sphere, then we have found a Galois extension of the field of rational functions, such that the Galois group is isomorphic to the preassigned group G.

REFERENCES

1. L. Ahlfors, *The complex analytic structure of the space of closed Riemann surfaces*, Analytic functions, pp. 45–66. Princeton Univ. Press, Princeton, N. J., 1960.

2. ———, *Teichmüller spaces*, Proceedings of the International Congress of Mathematicians, 1962 (to appear).

3. L. Bers, *Quasiconformal mappings and Teichmüller's theorem*, Analytic functions, pp. 89–119, Princeton Univ. Press, Princeton, N. J., 1960.

4. ———, *Spaces of Riemann surfaces*, Proceedings of the International Congress of Mathematicians, 1958, pp. 349–361, Cambridge Univ. Press, New York, 1960.

5. ———, *Correction to "Spaces of Riemann surfaces as bounded domains,"* Bull. Amer. Math. Soc. **67** (1961), 465–466.

6. W. Fenchel and J. Nielsen, *Discontinuous groups of non-Euclidean motions* (to appear).

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A NOTE ON ENTIRE FUNCTIONS AND A CONJECTURE OF ERDÖS

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1. **Introduction.** Let $f(z) = \sum_0^\infty a_n z^n$ be an entire (transcendental) function and let

$$M(r) = M(r, f) = \max_{|z|=r} |f(z)|, \quad \mu(r) = \mu(r, f) = \max_n (|a_n| r^n).$$

Erdös conjectured that [1] for every entire function, either

$$(1.1) \quad U = U(f) \equiv \limsup_{r\to\infty} \mu(r)/M(r) > u = u(f) \equiv \liminf_{r\to\infty} \mu(r)/M(r),$$

or

$$(1.2) \qquad U(f) = 0.$$

We prove this conjecture, except in one case, when broadly speaking the Taylor series for $f(z)$ has "wide latent" gaps. For $r>0$, let $\nu(r) = \max (n \mid \mu(r) = |a_n| r^n)$, and denote by $\{\rho_n\}$ the sequence of jump-

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