

Metodologi Penelitian Ilmiah

Publikasi Ilmiah

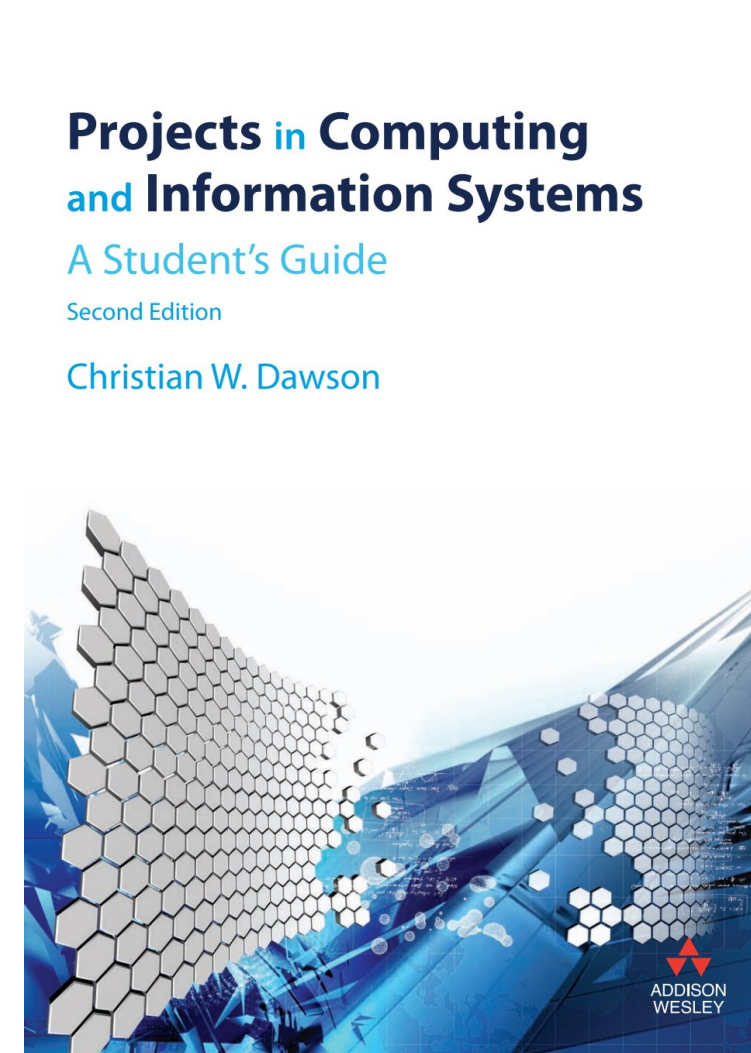
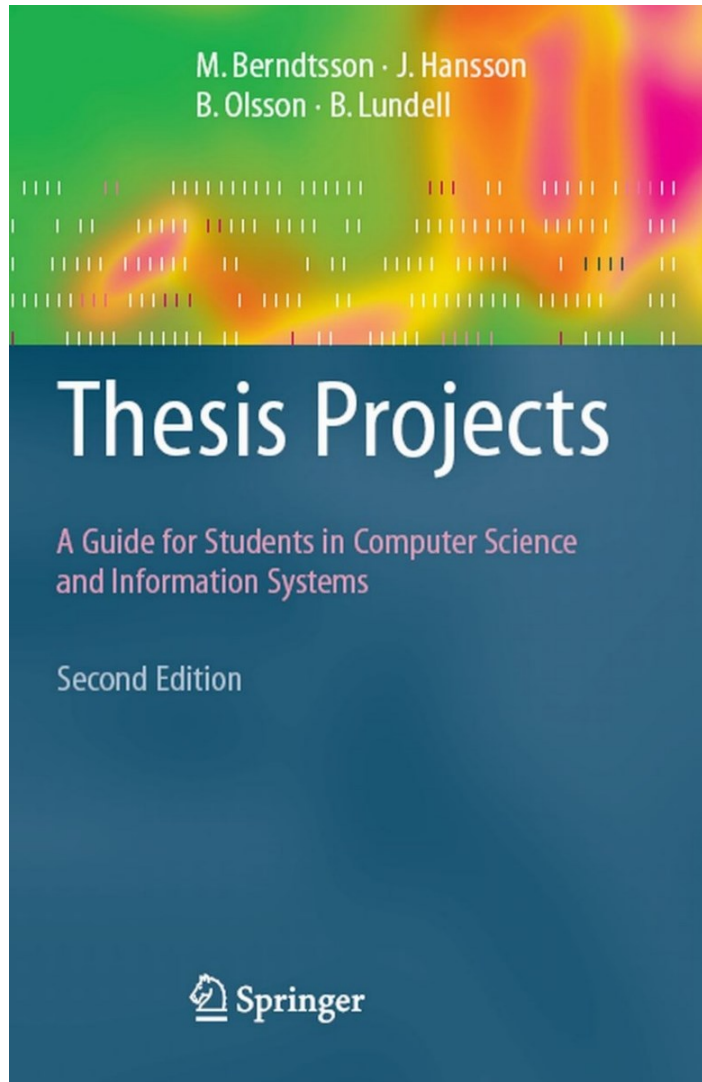


