

Mikrotomografia

Analiza danych cz.1

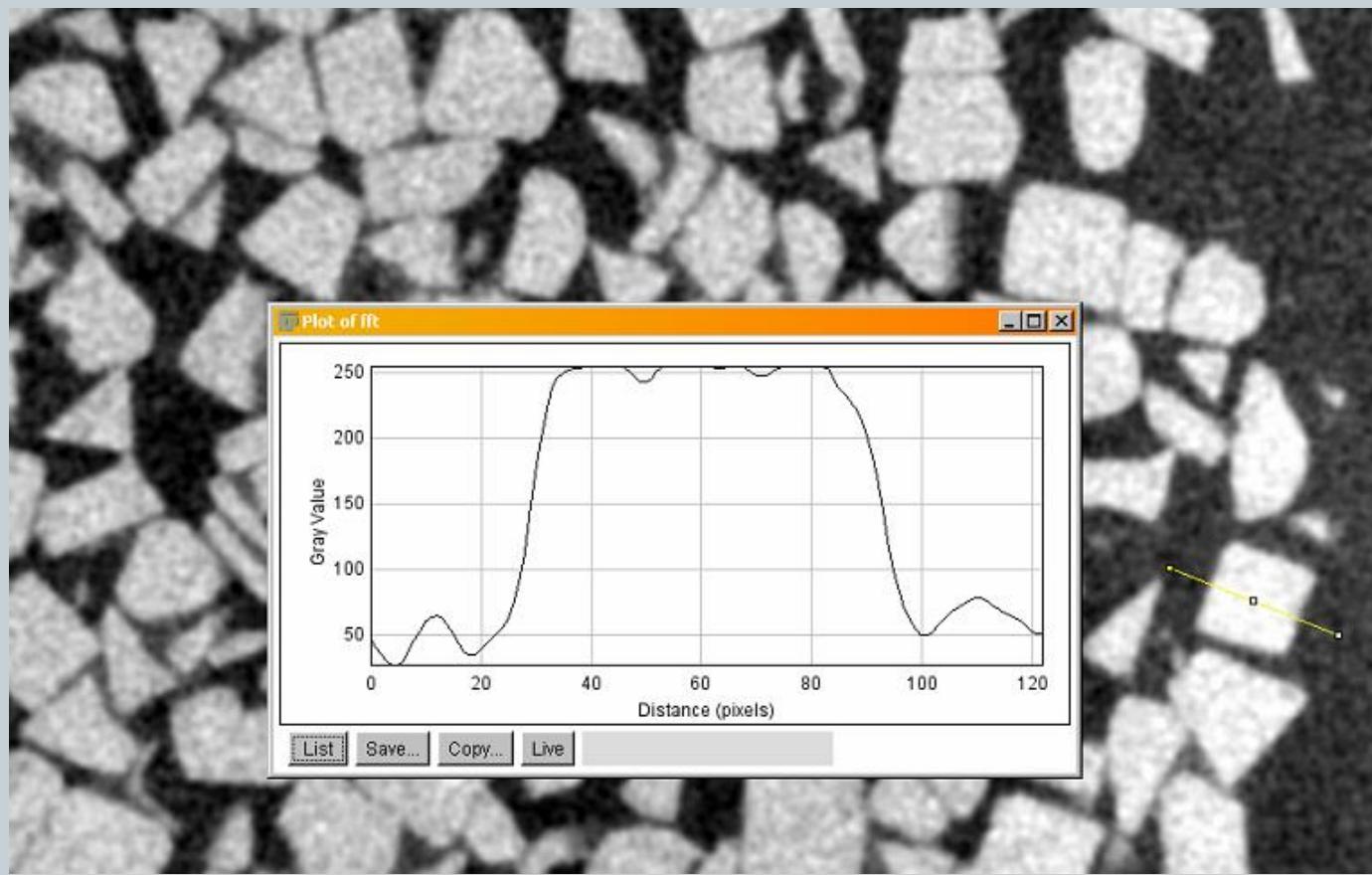


WYKŁAD OBIERALNY
JACEK TARASIUK

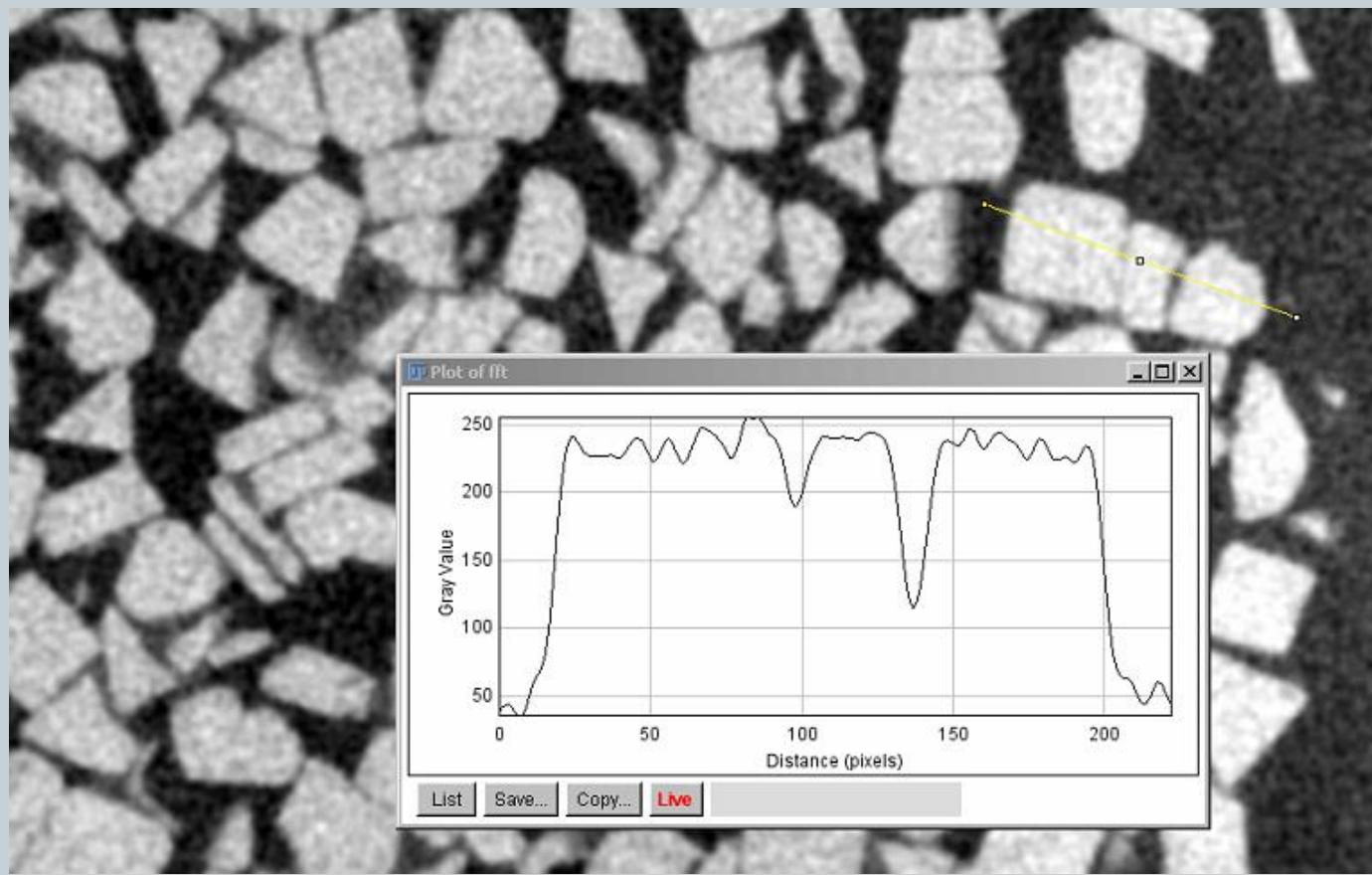
WYDZIAŁ FIZYKI I INFORMATYKI STOSOWANEJ
AGH, KRAKÓW

