Effects of orthopedic force magnitude and miniscrew length, diameter and insertion angle on the stability of miniscrews.
A three dimensional finite element analysis

A Thesis
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To my beloved family for their endless help and support.

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تقييم تأثيرات مقدار القوة التجبيرية وطول وقطر وزاوية إدخال المسمار الصغير على ثبات المسامير الصغيرة بإستخدام تحليل العناصر المحددة ثلاثي الأبعاد

رسالة

مقدمة للحصول على درجة الماجستير في تقويم الاسنان

مقدمة من

الطبيب / أيمن محمد صادق

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Abbreviation	Full term
FEA	Finite Element Analysis
U_x	Deformation in X axis direction in mm
U_y	Deformation in Y axis direction in mm
U_z	Deformation in Z axis direction in mm
U_{sum}	Total deformation (resultant deformation in X, Y, and Z directions) in mm
S_1	Maximum tensile stress in MPa
S_3	Maximum compressive stress in MPa
S_{int}	Stress intensity (shear stress indicator) in MPa
S_{von}	Von Mises stress (consist of formulae that include tensile, shear and compressive stresses applied all together with different magnitude) in MPa
MPa	Mega Pascal
με	Microstrain
BAMP	Bone anchored maxillary protraction
RME	Rapid maxillary expansion
FM	Face mask