



How to Choose a Good Journal

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Introduction

- Publishing in the right journal enhances your research impact
- Avoids wasted time and resources
- Increases chances of citation and collaboration

Why Journal Selection Matters

- Visibility
- citations
- reputation
- collaboration, and
- career advancement

Publication Lifecycle



- Idea →
- Research →
- Manuscript →
- Journal Selection →
- Review →
- **Publication.**

Types of Journals

- National
- International
- Scopus
- WoS
- Open Access
- Subscription.

Understanding Indexing

- Scopus
- Web of Science
- DOAJ
- PubMed
- IEEE Xplore.

Scopus

- Elsevier database indexing journals, conferences, and books. Supports citation analysis, h-index, CiteScore, SJR, and SNIP.

Web of Science

- Clarivate database with SCI, SCIE, SSCI, and ESCI indexes. Known for Impact Factor and citation tracking.

SCI (Science Citation Index)

- Prestigious science index
- High-impact journals
- Examples: Nature, Science, Cell

SCIE (Science Citation Index Expanded)

- Expanded version of SCI
- Covers 9,000+ journals
- Includes AI, Engineering, Medicine, Computing

SSCI (Social Sciences Citation Index)

- Social sciences journals
- Covers Management, Education, Tourism, Economics
- Example: Tourism Management

ESCI (Emerging Sources Citation Index)

- Emerging journals
- Under evaluation for SCIE/SSCI
- Growing citation performance

Comparison

- SCI & SCIE = Science
- SSCI = Social Sciences
- ESCI = Emerging Journals

Journal Progression

- New Journal → ESCI → SCIE/SSCI → Q4 → Q3 → Q2 → Q1

1. New Journal

- Pada tahap awal, jurnal baru:
- Baru didirikan.
- Memiliki ISSN dan sistem peer-review.
- Belum terindeks dalam database internasional besar.
- Masih membangun kualitas artikel dan reputasi editorial.

Contoh:

Jurnal yang baru terbit 1–2 tahun dan belum masuk Web of Science.

ESCI (Emerging Sources Citation Index)

- Jika jurnal menunjukkan kualitas yang baik, Clarivate dapat memasukkannya ke ESCI.

Karakteristik ESCI

- Memiliki peer-review yang jelas
- Terbit secara teratur
- Memiliki dewan editor internasional
- Memenuhi standar etika publikasi

Keuntungan

- Artikel dapat ditemukan di Web of Science.
- Sitasi mulai dihitung.
- Visibilitas jurnal meningkat.

Status

- ESCI dapat dianggap sebagai "**masa pembinaan**" sebelum masuk kategori jurnal utama.

SCIE / SSCI

- Jika performa jurnal semakin baik, Clarivate dapat menaikkan statusnya menjadi:

SCIE

- (*Science Citation Index Expanded*)
- Untuk bidang:
- Teknik
- Komputer
- AI
- Kedokteran
- Pertanian
- Lingkungan

SSCI

- *(Social Sciences Citation Index)*
- Untuk bidang:
- Manajemen
- Pendidikan
- Pariwisata
- Psikologi
- Ekonomi

Kriteria

- Sitasi meningkat.
- Pengaruh ilmiah tinggi.
- Artikel berkualitas konsisten.
- Reputasi internasional kuat.

Q4 (Quartile 4)

- Setelah masuk SCIE atau SSCI, jurnal akan diberi peringkat berdasarkan indikator seperti:
- Journal Impact Factor (JIF)
- Journal Citation Indicator (JCI)

In journal evaluation, a **Quartile** is a ranking category that divides journals within the same subject area into **four equal groups (25% each)** based on their impact and influence.

- Quartiles are commonly determined using:
- **SJR (Scopus)**
- **CiteScore Percentile (Scopus)**
- **Journal Impact Factor (Web of Science)**

Q3 (Quartile 3)

- Pada tahap ini:
- Sitasi mulai meningkat.
- Kualitas artikel lebih baik.
- Reputasi jurnal semakin dikenal.
- Posisi jurnal berada pada:
- **50–75% teratas** dalam bidangnya.

Q2 (Quartile 2)

Jurnal telah mencapai tingkat yang cukup baik.

Karakteristik

- Banyak disitasi.
- Seleksi artikel lebih ketat.
- Penulis berasal dari berbagai negara.

Posisi:

25–50% teratas

Q1 (Quartile 1)

- Ini adalah kelompok jurnal terbaik.

