, chromatography, mass spectrometry, TEP imaging, etc."--