P r a j a n t o W a h y u A d i

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+62896 2635 7775

Textbook



Penelitian

Mari kita ingat kembali:

- Research (Inggris)
 - re (kembali)
 - to search (mencari)
- Proses mengamati ‘sesuatu yang tidak diketahui’ (unknown), belajar dan memahami hal-hal baru, membangun pengetahuan baru tentang hal-hal yang belum dipahami sebelumnya (*Berndtsson et al., 2008*)
- Berangkat dari adanya **masalah penelitian**
 - Menerapkan metode yang ada untuk memecahkan masalah
 - Memperbaiki / meningkatkan metode yang ada
 - Menemukan metode baru

Tujuan Penelitian

- Penelitian adalah sebuah aktivitas untuk membuat **kontribusi** orisinal kepada **pengetahuan** (*pada bidang minat tertentu*) (Dawson, 2009)
- **Kontribusi ke masyarakat** tidak secara langsung bisa diukur, karena itu tidak dimasukkan ke tujuan penelitian, tapi ke **manfaat penelitian**

Plasmodium Falciparum Identification in Thick Blood Preparations Using GLCM and Support Vector Machine (SVM)

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Abstract - Malaria is one of the serious diseases that require rapid handling, otherwise, it can lead to death. One of the causes of malaria parasites is plasmodium falciparum which can cause severe or fatal malaria. Handling a medical late can increase the risk of death. Therefore, it takes a rapid identification system with a high percentage of accuracy to reduce the risk of death. This research aims to build an identification system of plasmodium falciparum in thick blood film using Gray Level Co-occurrence Matrix (GLCM) and Support Vector Machine (SVM). The GLCM is used to get texture feature values such as contrast, correlations, energy, and homogeneity from images. Those values are processed and as an input of classification using SVM. The research result using SVM for accuracy value of plasmodium falciparum identification can reach 93.33%.

Keywords - malaria parasite, plasmodium falciparum, feature extraction, support vector machine (SVM)

New Image Texture Feature for Chest X-Ray Classification

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Abstract - This study proposes a new feature extraction model to identify CXR images of covid-19 and pneumonia has a high visual resemblance. The feature extraction model starts by using histogram equalization and average filters as lowpass features and high pass features obtained through Laplacian and LoG filters. In the next step, covariance matrix of image along with the entire features are used to produce an eigen vector that will be used as a feature vector in the classification process. The final stage is the process of testing features on the classification algorithms KNN, SVM, LDA, Naïve Bayes, and Decision Tree through a 10-fold cross validation scheme with 0.9 training data and 0.1 test data. The first experiment for the Covid-19 and normal classes shows that the proposed model is able to produce an accuracy of 96% as the comparison model with GLCM texture extraction have an accuracy value of 91%. The second test is conducted for the class Covid-19 and pneumonia and obtained an accuracy value of 89% for the proposed model and 73% for the GLCM texture extraction. Experiments proved that the proposed model successfully outperformed the GLCM texture extraction model in all of classification algorithms used.

Keywords – classification, chest x-ray, feature extraction, covid-19, pneumonia

Improving CRT based Watermarking using Integer Wavelet Projection

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Abstract— A new watermarking scheme is proposed in this paper to embed the watermark in the high frequency image region. Diagonal integer wavelet filter is used to generate the high frequency sub band to be projected using convolution algorithm within the resolution of host image to define the most high frequency pixels. This is aimed to improve quality within the same robustness from the previous CRT algorithm which embeds the watermark on the host image regardless of the frequency. The experiments are conducted to compare the quality and robustness of the CRT and proposed method. They are measured using Structural Similarity and Normalized Correlation. The result shows that the proposed method has better quality with the average value of 0.9995 compared to the CRT method which has average value of 0.9981. In the meantime the compression and additive noise are used to measure the robustness of both methods. The CRT and the proposed method have similar result in robustness. It has successfully improved the quality of the watermarked image and maintaining the robustness of the watermark as well.

