

SUITA CONJECTURE AND THE OHSAWA-TAKEGOSHI THEOREM WITH SHARP ESTIMATES

ABSTRACT. The presentation is based on Berndtsson&Lempert[1]. Since Suita conjecture was proved by Błocki[3] based on a sharp version of the Ohsawa-Takegoshi theorem, some other approaches to prove this conjecture appeared, for example in [4] . A much simpler way proposed by Lempert is to use the plurisubharmonic variation of the Bergman kernels. This idea can be adapted to prove the Ohsawa-Takegoshi theorem with sharp estimates applying the positivity of direct image bundles[2] instead of the plurisubharmonic variation of the Bergman kernels.

REFERENCES

- [1] Bo Berndtsson, László Lempert, *A proof of the Ohsawa-Takegoshi theorem with sharp estimates*, arXiv:1407.4946
- [2] Bo Berndtsson, *Curvature of vector bundles associated to holomorphic fibrations*, Annals of Math. 169, (2009), 531-560
- [3] Zbigniew Błocki, *Suita conjecture and the Ohsawa-Takegoshi extension theorem*, Inventiones Math. (2013), 193, 149-158
- [4] Zbigniew Błocki, *A lower bound for the Bergman kernel and the Bourgain-Milman inequality*, Lecture Notes in Mathematics 2116, Springer, (2014) 53-63