ver. 2015

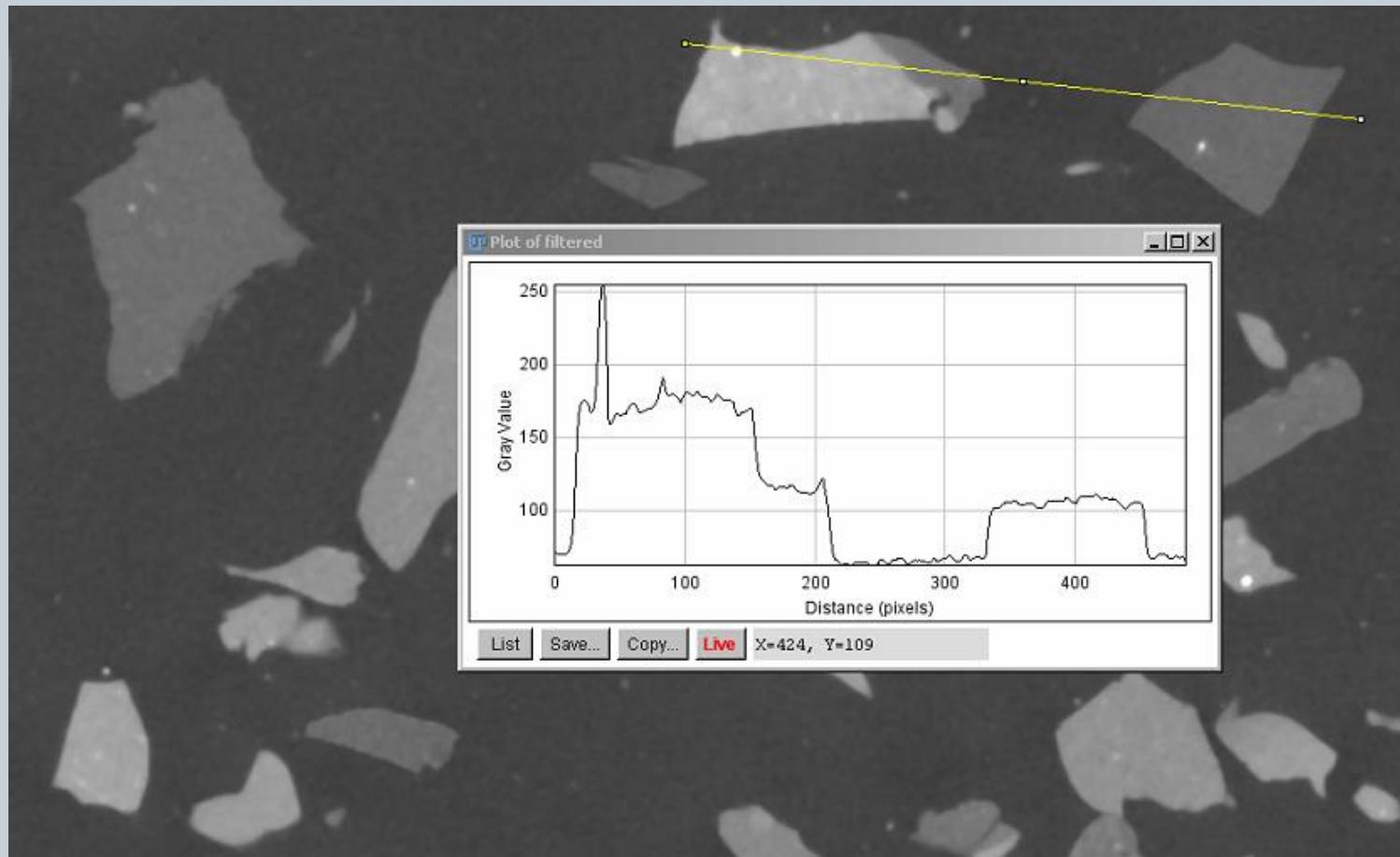
Problem progowania



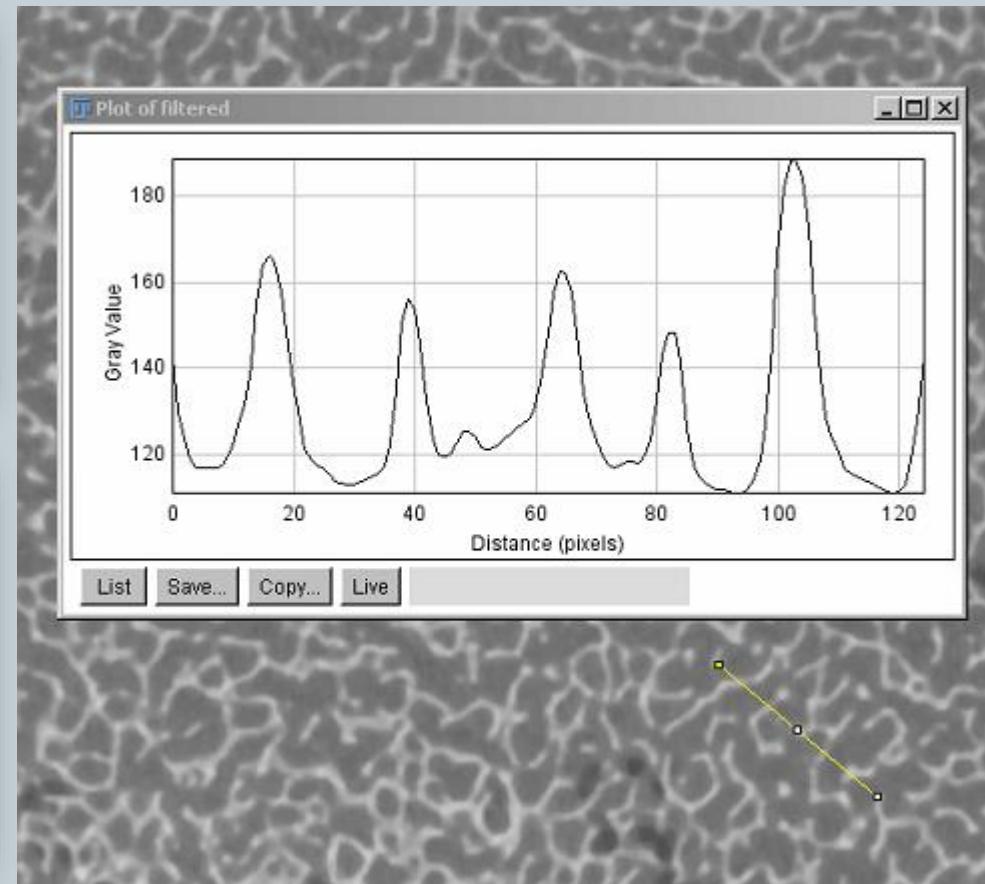
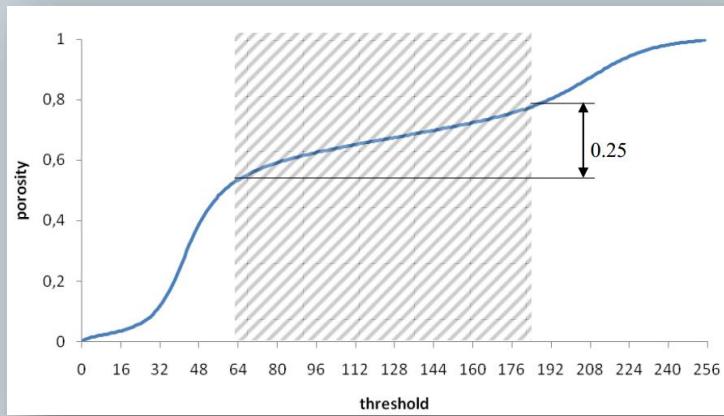
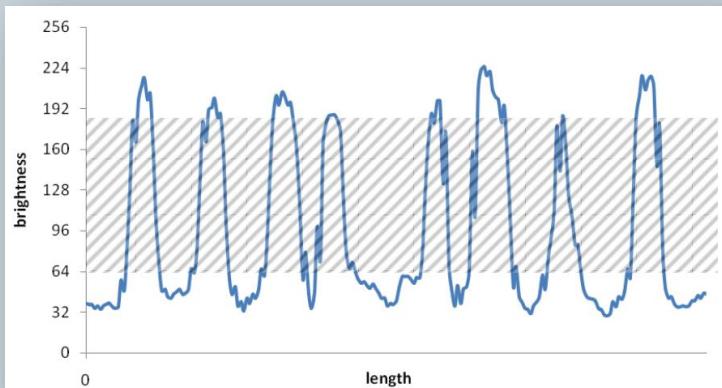
Problem progowania