Keywords—watermarking; crt; bicubic convolution; integer wavelet



A Novel Watermarking Method using Hadamard Matrix Quantization

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Abstract. One of the most used watermarking algorithms is Singular Value Decomposition (SVD), which has a balanced level of imperceptibility and robustness. However, SVD uses a singular matrix for embedding and two orthogonal matrices for reconstruction, which is inefficient. In this paper, a Hadamard matrix is used to get a singular matrix for the reconstruction process. Moreover, SVD works with a floating-point value, which takes long processing time, while the Hadamard matrix works with an integer range, which is more efficient. Visual measurement showed that SVD and the new method had average NC values of 0.8321 and 0.8293, whereas the average SSIM values resulted in the same value (0.9925). In terms of processing time, the proposed method ran faster than SVD with an embedding and extraction time of 0.6308 and 0.2163 seconds against 0.8419 and 0.2935 seconds. The proposed method successfully reduced the running time while maintaining imperceptibility and robustness.

Keywords: Hadamard matrix; image processing; quantization; SVD; watermarking.

Publikasi Ilmiah

- Artikel ilmiah/makalah adalah sebuah deskripsi hipotesis, data, dan kesimpulan yang terorganisir. Jika penelitian yang anda lakukan tidak menghasilkan makalah, sebaiknya tidak dilakukan (*Whitesides, 2004*)
- Jika penelitian tidak dipublikasikan, maka penelitian itu tidak dilakukan (*Miller 1993*)
- Surat Edaran Dirjen Dikti No. 152/E/T/2012 tentang Publikasi Karya Ilmiah:
“Terhitung kelulusan setelah Agustus 2012, untuk lulusan **program sarjana harus menghasilkan makalah yang terbit pada jurnal ilmiah**”

Tujuan dan Manfaat Publikasi Ilmiah

- Menyampaikan hasil penelitian kepada publik
- Mendapatkan pengakuan dalam bidang minat
- Memperoleh masukan dari rekan sejawat (*peer review*)

Jenis Publikasi

- **Conference Proceeding**
- **Journal Article**
- Book Chapter
- ...

Jurnal vs Prosiding

Jurnal

- Pembahasan lebih komprehensif
- Jumlah halaman lebih banyak
- Terbit ≥ 1 kali per tahun
- Proses lebih Panjang
- Berfaktor dampak
 - Memiliki tingkat / kategori
 - Sinta 1 – 6
 - Q1 – 4

Prosiding

- Pembahasan lebih singkat
- Jumlah halaman lebih sedikit
- Terbit 1 kali per tahun
- Proses lebih singkat
- Presentasi Oral

Kondisi Jurnal Ilmiah di Indonesia

Wahono, 2020:

- Dipublikasikan dalam **jumlah terbatas**
- **Tidak dilanggan** oleh perpustakaan (Indonesia maupun internasional)
- Ditulis dalam Bahasa Indonesia
- **Tidak digunakan pengajar** di Indonesia sebagai materi pengajaran di kampus
- **Tidak begitu dipedulikan** oleh dunia akademik
- **Sangat sedikit yang terindeks** oleh lembaga pengindeks jurnal

