

The Sound of Metrics: Using Musical Principles to Contextualize Security Events

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“We Will ~~Rock~~ Block You”



My Instrument...



Photo Credit: Sharon Steele-Smith

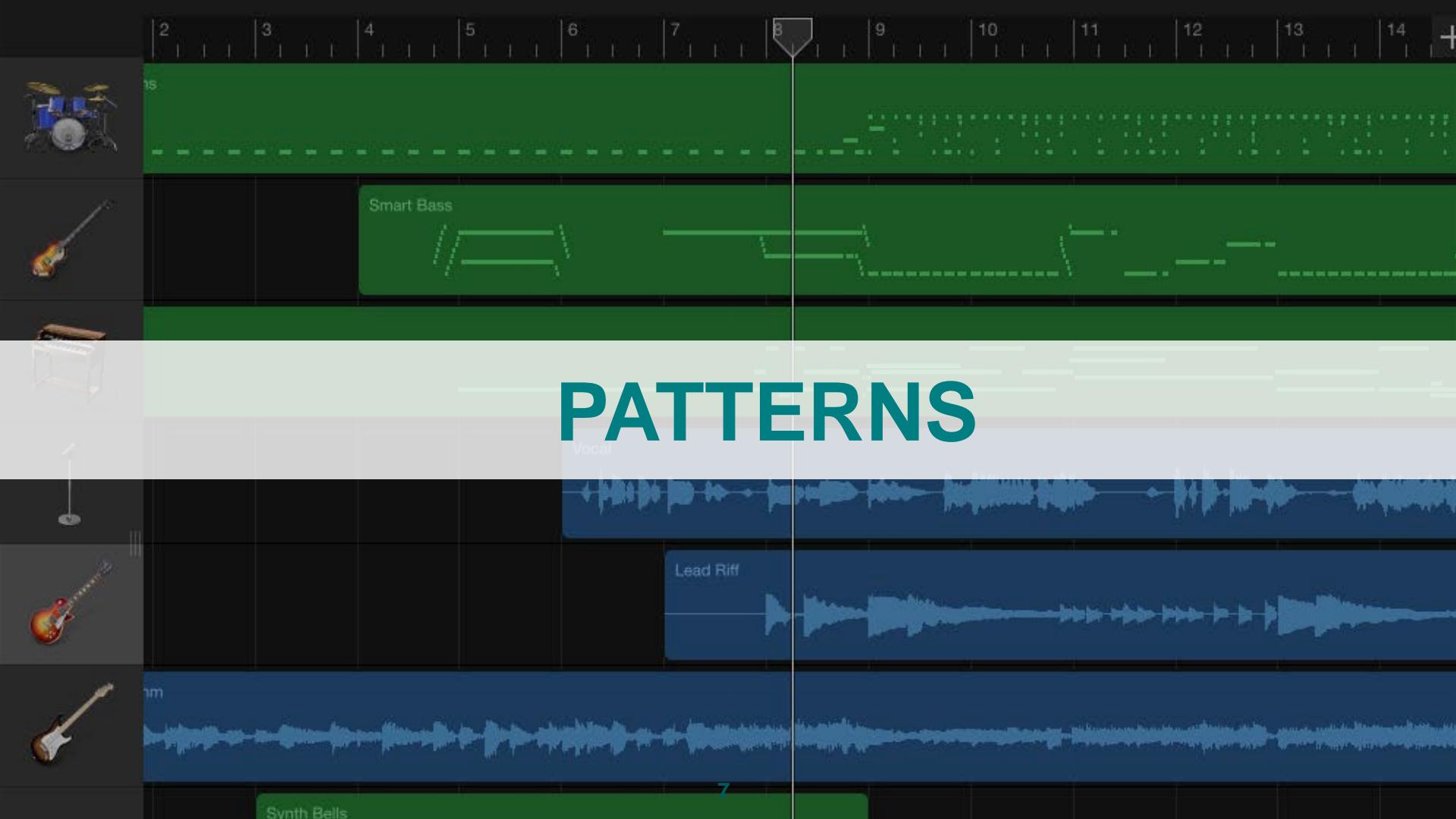
Music and Security are Connected





PEOPLE







Interpret – Create – Perform

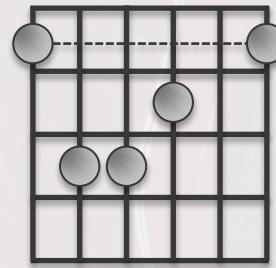
PRINCIPLES

Confidentiality – Integrity – Availability

SCALES



CHORDS



SYMPHONY V
C Minor Opus 67

C Minor Opus 67

Ludwig van Beethoven

Allegro con brio ♩: 108

1770-1827

MOTIF

Allegro con brio

Violino I

Violino II

Viola

Violoncello

Contrabasso

5 10

1

2

Fl.

Ob.

Cl.

Fag. ^{a 2}

Cor.

Tr.

