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Image Processing: Machine Vision Applications VII

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Introduction

In our everyday machine vision work, we are facing two big and very complex challenges. On one hand, we are doing scientific research in exploring the fundamental behavior of imaging systems and methods. On the other hand, we cooperate strongly with industrial needs for reliable quality under constraints of a reasonable budget. There are clear gaps in the goals of these two challenges and even contradictions in their demands.

Our conference, Machine Vision Applications**,** serves as a forum to discuss efforts that span these demands by bringing scientific research and industrial needs together. On reading the contributions to this conference, one will get a feel for how the different branches of machine vision serve to support industrial needs. You will find papers describing quality control issues at manufacturing processes, agricultural evaluations, face detection for security purposes, 3D topographical modelling by airborne images, hyperspectral detection for biological surveys, and many others. There are also papers concerning a bit more abstract level of machine vision indicating improvements in algorithms—speed, reliability, and memory usage—by keeping the quality of the overall evaluation task.

In this context, our community offers the "Best Paper Award" for contributions that combine three essential aspects: scientific background, industrial reliability, and clarity in writing, presentation, and discussion. The paper, "Depth and all-in-focus images obtained by multi-line-scan light-field approach," (9024-07), has been selected for this award. Congratulations!

Kurt S. Niel
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