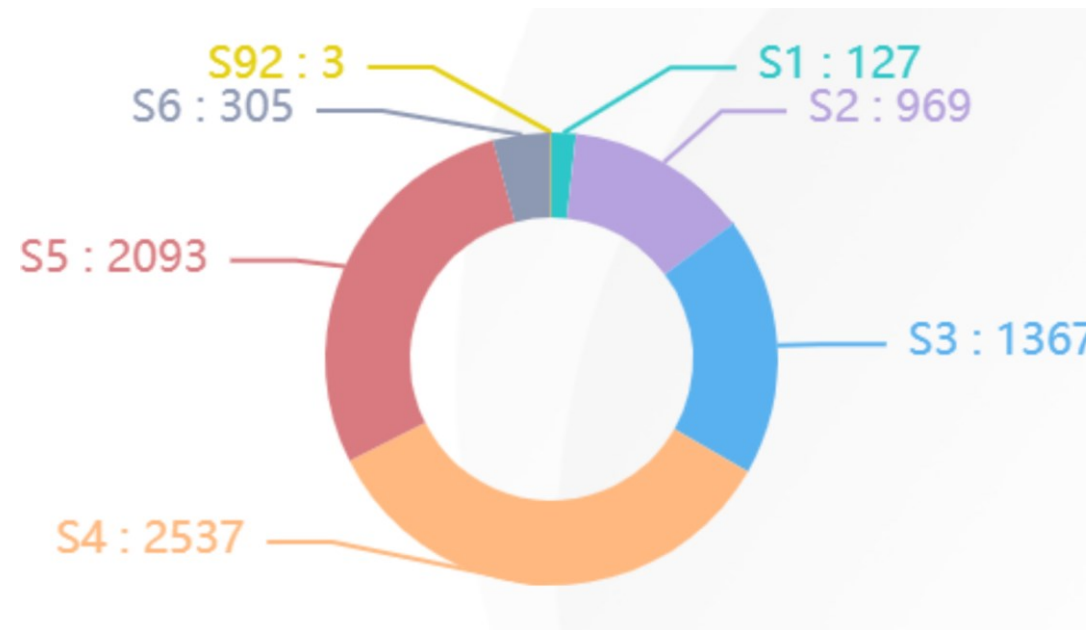
Kondisi Jurnal Ilmiah di Indonesia

Wahono, 2020:

- Budaya Indonesia adalah **lisan** dan bukan tulisan
- Budaya akademik di Indonesia baru mulai untuk mengajar, dan **bukan untuk meneliti**
- **Rendahnya minat penelitian** dan mempublikasikan hasil penelitian
- **Kurangnya penghargaan** dan insentif dari universitas
- **Kurang mengerti bagaimana cara menulis paper** untuk jurnal dan prosedur pengirimannya
- Tidak memahami **metodologi penelitian dengan baik**

Akreditasi Jurnal di Indonesia

- Sinta (Science and Technology Index)



Peringkat Jurnal Indonesia (Kutipan 5 Tahun)

INTERNATIONAL JOURNAL OF ELECTRICAL AND COMPUTER ENGINEERING ✓

[Google Scholar](#) [Website](#) [Editor URL](#)

[Institute of Advanced Engineering and Science \(IAES\)](#)

✴ P-ISSN : 20888708 | E-ISSN : 20888708 | Subject Area : Science, Engineering

✴ S1 Accredited

🔄 Scopus Indexed

📖 Garuda Indexed

6,88
Impact

41
H5-index

24.411
Citations 5yr

28.027
Citations

BIODIVERSITAS : JOURNAL OF BIOLOGICAL DIVERSITY ✓

[Google Scholar](#) [Website](#) [Editor URL](#)

[Jurusan Biologi Fakultas Matematika dan Ilmu Pengetahuan Alam Universitas Sebelas Maret](#)

✴ P-ISSN : 1412033X | E-ISSN : 20854722

✴ S1 Accredited

🔄 Scopus Indexed

2,87
Impact

36
H5-index

17.043
Citations 5yr

18.432
Citations

GADJAH MADA
**INTERNATIONAL
JOURNAL of
BUSINESS**
ISSN 1411-1128 (PRINT) | ISSN 2338-7238

GADJAH MADA INTERNATIONAL JOURNAL OF BUSINESS (GAMAIJB) ✓

[Google Scholar](#) [Website](#) [Editor URL](#)

[Universitas Gadjah Mada](#)

✴ P-ISSN : 14111128 | E-ISSN : 14111128 | Subject Area : Economy

✴ S1 Accredited

🔄 Scopus Indexed

📖 Garuda Indexed

13,39
Impact

64
H5-index

15.837
Citations 5yr

25.372
Citations

- Berdasarkan kutipan (dalam 5 tahun) terhadap seluruh artikel yang diterbitkan oleh jurnal tersebut
- Tidak dijelaskan apakah termasuk kutipan sendiri (*self citation*)

Peringkat Jurnal Indonesia (Indeks H)

GADJAH MADA INTERNATIONAL JOURNAL OF BUSINESS (GAMAIJB) ✓

[Google Scholar](#) [Website](#) [Editor URL](#)

[Universitas Gadjah Mada](#)

