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and to introduce  
young researchers  
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contributions discuss  
singularities in both  
complex and real  
geometry. As such,  
they provide a

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natural continuation  
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influence in the  
field.

This monograph  
considers a basic  
problem in the

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computer analysis of  
natural images,  
which are images of  
scenes involving

multiple objects that  
are obtained by a  
camera lens or a  
viewer's eye. The  
goal is to detect  
geometric features of  
objects in the image  
and to separate

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regions of the  
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objects with distinct  
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visual properties.  
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When the scene is illuminated by a single principal light source, we further include the visual clues resulting from the interaction of the geometric features of objects, the

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objects, and the  
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[apparent contours].

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mathematical  
analysis using a  
repertoire of  
methods in  
singularity theory.  
This is applied for  
generic light

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directions of both  
the  $\square$ stable  
configurations $\square$  for  
these interactions,

whose features  
remain unchanged  
under small viewer  
movement, and the  
generic changes  
which occur under  
changes of view  
directions. These



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may then be used to  
differentiate between  
objects and  
determine their  
shapes and positions.

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the "nearby stable  
object" associated to  
an unstable map-  
germ, which

includes in particular  
the images and  
discriminants of  
stable perturbations  
of unstable  
singularities. This  
part includes recent  
research results,



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bringing the reader  
up to date on the  
topic. By focusing  
on singularities of

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than spaces, this  
book provides a  
necessary addition to  
the literature. Many  
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appendices on

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background material,  
make it an  
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number of graduate  
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mappings could be  
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is translated  
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solution of  
highly  
degenerate  
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conical; there  
are parts of  
its link with  
non-trivial  
topology which  
shrink faster  
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