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| Book Name: | **Proceedings of the 8th International Conference on Solidification and Gravity** |
| Manuscript Number: | **Ms\_BPR\_3590.5** |
| Title of the Manuscript:  | **Comparison of image analysis techniques for the determination of the influence of melt flow on the solidification microstructure of technical aluminum alloys** |
| Type of the Article | **BOOK CHAPTER** |

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| PART 1: Review Comments |
| Compulsory REVISION comments | Reviewer’s comment | Author’s Feedback*(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)* |
| **Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimumof 3-4 sentences may be required for this part.** | This manuscript conntribute the improvement of automated analysis of 2D microstructures in aluminum alloys by evaluating the effectiveness of various microstructural image analysis methods.Traditional analysis techniques for2D-images and cutting-edge computer vision deep learning based methods(MaskR-CNN) are compared for detecting, classifying, and quantifying microstructural features in iron containing aluminum alloys.The micrstructure analysis Traditional (Imageanalysis ) combined with vision deep learing method results represents same as EDS analysis using SEM  |  |
| **Is the title of the article suitable?****(If not please suggest an alternative title)** | **Yes**  |  |
| Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here. | **Abstract written in good form**  |  |
| **Are subsections and structure of the manuscript appropriate?** | **YES** |  |
| **Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimumof 3-4 sentences may be required for this part.** | It is adnved mthod of with aid **of** vision deep learning based methods(MaskR-CNN) image anlysis of microstructure of optical images  |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.****-** | **YES** |  |
| Minor REVISION commentsIs the language/English quality of the article suitable for scholarly communications? | YES |  |
| Optional/Generalcomments | No coments  |  |

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| **PART 2:**  |
|  | **Reviewer’s comment** | **Author’s comment** *(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)* |
| **Are there ethical issues in this manuscript?**  | *(If yes, Kindly please write down the ethical issues here in details)* |  |

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| **Reviewer Details:** |
| Name: | **Dayanand M.Gouadr** |
| Department, University & Country | **Tontadarya College of Engineering, India** |