Karakteristik

- Impact Factor tinggi
- Sitasi sangat banyak
- Reviewer dan editor internasional
- Tingkat penerimaan (acceptance rate) rendah
- Menjadi rujukan utama peneliti dunia

Analogi

Tahap Jurnal

New Journal

ESCI

SCIE/SSCI

Q4

Q3

Q2

Q1

Analogi Pendidikan

Siswa Baru

Siswa Lolos Seleksi Awal

Mahasiswa Universitas Unggul

Peringkat 4

Peringkat 3

Peringkat 2

Juara Kelas

Artinya, tidak semua jurnal baru langsung menjadi Q1. Sebagian besar jurnal harus membangun reputasi, meningkatkan kualitas artikel, memperbanyak sitasi, dan menunjukkan dampak ilmiah selama beberapa tahun sebelum dapat naik dari ESCI → SCIE/SSCI → Q4 → Q3 → Q2 →

Recommendations for AI Researchers

Priority:

1. SCIE Q1
2. SCIE Q2
3. SCIE Q3
4. SCIE Q4
5. ESCI

DOAJ

- Directory of Open Access Journals providing free access to quality peer-reviewed journals.

PubMed

- Biomedical database maintained by NLM. Major source for medicine, healthcare, pharmacy, and life sciences.

IEEE Xplore

- Leading digital library for engineering, AI, computer science, IoT, robotics, and electronics.

Scopus vs Web of Science

- Both are prestigious indexing databases. Scopus uses CiteScore/SJR; WoS emphasizes Impact Factor.



Recommended Sources for AI, Data Science, Deep Learning,
IoT, Drone Technology, and Computer Vision

Research Areas

For researchers working in:

- Artificial Intelligence (AI)
- Data Science
- Deep Learning
- Internet of Things (IoT)
- Drone Technology
- Computer Vision

Recommended Literature Search Priority

1. Scopus ★★★★★
2. IEEE Xplore ★★★★★
3. Web of Science ★★★★★
4. DOAJ ★★★★★
5. PubMed ★★★★★ (primarily for health and biomedical applications)

Most Relevant Sources for Advanced Research

For research topics such as:

- LiDAR-Multispectral Deep Learning
- UAV Swarms
- Edge AI
- Biomass Monitoring in Agroforestry

The most relevant databases are:

- Scopus
- IEEE Xplore
- Web of Science

Comparison Table

- Coverage, metrics, access model, strengths, and limitations across all databases.

Feature	Scopus	Web of Science	DOAJ	PubMed	IEEE Xplore
Type	Indexing Database	Indexing Database	Open Access Directory	Biomedical Database	Engineering Database
Coverage	All disciplines	All disciplines	All disciplines	Health Sciences	Engineering & Computing
Q1–Q4 Ranking	Yes	No (uses Impact Factor)	No	No	Depends on the journal
Impact Factor	Indirectly (via CiteScore, SJR, SNIP)	Yes	No	No	Depends on the journal
Open Access	Partial	Partial	Yes	Partial	Partial
Suitable for AI Research	Excellent	Very Good	Limited	Limited	Excellent

DATABASE STRENGTHS

Database	Key Strengths
Scopus	Broad coverage, citation analysis, Q1–Q4 journal rankings, multidisciplinary research.
Web of Science	High-quality journals, Impact Factor, strong citation tracking and research evaluation.
DOAJ	Free access to peer-reviewed open-access journals, supports Open Science.
PubMed	Leading source for medical, healthcare, pharmaceutical, and biomedical research.
IEEE Xplore	Premier source for engineering, computer science, AI, machine learning, IoT, robotics, and electronics research.

Advantages

- Improves literature review quality, citation tracking, and publication targeting.

AI Research Sources

- Recommended: Scopus, IEEE Xplore, Web of Science for AI, ML, IoT, Computer Vision, and Data Science.

Examples of Journals

- IEEE Access, Expert Systems with Applications, Scientific Reports, Nature, and Science.

How to Search Effectively

- Use keywords, Boolean operators, filters, citations, and advanced search options.

Quartile Rankings

- Q1, Q2, Q3, and Q4 explained.

Impact Factor

- Definition,
- calculation,
- strengths,
- and limitations.

Definition

- Impact Factor (IF) is a bibliometric indicator that measures the average number of citations received by articles published in a journal. It is published annually by Clarivate in Journal Citation Reports (JCR).

Purpose of Impact Factor

- Assess journal influence
- Compare journals within a discipline
- Support publication decisions
- Assist research evaluation

Calculation Formula

- IF = Citations in current year to articles published in previous two years / Number of citable articles published in previous two years

$$\text{Impact Factor}_{\text{Year}} = \frac{\text{Citations in Year to articles published in previous two years}}{\text{Number of citable articles published in previous two years}}$$

Calculation Example

- 2023 Articles: 120
- 2024 Articles: 130
- Total Articles: 250
- Citations in 2025: 750
- Impact Factor = $750 / 250 = 3.0$

Strength 1

- Widely recognized metric used globally to evaluate journal influence and visibility.

