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CORRECTION TO "BIFURCATION OF MINIMAL SURFACES IN RIEMANNIAN MANIFOLDS"

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In [1] the formula between (3.16) and (3.17) should be

$$h_{\alpha\beta} = \sum_{j=1}^{k} \sum_{\sigma=m+1}^{n} \frac{2}{m} x^\sigma \lambda_j g_{\alpha\beta} \langle \frac{\partial}{\partial x^\sigma}, \xi_j \rangle \quad \text{for } \alpha, \beta = 1, \dots, m.$$

On the bottom of p. 58, write:

We say that $(Q^1(\nu), \dots, Q^k(\nu))$ is nondegenerate if there exist $a_{ij} \in \mathbb{R}, \mu_{ij} > 0$ satisfying the following: We put

$$\nu_j = \sum_{i=1}^{k} t^{\mu_{ij}} a_{ij} \tau_i \tag{3.23}$$

with $\tau = (\tau_1, \dots, \tau_k)$. We then require that

$$Q^i(\nu) = t^{n_i} P^i(\tau) + O(t^{n_i}) \tag{3.24}$$

with $n_i \in \mathbb{R}, n_i > 0, i = 1, \dots, k$, and polynomials $P^i(\tau)$ that are nondegenerate in the sense that

$$\det\left(\frac{\partial P^i}{\partial \tau_j}\right) \not\equiv 0. \tag{3.25}$$

In the statement of Theorem 1, the variation is of the form

$$g_\rho = g_0 + h_\rho,$$

with h_ρ being determined in the proof.

Also, the last remark before the proof of Theorem 1 is not quite justified by our analysis.

Proof of Theorem 1. We shall first solve the simplified version of (3.20),

$$0 = (u_g h, \xi_i) + Q^i(\nu), \tag{3.27}$$

(to be precise, we shall actually solve a further simplified version, where we only keep the leading terms of (3.24)) and then use the implicit function theorem to get a solution of (3.20). By Lemma 2, for each t, we may find h_t satisfying

$$(u_g h_t, \xi_i) = t^{n_i} \lambda_i, \tag{3.28}$$

with n_i as in (3.24). (3.27) then becomes

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$$0 = t^{n_i}(\lambda_i + P^i(\tau) + o(1)). \tag{3.29}$$

This is equivalent to (3.33) of our paper, and we may then proceed as there. ☐

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References

1. J. Jost, X. Li-Jost, and X. W. Reng, *Bifurcation of minimal surfaces in Riemannian manifolds*, Trans. Amer. Math. Soc. **347** (1995), 51–62.

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