

### Problem 10

## The Feuerbach Point lies on the Cevian Circle of the Schiffler Point

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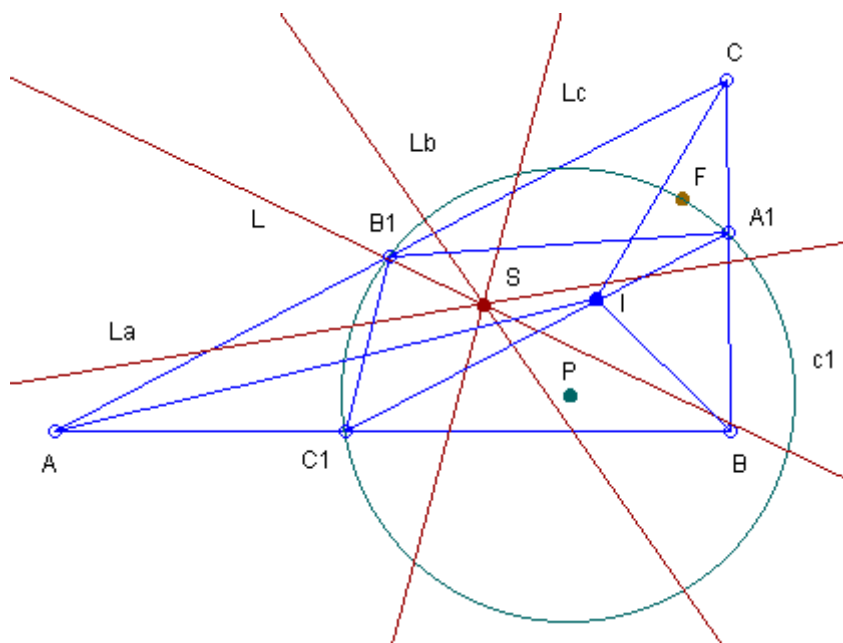
Prove the following computer-generated theorem:

**THEOREM.** The Feuerbach Point lies on the Cevian Circle of the Schiffler Point.

The reader may find the definitions in [1-4].

The *Euler line* is the line passing through the Centroid and the Orthocenter of a triangle. Denote by  $I$  the Incenter of triangle  $ABC$ . The Euler lines of triangles  $ABC$ ,  $BCI$ ,  $CAI$ , and  $ABI$  concur in a point and the point of concurrence is called the *Schiffler Point*.

See the Figure:



$I$  - Incenter;

$L$  - the Euler Line of triangle  $ABC$ ;

$La$  - the Euler Line of triangle  $BCI$ ;

$Lb$  - the Euler Line of triangle  $CAI$ ;

$Lc$  - the Euler Line of triangle  $ABI$ ;

The Schiffler Point  $S$  is the point of concurrence of lines  $L$ ,  $La$ ,  $Lb$  and  $Lc$ ;

$A_1B_1C_1$  - Cevian Triangle of the Schiffler Point;  
circle  $c_1$  - Cevian Circle of the Schiffler Point = Circumcircle of triangle  $A_1B_1C_1$ ;  
The Feuerbach Point  $F$  lies on the Cevian Circle of the Schiffler Point.

## References

1. Quim Castellsaguer, The Triangles Web,  
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3. D. Dekov, papers in this journal, 2006, 2007, 2008.
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