P-ISSN : 14111128 | E-ISSN : 14111128 | Subject Area : Economy

[S1 Accredited](#) [Scopus Indexed](#) [Garuda Indexed](#)

13,39

Impact

64

H5-index

15.837

Citations 5yr

25.372

Citations

JURNAL PENDIDIKAN IPA INDONESIA (INDONESIAN JOURNAL OF SCIENCE EDUCATION) ✓

[Google Scholar](#) [Website](#) [Editor URL](#)

[Science Education Study Program, Faculty of Mathematics and Natural Sciences, Universitas Negeri Semarang](#)

P-ISSN : 23391286 | E-ISSN : 20894392 | Subject Area : Education

[S1 Accredited](#) [Scopus Indexed](#) [Garuda Indexed](#)

13,80

Impact

54

H5-index

11.369

Citations 5yr

12.153

Citations

JURNAL KESEHATAN MASYARAKAT ✓

[Google Scholar](#) [Website](#) [Editor URL](#)

[Universitas Negeri Semarang](#)

P-ISSN : 18581196 | E-ISSN : 23553596 | Subject Area : Health

[S1 Accredited](#) [Garuda Indexed](#)

1,20

Impact

45

H5-index

6.578

Citations 5yr

7.503

Citations

- Indeks H diperoleh dari paling sedikit n artikel yang dikutip paling sedikit n kali
- Misal:
Jurnal Z menerbitkan 5 artikel:
 - Artikel #1 → dikutip 5 x
 - Artikel #2 → dikutip 3 x
 - Artikel #3 → dikutip 2 x
 - Artikel #4 → dikutip 1 x
 - Artikel #5 → dikutip 1 xMaka diperoleh Indeks $H = 2$

Peringkat Jurnal Indonesia (Faktor Dampak)

The cover of the International Journal of Evaluation and Research in Education (IJERE) features a blue background with a yellow horizontal band across the middle. The band contains the journal's title in black and red text. Above the band, the volume and issue information are listed. The IJERE logo is prominently displayed in the center. At the bottom, the IAES logo is visible.

INTERNATIONAL JOURNAL OF EVALUATION AND RESEARCH IN EDUCATION (IJERE) ✓

[Google Scholar](#) [Website](#) [Editor URL](#)

[Institute of Advanced Engineering and Science \(IAES\)](#)

P-ISSN : 22528822 | E-ISSN : 26205440 Subject Area : Education

[S1 Accredited](#)

[Scopus Indexed](#)

[Garuda Indexed](#)

35,20
Impact

33
H5-index

4.507
Citations 5yr

4.751
Citations

The cover of the Indonesian Journal of Electrical Engineering and Computer Science (IJECCS) has a blue background with a yellow and white abstract design on the left side. The journal title is written in white and yellow text. The IJECCS logo is at the bottom left, and the IAES logo is at the bottom right.

INDONESIAN JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE ✓

[Google Scholar](#) [Website](#) [Editor URL](#)

P-ISSN : 25024752 | E-ISSN : 25024760 Subject Area : Science, Engineering

[S1 Accredited](#)

[Scopus Indexed](#)

[Garuda Indexed](#)

31,00
Impact

32
H5-index

9.257
Citations 5yr

14.241
Citations

The cover of the Indonesian Journal of Science and Technology (IJoST) features a dark blue background with a large, stylized graphic of a globe or sphere in the center, surrounded by red and yellow curved lines. The journal title is written in white text at the bottom.

INDONESIAN JOURNAL OF SCIENCE AND TECHNOLOGY ✓

[Google Scholar](#) [Website](#) [Editor URL](#)

[Universitas Pendidikan Indonesia](#)

P-ISSN : 25278045 | E-ISSN : 25278045 Subject Area : Science, Social

[S1 Accredited](#)

[Scopus Indexed](#)

[Garuda Indexed](#)

19,32
Impact

23
H5-index

2.741
Citations 5yr

2.770
Citations

- Diperoleh dari:
jumlah kutipan dibagi
dengan jumlah artikel
- Misal:
Jurnal Z menerbitkan 5
artikel:
 - Artikel #1 → dikutip 5 x
 - Artikel #2 → dikutip 3 x
 - Artikel #3 → dikutip 2 x
 - Artikel #4 → dikutip 1 x
 - Artikel #5 → dikutip 1 xMaka diperoleh Faktor
Dampak = $12/5 = 2.4$






Lembaga Pengindeks Publikasi Internasional

- WoS
- Scopus





- ...











