Abstracts

A pre-crash radar sensor system based on pseudo-noise coding

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A pre-crash radar sensor system measuring closing velocity and range, working at 24 GHz is presented. The radar is based on spread spectrum modulation using a 1023 long pseudo-noise sequence at a 450 Mbps data rate. The achieved resolution of 33 cm is also suitable for object identification applications in a driving environment. The time delay of the noise sequence in the correlation receiver covers the entire unambiguous range. The construction of the sensor, strategy of application and measurement results are presented.

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