Problem progowania



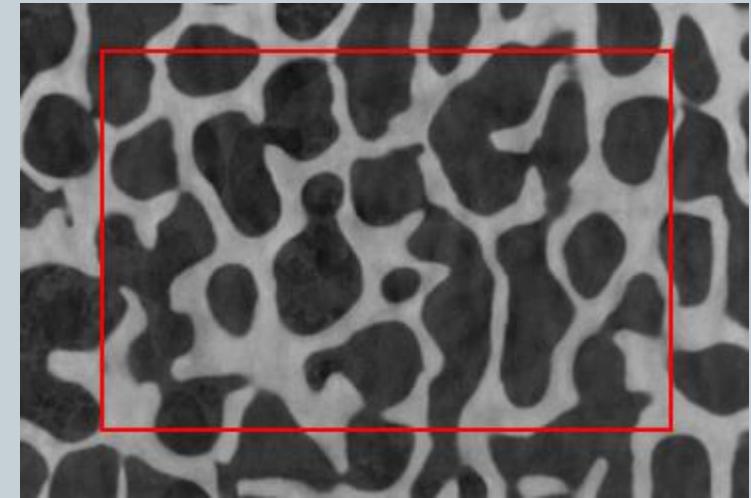
Problem progowania



Wybrane parametry morfometryczne



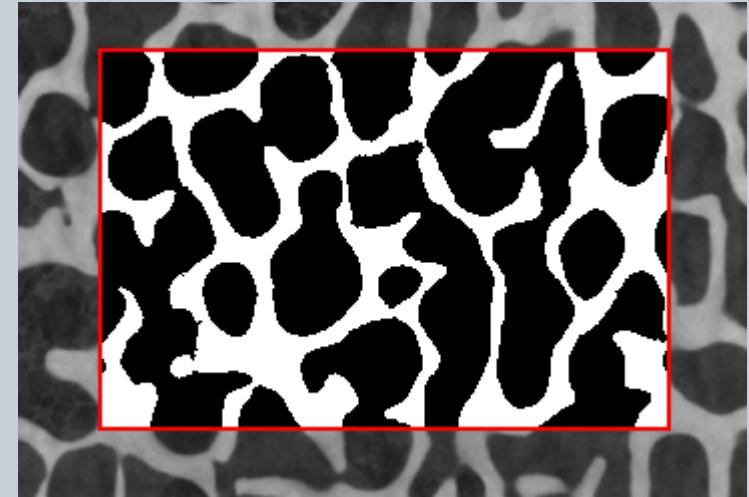
- VOI volume - TV [mm³]
- VOI surface - TS [mm²]



Wybrane parametry morfometryczne



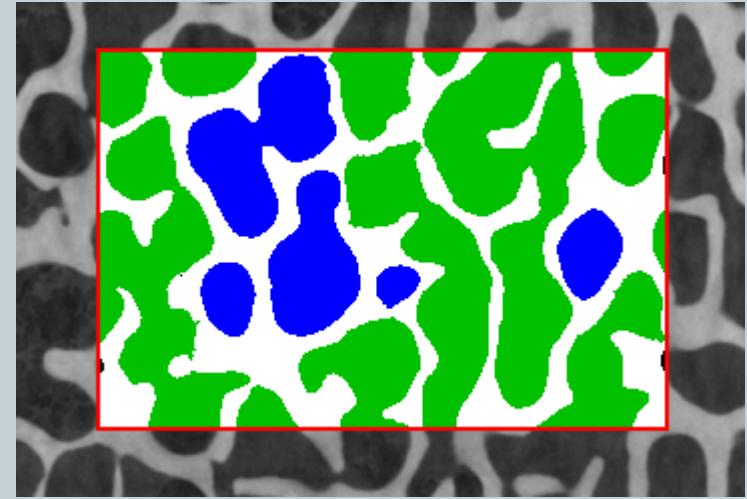
- Object volume - Obj.V [mm³]
- Object surface - Obj.S [mm²]
- Percent object volume - Obj.V/TV [%]
- Intersection surface - i.S [mm²]
- Object surface / volume ratio - Obj.S/Obj.V [mm⁻¹]
- Object surface density - Obj.S/TV [mm⁻¹]