Jurnal Bereputasi di Indonesia

	Title	Type	↓ SJR	H index	Total Docs. (2021)	Total Docs. (3years)	Total Refs. (2021)	Total Cites (3years)	Citable Docs. (3years)	Cites / Doc. (2years)	Ref. / Doc. (2021)
1	Indonesian Journal of Science and Technology 	journal	0.710 Q1	14	37	82	1354	406	82	5.59	36.59
2	Journal on Mathematics Education 	journal	0.529 Q2	21	29	93	1336	224	92	2.67	46.07
3	Electronic Journal of Graph Theory and Applications 	journal	0.492 Q2	7	45	94	687	79	94	0.66	15.27
4	Jurnal Pendidikan IPA Indonesia 	journal	0.458 Q2	20	57	181	2835	356	181	1.88	49.74
5	Forest and Society 	journal	0.454 Q2	10	42	61	1966	159	61	2.90	46.81












Jurnal Bereputasi di Indonesia (Bidang Ilmu Komputer)

	Title	Type	↓ SJR	H index	Total Docs. (2021)	Total Docs. (3years)	Total Refs. (2021)	Total Cites (3years)	Citable Docs. (3years)	Cites / Doc. (2years)	Ref. / Doc. (2021)
1	Indonesian Journal of Science and Technology 	journal	0.710 Q2	14	37	82	1354	406	82	5.59	36.59
2	Journal of Robotics and Control (JRC)	journal	0.395 Q3	10	100	42	3143	115	42	2.74	31.43
3	International Journal of Advances in Intelligent Informatics 	journal	0.386 Q3	12	29	77	1009	123	77	1.40	34.79
4	International Journal of Electrical and Computer Engineering	journal	0.376 Q2	26	573	1986	18320	3433	1986	1.94	31.97
5	Bulletin of Electrical Engineering and Informatics	journal	0.357 Q3	16	359	600	11410	1145	600	1.90	31.78

Peringkat Publikasi

	Country	↓ Documents	Citable documents	Citations	Self-Citations	Citations per Document	H index
1	 United States	14408686	12662685	422381431	181255974	29.31	2711
2	 China	8254736	8081358	96129346	55619277	11.65	1112
3	 United Kingdom	4235739	3564646	114382158	24729307	27.00	1707
4	 Germany	3663812	3352795	89183196	20651732	24.34	1498
5	 Japan	3191326	3035507	58822810	14431511	18.43	1171
6	 France	2521133	2325263	61010667	11895280	24.20	1352
7	 India	2353482	2177268	26332969	8967838	11.19	745
8	 Italy	2197985	1983062	48803041	11022920	22.20	1189
9	 Canada	2146402	1917712	58975462	9677796	27.48	1381
10	 Australia	1747456	1538304	43564203	8366775	24.93	1193