Strength 2

- Useful for comparing journals within the same research field.

Strength 3

- Indicator of journal prestige and attractiveness to researchers.

Strength 4

- Supports research assessment, funding decisions, and academic evaluation.

Limitation 1

- Measures journals rather than the quality of individual articles.

Limitation 2

- Citation patterns vary across disciplines, making cross-field comparisons difficult.

Limitation 3

- Uses a short two-year citation window that may not capture long-term impact.

Limitation 4

- Can be influenced by review articles and citation practices.

Comparison with Other Metrics

- Impact Factor (WoS), CiteScore (Scopus), SJR (Scopus), SNIP (Scopus), and h-index are complementary metrics.

CiteScore

- Scopus-based citation metric.

Definition

- CiteScore is a journal-level metric developed by Elsevier using Scopus data. It measures the average number of citations received per document over a four-year period.

Purpose of CiteScore

- Measure journal impact
- Compare journals within a field
- Support publication decisions
- Evaluate journal performance

Calculation Formula

- CiteScore = Citations received in a 4-year period / Total documents published in the same 4-year period

$$\text{CiteScore} = \frac{\text{Citations received in a 4-year period}}{\text{Total documents published in the same 4-year period}}$$

Calculation Example

- Total documents published (2021–2024): 500
- Total citations received: 2,000
- CiteScore = $2,000 / 500 = 4.0$

Strength 1

- Uses a four-year citation window, providing a more stable measure of impact.

Strength 2

- Based on Scopus, which offers broad international coverage across many disciplines.

Strength 3

- Transparent and easy-to-understand calculation methodology.

Strength 4

- Particularly useful for Engineering, Computer Science, AI, Data Science, and IoT.

Limitation 1

- Measures journal performance rather than the quality of individual articles.

Limitation 2

- Can be influenced by a small number of highly cited papers.

Limitation 3

- Citation behavior varies across disciplines, limiting cross-field comparisons.

Limitation 4

- Includes multiple document types, which may affect comparisons with Impact Factor.

CiteScore vs Impact Factor

- CiteScore uses Scopus and a 4-year window, while Impact Factor uses Web of Science and a 2-year window.

Quartile Ranking

- Q1 = Top 25%
- Q2 = Top 25–50%
- Q3 = Top 50–75%
- Q4 = Bottom 25%

Importance for AI Research

- Highly relevant for AI, Machine Learning, Deep Learning, Computer Vision, Robotics, and IoT research.

SJR

- Measures journal prestige and influence.



Definition of SJR (SCImago Journal Rank)

Konsep Utama SJR

- Tidak semua sitasi memiliki bobot yang sama. Sitasi dari jurnal bereputasi tinggi memiliki nilai lebih besar dibanding sitasi dari jurnal biasa.



Simplified Calculation Process

Step 1: Collect Citation Data

- Count citations received by a journal during a specific period.
- Journal A (high prestige): 10 citations
- Journal B (medium prestige): 20 citations
- Journal C (low prestige): 30 citations

Step 2: Assign Prestige Weights

- Journal A = 5
- Journal B = 2
- Journal C = 1

- Weighted Citations:
 - $(10 \times 5) + (20 \times 2) + (30 \times 1)$
 - $= 50 + 40 + 30$
 - $= 120$

Step 3: Normalize by Published Documents

- Suppose the journal published 40 articles.
- $SJR = \text{Weighted Citations} / \text{Number of Documents}$
- $SJR = 120 / 40$
- $SJR = 3.0$

Actual SCImago Formula

- $PSJR_i = \Sigma(PSJR_j / C_j)$
- $PSJR_i$ = prestige of journal i
- $PSJR_j$ = prestige of citing journal j
- C_j = total outbound references from journal j
- The process is iterative until prestige values stabilize.

Example Interpretation of SJR

- 0.2 = Low influence
- 0.5 = Moderate influence
- 1.0 = Strong journal
- 2.0 = Very influential journal
- >5.0 = Elite journal

Examples of Journal SJR Values

- Nature: >15
- Science: >14
- IEEE Transactions Journals: 1–8
- Many Q1 Journals: 1–5
- Many Q2 Journals: 0.5–1.5

Difference Between SJR and CiteScore

- CiteScore: Average citations per document
- SJR: Weighted citations based on journal prestige
- Impact Factor: Average citations over 2 years
- SNIP: Citations normalized by subject field

Key Takeaway

- A citation from a prestigious journal contributes more to SJR than a citation from a less influential journal. Therefore, SJR measures both quantity and quality of citations.

