



AKADEMIA GÓRNICZO-HUTNICZA  
IM. STANISŁAWA STASZICA W KRAKOWIE



# DYNAMIKA DOTYKU JAKO CECHA BIOMETRYCZNA

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WFiS AGH, SKNFM „Kerma”

PWN:

1. «nauka zajmująca się badaniem prawidłowości kierujących zmiennością cech populacji organizmów żywych, posługująca się metodami statystyki matematycznej»
2. «technika dokonywania pomiarów istot żywych»

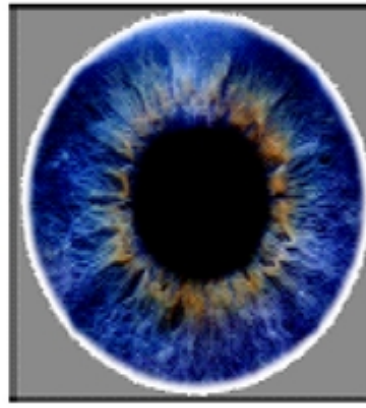
# Biometria



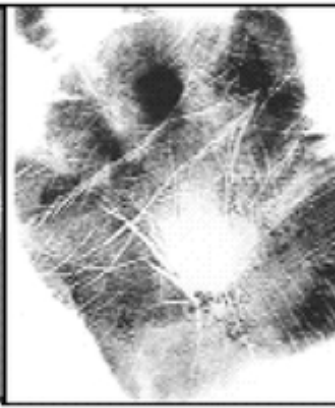
Fingerprint



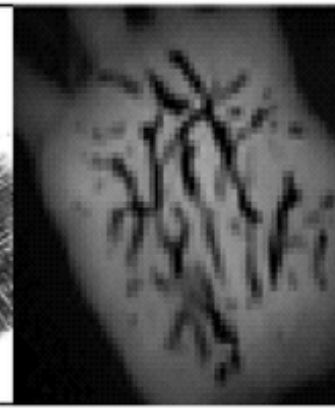
Face



Iris



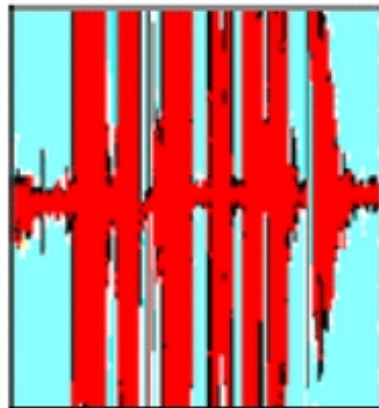
Palm print



Hand vein



Finger  
geometry



Voice



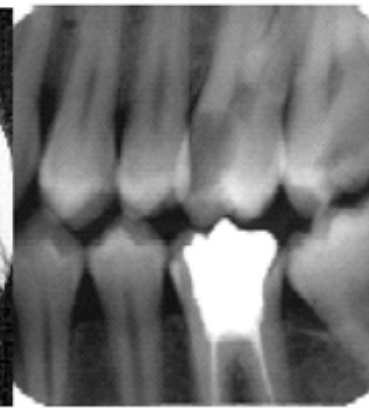
Signature



Ear



Retina



Tooth-shape



Walking gait

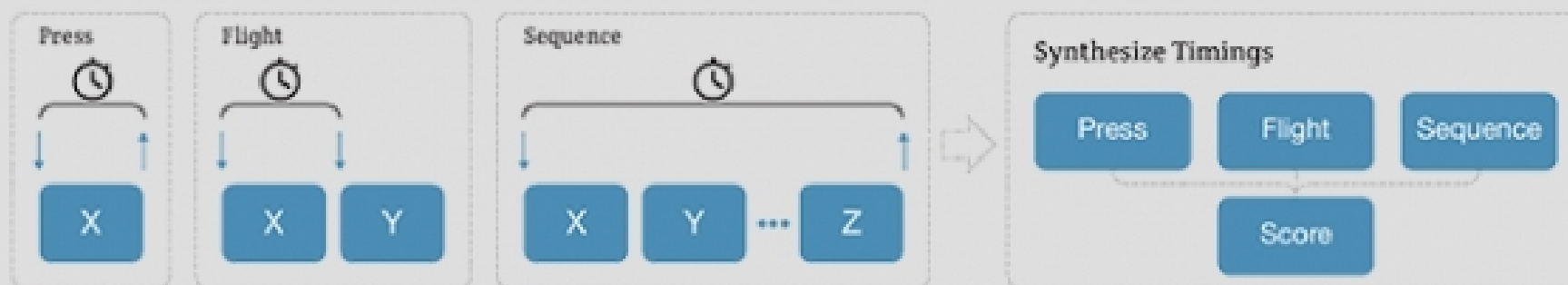
## KEYSTROKE DYNAMICS

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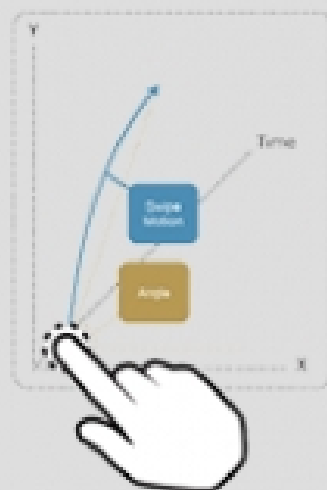
**Nie tylko co piszemy, ale też jak!**

