Schedule VIP-2021 v. 1/12

week	dato		Title/Contents	Exercises	Material
1a	22/11	SIO	Introduction	Ex1: Math	FP 1.1
1b	24/11	FL	Linear Algebra revisited		Lin.Alg. Tutorial
2a	29/11	FL	Filtering, convolutions, Derivatives, Gradients	Ex2: Filtering	FP 4.1-2
2b	1/12	FL	Features, Interest points, Scale-Space		FP 4.7, 5.1-3
3a	6/12	FL	Descriptors, Feature point matching		FP 5.4, 4.6; Lowe; FP 6.2
3b	8/12	FL	Image formation, specularities, surface reflection	Ex2: Photometric stereo	FP 2.1-2.2; Woodham
4a	13/12	FL	Photometric stereo		FP 2.2; Woodham
4b	15/12	SIO	CBIR using BOW		FP 6.2, Lowe, FP 21.1, 21.2.1
5a	20/12	SIO	Camera models, Homogeneous coordinates, Transformations, Homographies	Ex3: CBIR	FP 1 + 7.-7.1, 12.1 (mainly 12.1.3)
6a	3/1	SIO	Stereo, lass evaluation, Questions		DerWalt: Correspondence problem
6b	5/1	SIO	Color image analysis, shadows		FP 3
7a	10/1	FL	Segmentation: Clustering		FP 6.2, FP 9.-; 9.3.2-3
7b	12/1	FL	Segmentation: Mean Shift	Ex4: Segmentation	FP 9.3.4-5
8a	17/1	SIO	Convolutional Neural Nets		Ponti, Slides
8b	19/1	SIO	Convolutional Neural Nets, Class evaluation		Ponti, Slides

Lectures and exercises

- Monday 15:15-17:00, lectures, Auditorium Lille UP1, DIKU, Universitetsparken 1
- Wednesday 10:15-12:00, lectures Auditorium Lille UP1, DIKU, Universitetsparken 1
- Wednesday 13:15-15:00, exercises, NBI 01 (Team1: 3.I 164, Team2: 3.H 142, Ream 3: 3.I 080), Jagtvej 155

Teachers:

Søren I. Olsen, SIO
Francois Lauze, FL
TA1: Seyednavid Mohammadifoumani; TA2: Steffen Czolbe; TA3: Peidi Xu

Reading material:

D. Forsyth and J. Ponce: Computer Vision - A Modern approach, Pearson, 2ed, 2012.
Additional we will use scientific papers and tutorials, all available at Absalon.

Mandatory assignments:

Ex1: 22.11 – 29.11 Math - FL

Ex2: 29.11 – 8.12 Filtering - SIO

Ex3: 8.12 – 17.12 Photometric stereo - FL

Ex4: 15.12 – 12.1 CBIR- SIO

Ex5: 12.1 – 21.1 Segmentation- FL

To this comes weekly non-mandatory quizzes taken at Absalon.