Musical score for orchestra, page 20, measures 19-20. The score includes parts for Violin (Vln.), Cello (Cello), Bassoon (Bsn.), Clarinet (Cl.), and Trombone (Tr.). The key signature is one flat, and the time signature is 2/4. Measure 19 starts with a dynamic of ***ff***. Measure 20 begins with a eighth-note rest followed by a eighth-note eighth-note eighth-note eighth-note pattern. The bassoon part has a sustained note with a fermata over it.

Ob. *B* 2 L
 Cl. *B* 2 1 *p*
 Fj. *B* 2 *p*
 Cor. *B* *p*
 VI. I *B*
 VI. II *B* *p*
 Vla. *B* *p*
 Vlc. e. Cb. *B* 25 30 *p*

1.

Fl.

Ob.

Cl.

Fg.

Cor.

V.I.

A musical staff with a bass clef, a common time signature, and a single note.

A musical score page showing measures 11 and 12 for an orchestra. The page includes parts for Cor., Tr., Timpani, Violin I (Vi. I), Violin II (Vi. II), Cello (Vcl.), and Double Bass (e Cb.). The notation shows various dynamic markings like 'f' (fortissimo) and 'ff' (fortississimo), and rhythmic patterns including eighth and sixteenth notes.



IMPROVISATION

Fungii Mama

Music by Blue Mitchell



Music score for "Fungii Mama" by Blue Mitchell. The score consists of two staves of musical notation. The top staff starts with a key signature of one sharp (F#) and a time signature of common time (C). The bottom staff starts with a key signature of one flat (F) and a time signature of common time (C). Both staves feature a series of chords: F, (D7), Gm⁷, C⁷, F, (D7), Gm⁷, C⁷. The bottom staff continues with F, F/A, Gm⁷, C⁷, F, Dm⁷, Gm⁷, C⁷, F, E⁷. The score includes measure numbers 1 and 2, and a repeat sign.



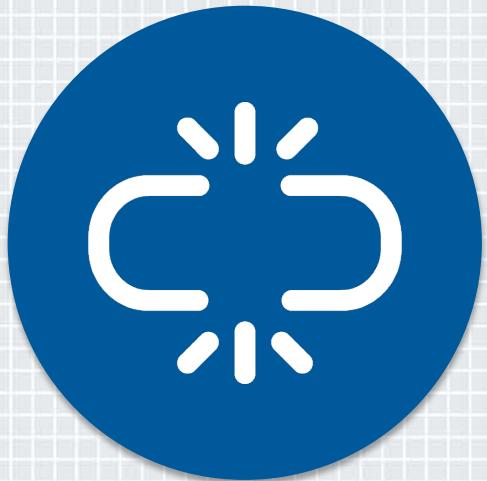
A Few More Comparisons...

Music	Security
Style	Event Analysis, Operational patterns
Instruments	Software
Volume	DoS attacks, Support Level Agreements
Rhythm	Attack patterns, Operational patterns
Timing	Response latency
Form & Analysis, Music History	Forensics

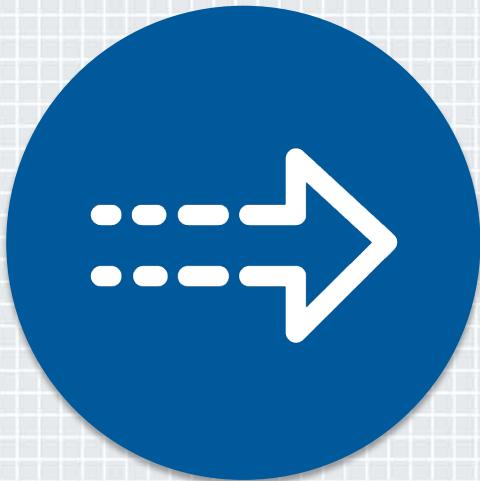


Now the Fun Starts

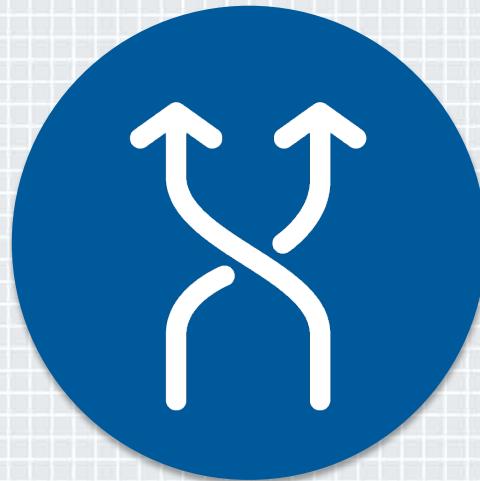
Consistent Creativity



Break it down



Move it over



Twist it up

A wide-angle photograph of a calm ocean under a dramatic sunset sky. The sky is filled with wispy, orange and yellow clouds, transitioning to a darker blue at the horizon. In the bottom right corner, a single sailboat with a dark hull and a white sail is visible on the water.

Now What?

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