

UBCSEIS Version 1.xx (for Windows)

A COMPUTER PROGRAM FOR THE ESTIMATION OF UNIFORM BUILDING CODE COEFFICIENTS USING 3-D FAULT SOURCES

UBCSEIS, a computer program for the estimation of 1997 Uniform Building Code coefficients using three-dimensional faults as earthquake sources, is now available for the IBM-PC. UBCSEIS, which runs in WINDOWS® 95/98/2000/XP, reads a disk-data file that can contain information for up to 250 faults. It uses data from that file to calculate the closest distances between a site and the surface projection of each of the fault planes in the file, and the results are sorted and arranged by distance. Then, the program uses the calculated distances from the closest faults to estimate 1997 Uniform Building Code coefficients. The estimated coefficients can be tabulated and written to disk-data files. Also, if desired, graphical plots of estimated design response spectra can be created (see reverse side of this flyer for a sample). The program allows for some user-modification of the format of the plotted response spectrum.

The user is presented with an input screen (see reverse side of this flyer for a sample) in which the pertinent data are entered. Site coordinates are entered in decimal degrees of latitude and longitude, and the UBC seismic zone and soil type are selected using option buttons. If the user wants to bypass the fault search, fault-site distances can be entered manually and the program can compute the UBC seismic coefficients from those manually input distances.

A sample file of 183, digitized, late-Quaternary, California faults (each with assigned seismic parameters) is included for use with UBCSEIS. That file was adapted and modified primarily from the California Division of Mines & Geology fault-database for the state of California. To use that data file, CDMG requires that users must sign a special license agreement. Using UBC criteria (slip rates and magnitudes), each of the faults in the file has been assigned a fault type (A, B, or C). In the program, the fault geometries are modeled as three-dimensional articulated planar elements. In recognition of the potential for differing professional opinions regarding which faults to consider and what parameters should be assigned to each, instructions are given so that the user can generate his own fault-data file.

UBCSEIS, which is written in Microsoft's VisualBasic™ and makes calls to subroutines written in Microsoft's Fortran Power Station, is available in a 32-bit version (for WINDOWS® 95/98/2000/XP). The program is provided on CD-ROM. To run the program, your computer should have an 80486 or Pentium microprocessor and at least 8mb of available RAM memory. A WINDOWS® compatible printer is needed to obtain printed output and plots. A User's Manual is provided with the UBCSEIS program. The User's Manual explains the operation and options of the program.

The cost to license an initial copy of the program for a company is \$195.00 (+ tax). For the reduced price of \$155.00 (+ tax) each, additional copies of the program can be licensed to branch offices of a company that has already licensed an initial copy. If you want to license the program, please use the coupon below. Remember to sign and include the CDMG license agreement with your order. If you have any questions, or if you want to place an order, please contact us. (Web site address: <http://thomasfblake.com/>).

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_____ Copy of UBCSEIS [Initial copy for a company] (\$195.00 each, + tax)

_____ Copy(ies) of UBCSEIS [one for each branch office of a company that has already
licensed an initial copy] (\$155.00 each, + tax)

_____ (Previous serial number for branch office copy)

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SAMPLE INPUT SCREEN

UBCSEIS
_ □ ×

INPUT PARAMETERS

Job Name (15 Characters)

Job Number (15 Character Max)

Site Latitude (deg)

Site Longitude (deg)

Fault Data File Name (.DAT)

Output File Name

Override Fault Search and Calculate Coefficients Manually From Hand-Input Distances.

 Perform Calculations and Display Only on the Screen (no printed output).

Seismic Zone

0.075

0.15

0.2

0.3

0.4

Soil Profile Type

SA

SB

SC

SD

SE

SF

RESULTS FROM FAULT SEARCH

Nearest Sources (Type)	Fault Name	Dist. (km)	Na	Nv	Ca	Cv
A	SAN ANDREAS - 1857 Rupture	74.3	1.0	1.0	0.40	0.56
B	MALIBU COAST	8.0	1.0	1.1	0.40	0.60
C		99999.	1.0	1.0	0.40	0.56

COEFFICIENTS

Na	Nv	Ca
<input type="text" value="1.0"/>	<input type="text" value="1.1"/>	<input type="text" value="0.40"/>
Cv	Ts	To
<input type="text" value="0.60"/>	<input type="text" value="0.605"/>	<input type="text" value="0.121"/>

Enable Plot-Axis Control

SAMPLE SPECTRUM PLOT

DESIGN RESPONSE SPECTRUM

Seismic Zone: 0.4 Soil Profile: SC

Period (s)	Spectral Acceleration (g)
0.0	0.00
0.1	1.00
0.5	1.00
1.0	0.60
1.5	0.45
2.0	0.35
2.5	0.30
3.0	0.27
3.5	0.25
4.0	0.24
4.5	0.23
5.0	0.22