

Development of welfare devices and systems for improving the quality of life



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Keywords	Welfare device, Sensing
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Technical Support Skills	<ul style="list-style-type: none"> • We develop new welfare devices and systems for handicapped and elderly persons. • Our study is concerned with the operating analysis using multi degrees of freedom (DOF) force/motion sensor.
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Research Contents

- ◆ We investigate a wheelchair driving or assistance force for the improvement of functionality using 6 DOF force sensor. (see Fig.1 : Wheel axis-mounted 6 DOF force sensor)
- ◆ We develop a new support device for parents/guardians with severe handicapped child. (see Fig.2 : A prototype of the standing support chair) (collaborative research)
- ◆ We investigate the alignment of the trans-tibial prosthesis and the motion measurement method to a quantitative and scientific evaluation using the multi-axis motion sensor. (see Fig.3 : Installation of 9 DOF motion sensors and three dimensional motion analysis maker to the trans-tibial prosthesis for track) (collaborative research)



Fig.1



Fig.2



Fig.3

Available Facilities and Equipment

6 DOF force sensor (NITTA Corporation)	Sound-level meter (ONO SOKKI Corporation)
Digital oscilloscope (Agilent Technologies)	Maple12 (CYBERNET SYSTEMS Corporation)
9 DOF wireless motion sensor (Sport sensing Corporation)	