In CMI, Mawatari Lab especially focuses on developing intelligent technologies for highly-skilled handwork in industry. There is an increasing need to automate handwork by skilled workers in industry. However, that handwork is usually difficult to express clearly in words. Furthermore, human’s motion contains time and spatial perturbations, and this makes the automation even more difficult. Mawatari lab is constructing mathematical methodologies to quantitatively evaluate highly-skilled handwork, and to establish principles for automation by robots and for workers learning the handwork.