The IPOL module can be validated by a mark at MVA

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This module is offered to all students in MVA. Its goal is for students to publish algorithmic analysis and implementation of an article of critical importance in the online journal http://www.ipol.im/ IPOL (currently 2000 real visits per week). A list of article items will be available October 15. Students are assisted by researchers who provide all relevant information and collaborate with them to overcome any technical barriers. The final mark is given by the researcher, taking into account the degree of completion of the article. Eight articles from the IPOL 2010 MVA module are being currently published.

Terms of the current MVA course (Jean-Michel Morel + collaborators),
Cournot Building, Room C103, Friday, 1:30 p.m. to 4:30 p.m.

Lecture notes, documents and slides, numbered per session, can be found at
http://dev.ipol.im/ morel/Dossier_MVA_2011_Cours_Transparents_Documents ~ /
Each lecture presents a "fundamental" image processing algorithm, supported by a publication with IPOL online demo permitting to try it on any image. Lecture notes for the underlying mathematical theory and the algorithm detail are provided in English.
The chosen topics cover the four main aspects of the discipline: the capture, processing, analysis, and synthesis of images, and a range of mathematical techniques: Fourier analysis, probability models on the contrary, projective geometry, differential equations partial derivatives, methods called "non local". Each course offers and also comments 1-4 important items that can become a project of the "module IPOL".

Terms of MVA Course exam: Students will make an analysis report for each course with experimental results obtained on the online facility, and raising critical questions on the mathematical algorithms. Each report can be short. Its length can vary depending on interest. The reports should be given by the students before Christmas.

VENDREDI 30 septembre:
Rafael Grompone et JMM: *LSD: a Line Segment Detector*
VENDREDI 7 octobre:
Jean-Michel Morel: *The SIFT method and its scale invariance*
VENDREDI 14 octobre:
Julie Digne & JMM: *3D point cloud processing: Scale Space Meshing*
VENDREDI 21 octobre:
Julien Rabin: *A contrario matching of SIFT descriptors*
VENDREDI 28 octobre:
Bruno Galerne & JMM: *Microtexture synthesis by phase randomization*
VENDREDI 4 novembre:
Yohann Tendero & JMM: *The flutter shutter*
VENDREDI 18 novembre:
Pascal Monasse & JMM: *A contrario block matching in stereo vision*
VENDREDI 25 novembre:
Marc Lebrun et JMM: *Nonlocal image denoising*