Peringkat Publikasi

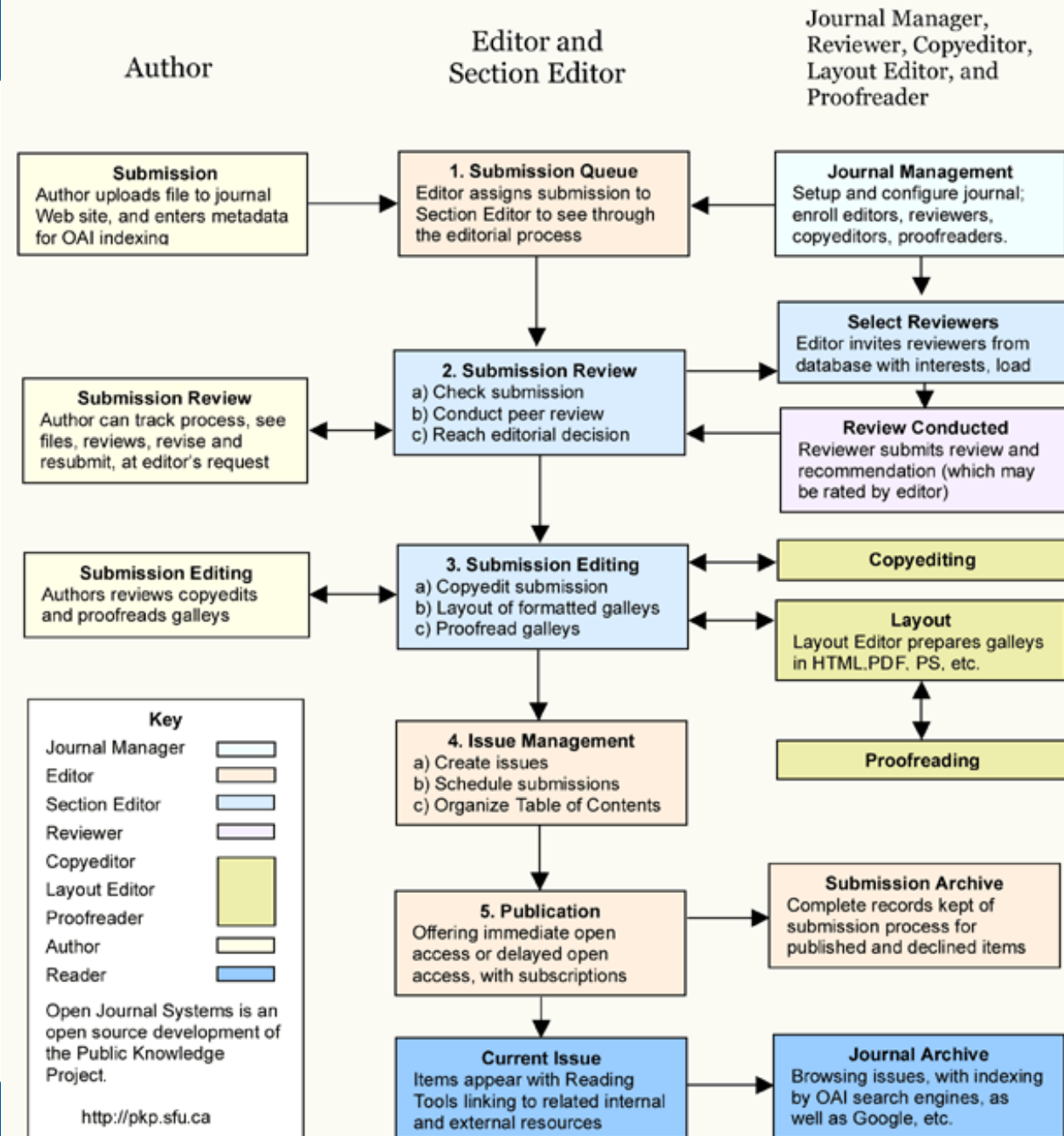
34		Singapore	373202	341165	9580943	930752	25.67	697
35		South Africa	372646	336951	6268457	1247517	16.82	567
36		Egypt	302626	290713	3812756	786275	12.60	349
37		New Zealand	301756	265890	7413693	933091	24.57	633
38		Saudi Arabia	299283	285929	4487881	712683	15.00	478
39		Ireland	264124	231551	6448205	628096	24.41	628
40		Indonesia	263491	256614	1393314	377132	5.29	284
41		Argentina	260997	243496	4704091	861118	18.02	510
42		Romania	255651	244577	2492998	493756	9.75	364
43		Ukraine	250206	243638	1933272	544015	7.73	323
44		Thailand	248087	235095	3447129	522983	13.89	396

Proses Penerbitan Artikel Jurnal

1. Kirim artikel
2. Editor
 - Sesuai
 - Tidak sesuai
3. Reviewer
 - Komentar, kritik, masukkan
4. Editor
 - Terima (*lanjut*)
 - Tolak
5. Revisi (*jika diterima*)
 - Setuju dengan reviewer
 - Tidak setuju, argumen
6. Keputusan
 - Terima
 - Tolak

Proses 3 & 4 dapat berlangsung beberapa babak (round)

OJS Editorial and Publishing Process



Penutup

- Makalah yang baik tidak dihasilkan dari kejeniusan atau kecerdasan, tetapi dihasilkan dari ketekunan
- Salah satu bagian yang sulit dalam penelitian ada proses penulisan artikel
- Proses pengiriman hingga penerbitan memerlukan proses yang panjang sehingga diperlukan ketekunan dalam menjalankannya
- Tidak sedikit dari penulis berhenti meneruskan artikelnya Ketika melihat komentar review yang tajam dan banyak

Penutup

- Pada pertemuan berikutnya kita akan membahas tentang Teknik penulisan artikel ilmiah

Semangat Menulis 😊

TERIMA KASIH