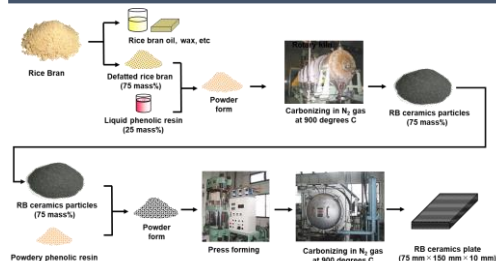
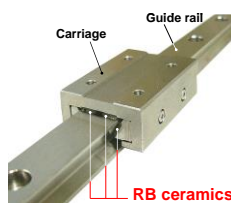


Yamaguchi-Nishi Laboratory is engaged in research to improve the health and function of mechanical systems and to expand human motor functions, based on soft mechanics research such as contact and friction control of soft materials (rubber and living organisms) and human motion analysis. Aiming at innovation in the field of life and life support through soft mechanics research, we also focus on cross-disciplinary and interdisciplinary research and development, and industry-academia co-creation for social implementation of our research results.

Development and Application of Green Materials



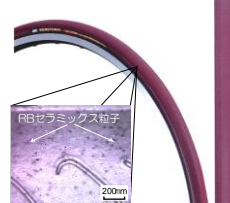
Development of carbon materials made from rice bran/husk



Dry sliding bearing

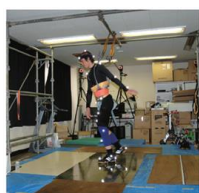


Electric drive unit for wheel chair

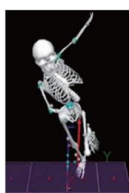


Road Racing Bicycle Tire

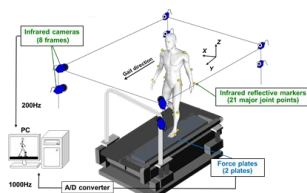
Fall Prevention Engineering



Mechanism of slip-induced falls



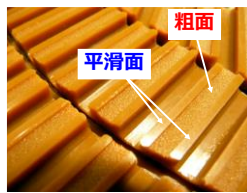
Evaluation of dynamics stability during walking



Slip- and trip-induced fall simulation using neuromusculoskeletal model



Super high grip shoe sole



Slip-resistance testing device



Gait analysis using sole sensor system (Photo by Denjiken)

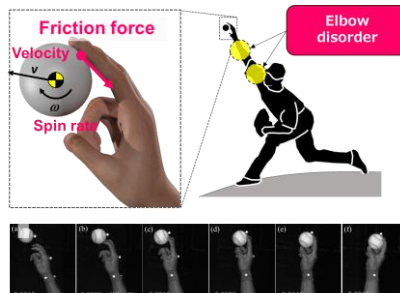
Physical Function Augmentation and Sports Engineering



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