Wybrane parametry morfometryczne



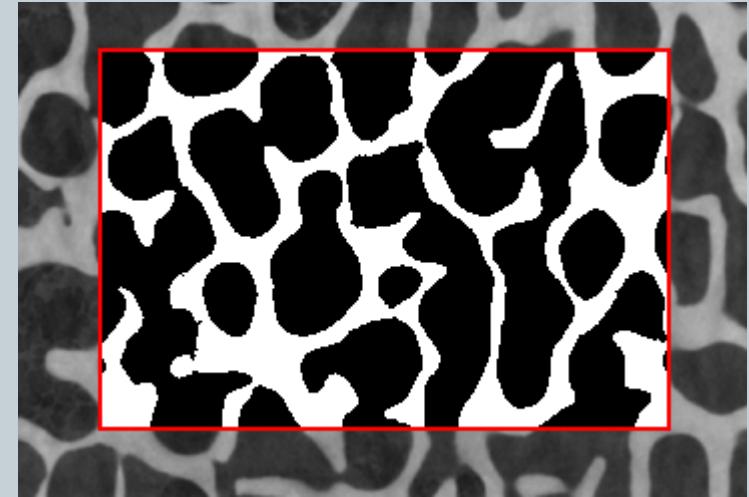
- Volume of pores - Po.V [mm³]
- Surface of pores - Po.S [mm²]
- Porosity - Po [%]
- Number of pores - N.Po
- Fragmentation index - Fr.I [mm⁻¹]
- Number of objects - Obj.N
- Number of closed pores - Po.N(cl)
- Volume of closed pores - Po.V(cl) [mm³]
- Surface of closed pores - Po.S(cl) [mm²]
- Closed porosity (percent) - Po(cl) [%]
- Volume of open pores - Po.V(op) [mm³]
- Open porosity (percent) - Po(op) [%]



Wybrane parametry morfometryczne



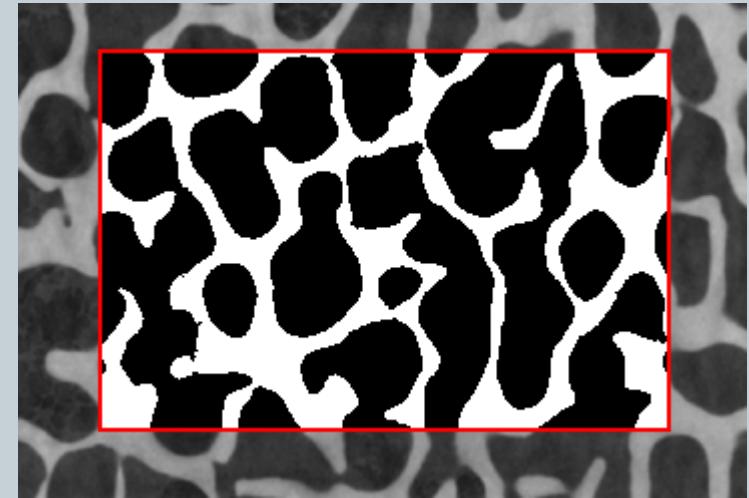
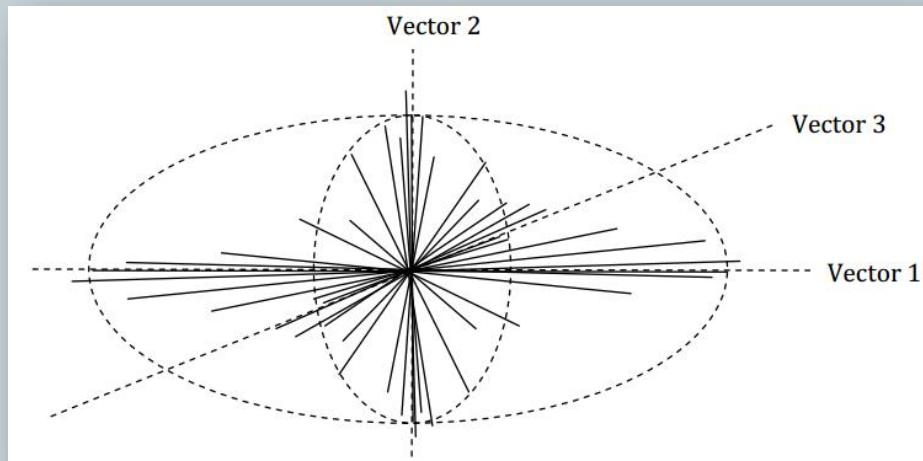
- Structure model index - SMI**
 płaszczyzna – 0, cylinder – 3, sfera – 4
- Structure thickness - St.Th [mm]**
- Structure linear density - St.Li.Dn [mm⁻¹]**
- Structure separation - St.Sp [mm⁻¹]**
- Fractal dimension - FD**



