

# Department of Finemechanics Yamaguchi Laboratory

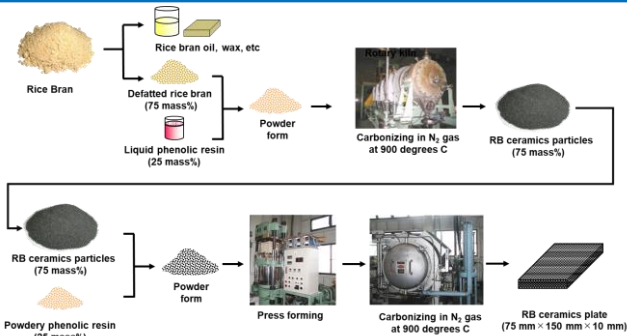


## Sustainable Life Support Engineering

for the realization of sustainable, safe, secure and high-quality life and society

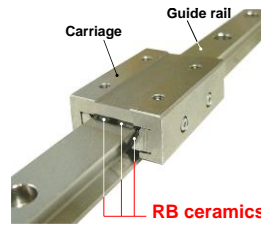


### Development and Application of Green Materials



Development of carbon materials made from rice bran/husk

#### Applications of RB ceramics



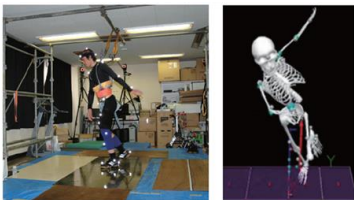
Dry sliding bearing



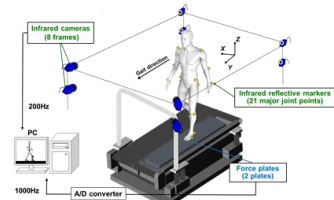
Electric drive unit for wheel chair using friction drive mechanism



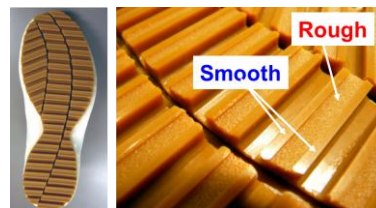
### Fall Prevention Engineering



Mechanism of slip-induced falls



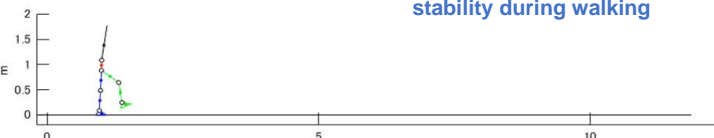
Evaluation of dynamics stability during walking



Super high grip shoe sole



Slip-resistance testing device



Slip- and trip-induced fall simulation using neuromusculoskeletal model



Gait analysis using sole sensor system (Photo by Denjiken)



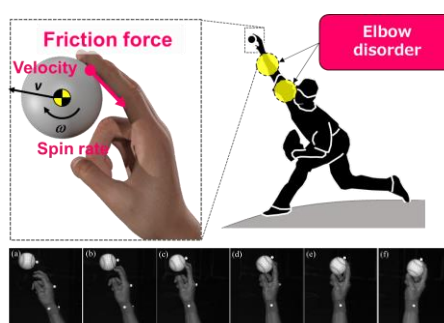
### Physical Function Augmentation and Sports Engineering



Left leg Lower limb orthotic using CFRP leaf spring



Development of high-grip sport shoes



Effect of friction between finger and ball on baseball pitching performance and elbow disorder



Evaluation of frictional properties of friction aids for sports

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