Fig. 5. SNR (in dB) for different values of $K$ when the observation signal $x$ is a linear combination of $P = 10$ dictionary vectors in the uncorrelated case (left) and correlated case (right).

Fig. 6. Success rate for different values of $K$ for uncorrelated signals (left) and correlated signals (right).

linked to the scalar product computation and by only retaining the dominant terms\(^5\) (more detailed complexity figures are provided for some algorithms in the appendix).

The results are also displayed in figure 7 for all algorithms and different values of $K$. In this figure the complexity figures of OOMP (or MGS) and GP are also provided and it can be seen, as expected,

\(^5\)The overall complexity figures were obtained by considering the following approximation for small $i$ values: $\sum_{k=1}^{K} k^i \approx K^{i+1}/i$ and by only keeping dominant terms considering that $K \ll N$. Practical simulations showed that the approximation error with these approximative figures was less than 10% compared to the exact figures