Wybrane parametry morfometryczne

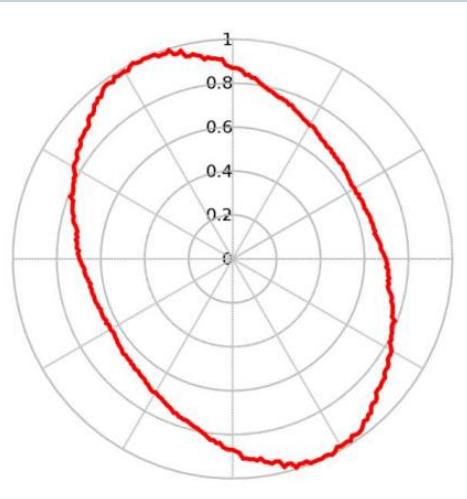
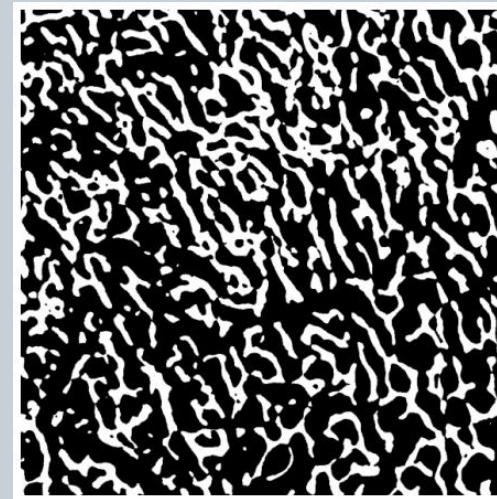
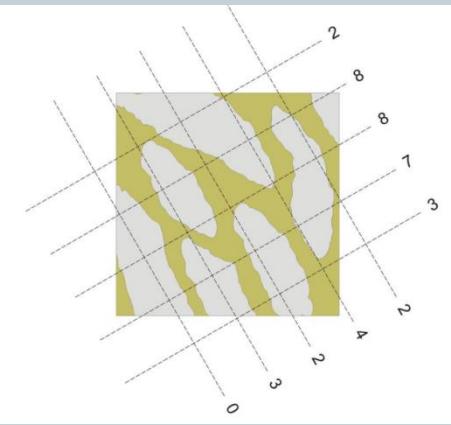


