

TAKAHIRO SHIGAKI  
Kwansei Gakuin University, JAPAN  
Email: gzp82909@kwansei.ac.jp

**Exact WKB analysis of nonlinear eigenvalue problems for a certain first order equation**

Bender, Fring and Komijani studied a certain first order differential equation as a typical example of nonlinear eigenvalue problems. In their result, an asymptotic behavior of the eigenvalues is obtained.

We try to apply exact WKB analysis to this problem. In our talk, we describe the construction of so-called 0-parameter solution and the Borel summability in some Stokes regions. We also introduce that the eigenfunctions are written by the Borel sum of a 0-parameter solution.

REFERENCES

- [Sh] T. Shigaki, *Toward exact WKB analysis of nonlinear eigenvalue problems*, RIMS-Kôkyûroku Bessatsu **B75** (2019), 177-201.