# Istniejące systemy

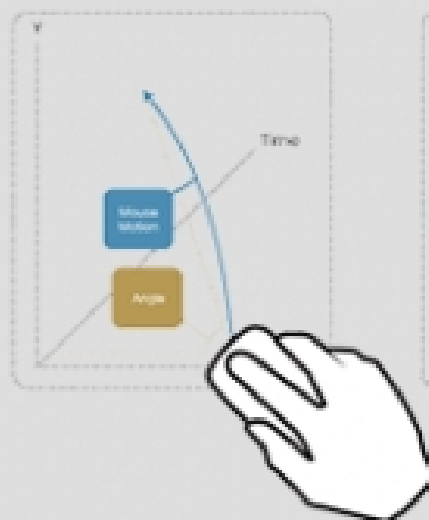
## Keyboard Capture Intervals



## Touch Motion

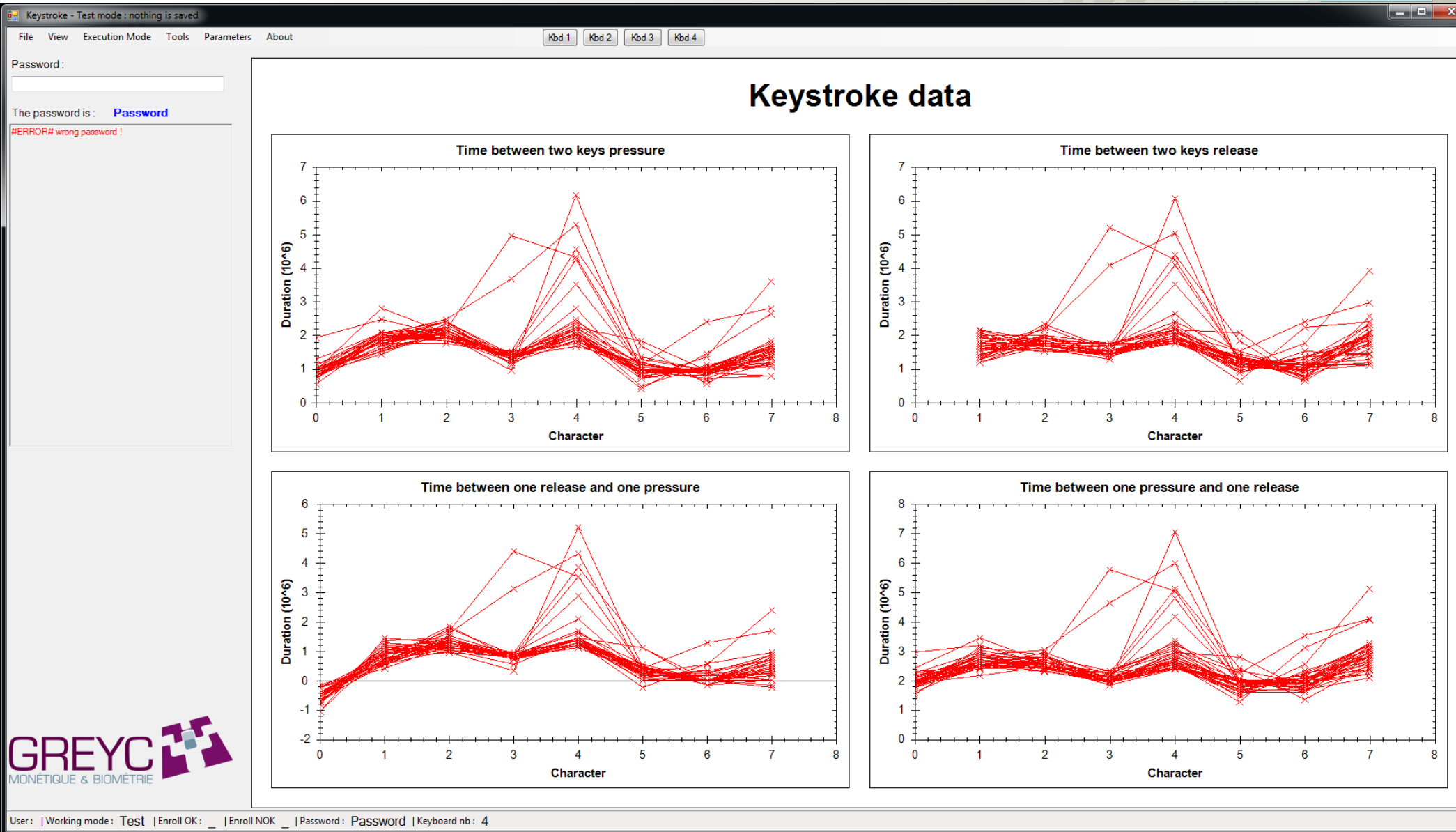


## Mouse Motion



## Continuous





# Touch Analysis



Screenshot z apki



# Touch Analysis

```
Button button = (Button) findViewById(R.id.button);
button.setOnClickListener(new View.OnClickListener(){
    @Override
    public boolean onTouch(View v, MotionEvent event){

        if(i<57 && j<56){
            if (event.getAction() == MotionEvent.ACTION_DOWN) {
                // Pressed
                Calendar calendar = Calendar.getInstance();
                pressTable[i] = calendar.getTimeInMillis();
                i++;

            } else if (event.getAction() == MotionEvent.ACTION_UP) {
                // Released
                Calendar calendar = Calendar.getInstance();
                releaseTable[j] = calendar.getTimeInMillis();
                j++;
            }
        }
        else{
            Toast.makeText(getApplicationContext(), "Koniec", Toast.LENGTH_LONG).show();
        }
        return true;
    }
});
```

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```

<https://niebezpiecznik.pl/post/to-jak-piszesz-moze-ujawnic-twoja-tozsamosc-nawet-jesli-uz-ywasz-tor-a/>

<https://www.behaviosec.com/features/>