- Degree of anisotropy - DA
- Eigenvalue 1 , Eigenvalue 2 , Eigenvalue 3

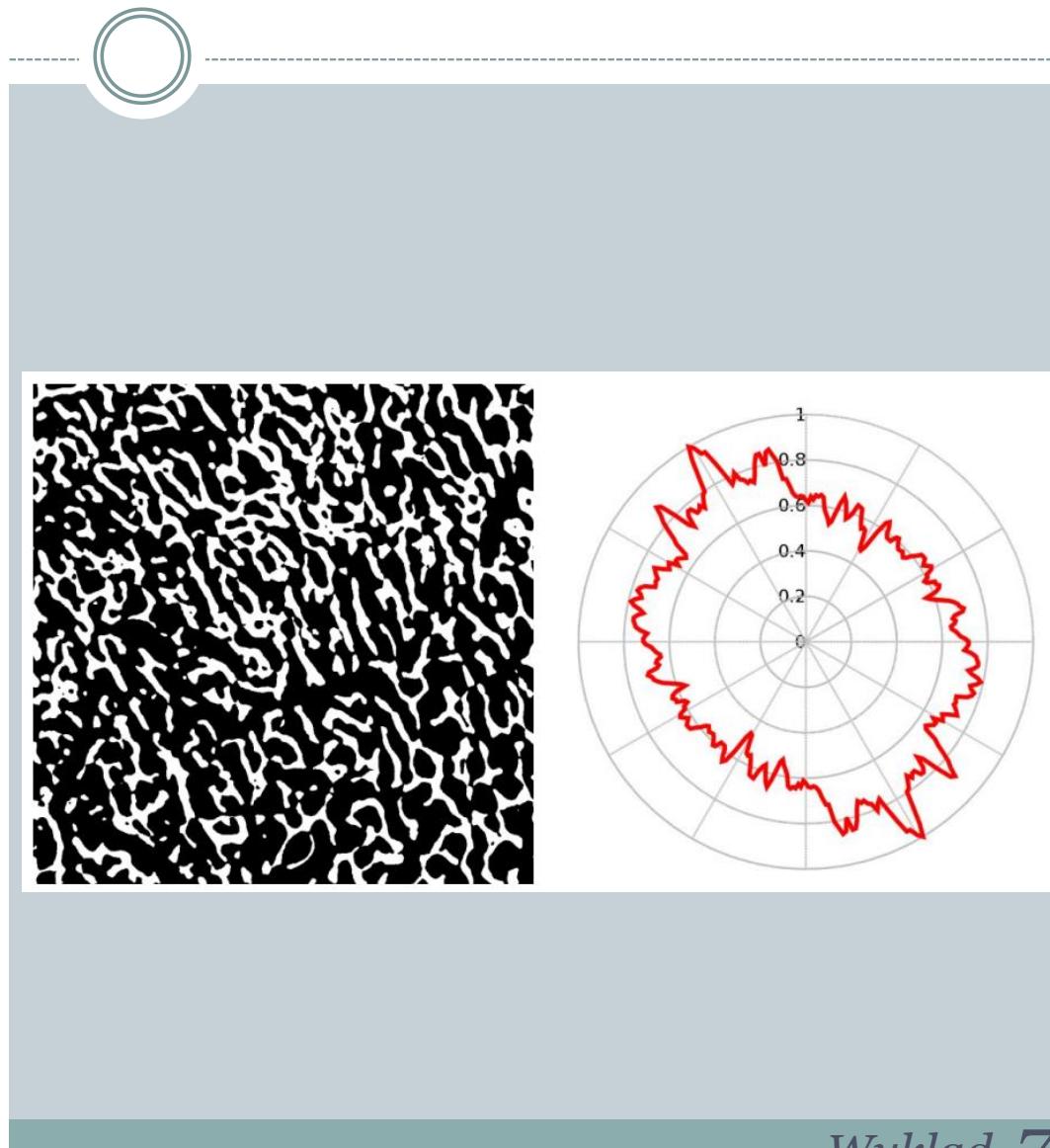
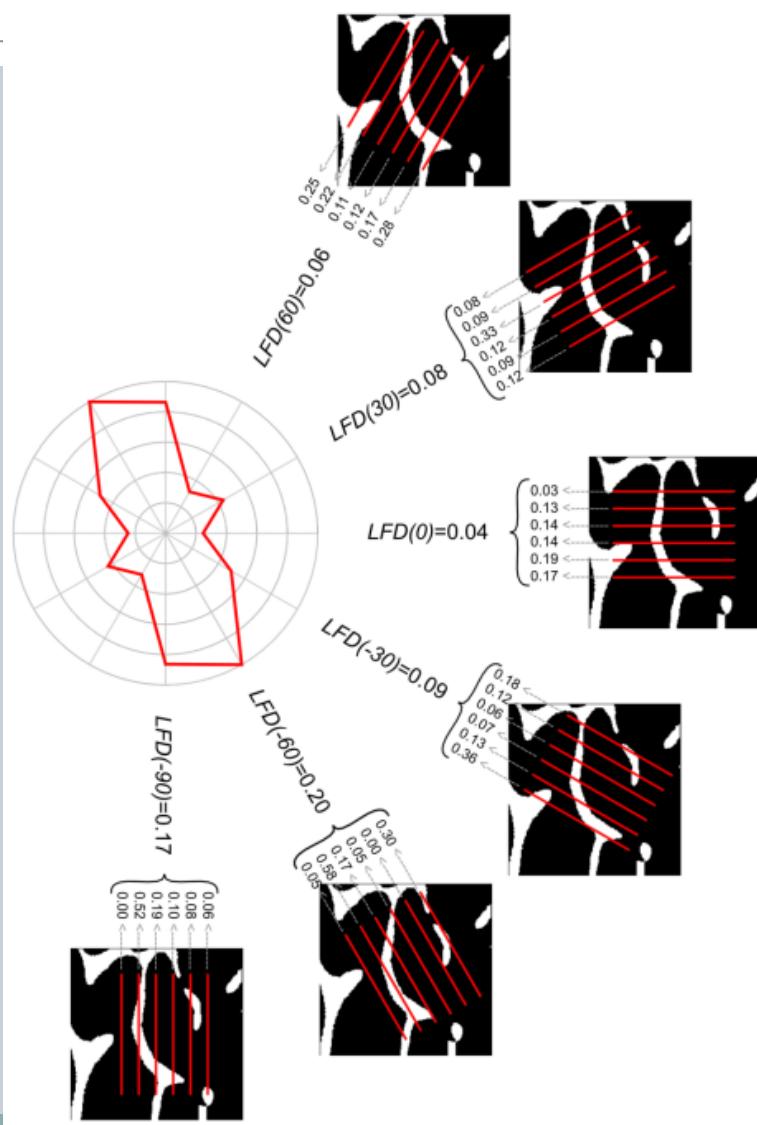


$$DA = 1 - \frac{\min \text{ eigenvalue}}{\max \text{ eigenvalue}}$$

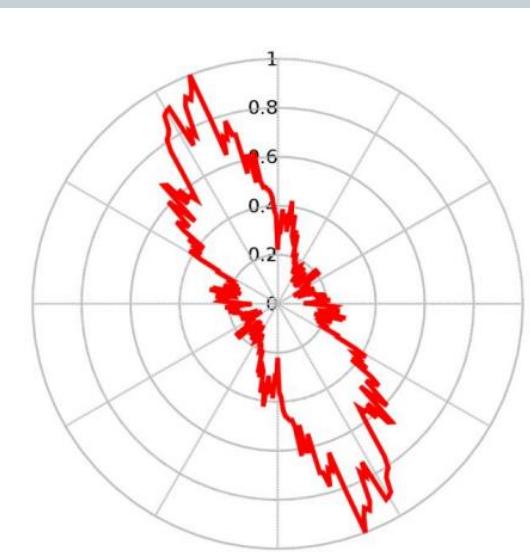
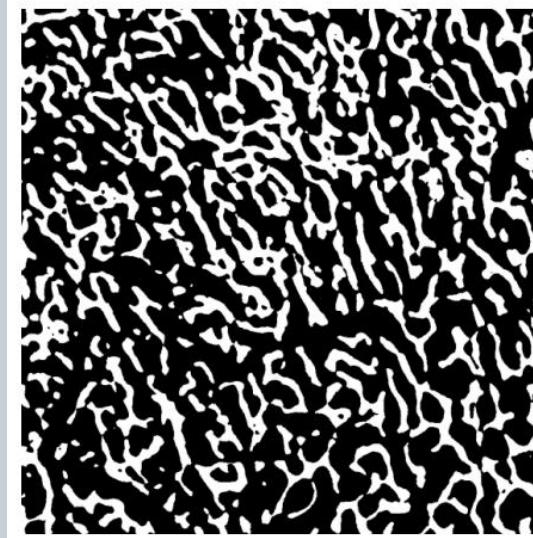
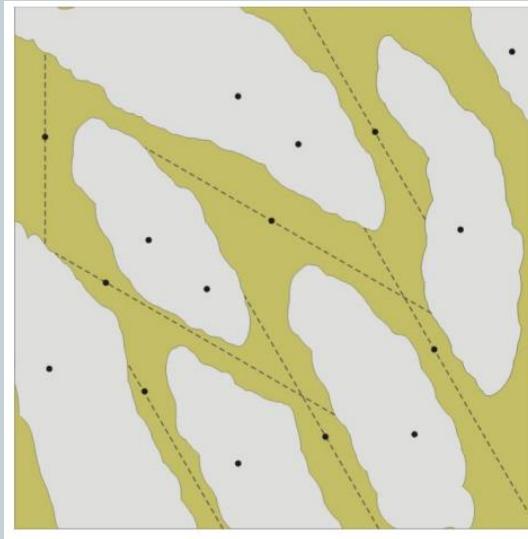
MIL – Mean Intercept Length



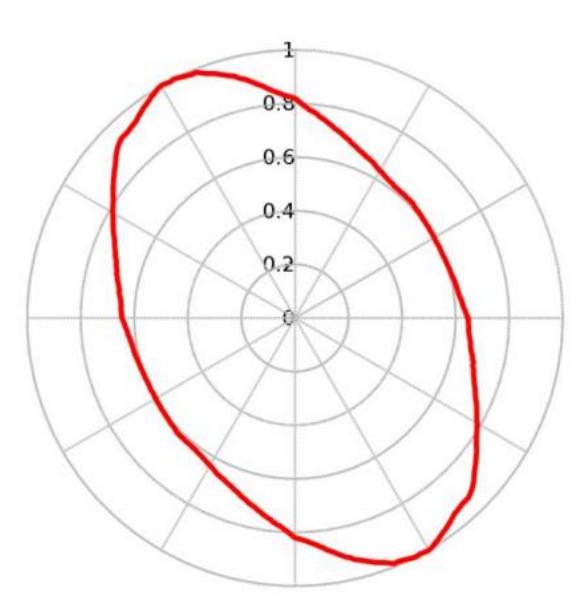
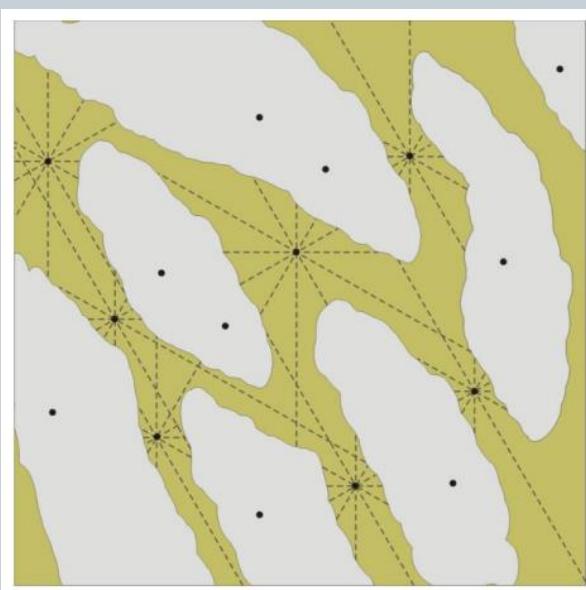
LFD – Line Fraction Deviation



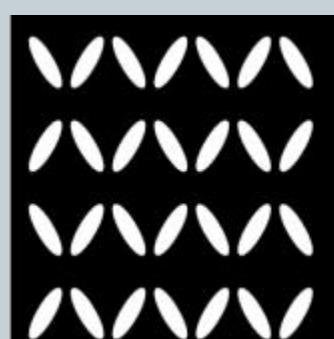
VO – Volume Orientation



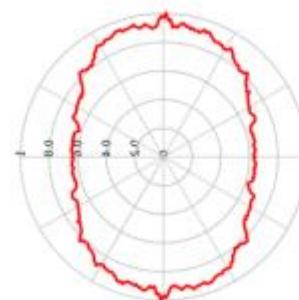
SLD – Star Length Distribution



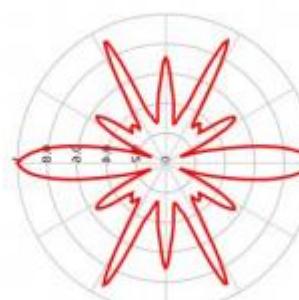
Porównanie



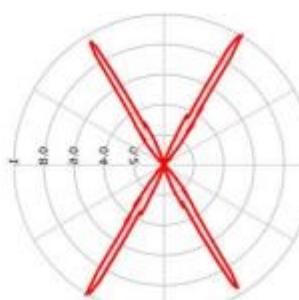
MIL



LFD



VO



SLD