Actual SCImago Formula

The real SJR calculation is much more complex and uses an iterative prestige-transfer algorithm:

$$PSJR_i = \sum_j \frac{PSJR_j}{C_j}$$

where:

- $PSJR_i$ = prestige of journal i
- $PSJR_j$ = prestige of citing journal j
- C_j = total outbound references from journal j

After several iterations, the prestige values stabilize and are normalized to produce the final SJR score.

Cara Kerja SJR

- SJR mempertimbangkan jumlah sitasi dan prestise sumber sitasi. Jurnal dengan sitasi dari jurnal top dapat memiliki SJR lebih tinggi meskipun jumlah sitasinya lebih sedikit.

Interpretasi Nilai SJR

- >10 : Sangat Tinggi
- $1-10$: Tinggi
- $0.5-1$: Menengah
- <0.5 : Relatif Rendah

SJR dan Kuartil

- Q1: 25% jurnal terbaik
- Q2: 25–50%
- Q3: 50–75%
- Q4: 75–100%

Kelebihan SJR

- Mempertimbangkan kualitas sitasi
- Cocok untuk evaluasi reputasi jurnal
- Menggunakan basis data Scopus

Keterbatasan SJR

- Sulit membandingkan bidang berbeda
- Bergantung pada cakupan Scopus
- Nilai berubah setiap tahun

Contoh Jurnal dengan SJR Tinggi

- Nature
- Science
- The Lancet
- IEEE TPAMI

Kesimpulan

- SJR mengukur prestise jurnal berdasarkan kualitas dan jumlah sitasi sehingga menjadi salah satu indikator penting dalam evaluasi jurnal ilmiah.

SNIP

- Field-normalized citation impact.



What is SNIP?

- SNIP is a journal impact metric developed by CWTS Leiden University and based on Scopus data. It measures citation impact while adjusting for differences in citation practices across research fields.

Why Was SNIP Created?

- Different disciplines have different citation behaviors. Medicine journals often receive more citations than Mathematics journals. SNIP normalizes these differences to enable fair comparisons.

Definition of SNIP

- SNIP measures a journal's contextual citation impact by weighting citations based on the citation potential of its field.

Simplified Formula

- $SNIP = \text{Raw Impact per Paper (RIP)} / \text{Citation Potential}$
- $RIP = \text{Average citations per article}$
- $\text{Citation Potential} = \text{Likelihood of receiving citations within the field}$

Calculation Example

- Journal A (Medicine): 10 citations/article, Citation Potential = 5
- $SNIP = 10/5 = 2.0$

- Journal B (Mathematics): 4 citations/article, Citation Potential = 2
- $SNIP = 4/2 = 2.0$

Interpretation of SNIP

- < 0.5 = Low impact
- $0.5\text{--}1.0$ = Average impact
- $1.0\text{--}2.0$ = Above-average impact
- > 2.0 = High impact
- > 3.0 = Very high impact

Examples of High-SNIP Journals

- Nature: >7
- Science: >6
- Lancet: >6
- IEEE Transactions: 1–4
- Many Q1 Journals: 1–3

SNIP vs SJR

- SNIP: Considers field differences and citation normalization.
- SJR: Considers prestige of citing journals using a PageRank-like algorithm.

SNIP vs Other Metrics

- CiteScore: Average citations per document
- SNIP: Field-normalized citation impact
- SJR: Prestige-weighted citation impact
- Impact Factor: Average citations over 2 years

Key Takeaway

- SNIP provides a fair comparison of journals across different disciplines by normalizing citation impact according to field-specific citation practices.

Step 1: Define Your Publication Goals

- Target audience (academics, professionals, interdisciplinary)
- Purpose: visibility, impact, career development
- Preference: open access or subscription-based

Step 2: Match Your Manuscript with Journal Scope

- Read the journal's aims and scope
- Check recently published articles
- Ensure methodological and thematic alignment

Step 3: Assess Journal Reputation

- Is it indexed in Scopus, Web of Science, DOAJ?
- Publisher credibility (Springer, Elsevier, IEEE, etc.)
- Impact metrics: Impact Factor, SJR, CiteScore

Step 4: Examine the Review and Editorial Process

- Is it peer-reviewed or editorial-reviewed?
- Average time to decision and publication
- Transparency of review process and editorial board

Step 5: Check Article Processing Charges and Access

- Are there publication or APC fees?
- Is it open access or subscription?
- Are waivers available for developing countries?

Step 6: Avoid Predatory Journals

- No peer-review, fake editorial board
- Vague or overly broad scope
- Fast acceptance promises
- Not indexed in reputable databases

Step 7: Use Journal Evaluation Tools

- Think. Check. Submit.
- Elsevier Journal Finder
- Springer Journal Suggester
- Scopus/SJR metrics at www.scimagojr.com

Step 8: Get Advice from Peers

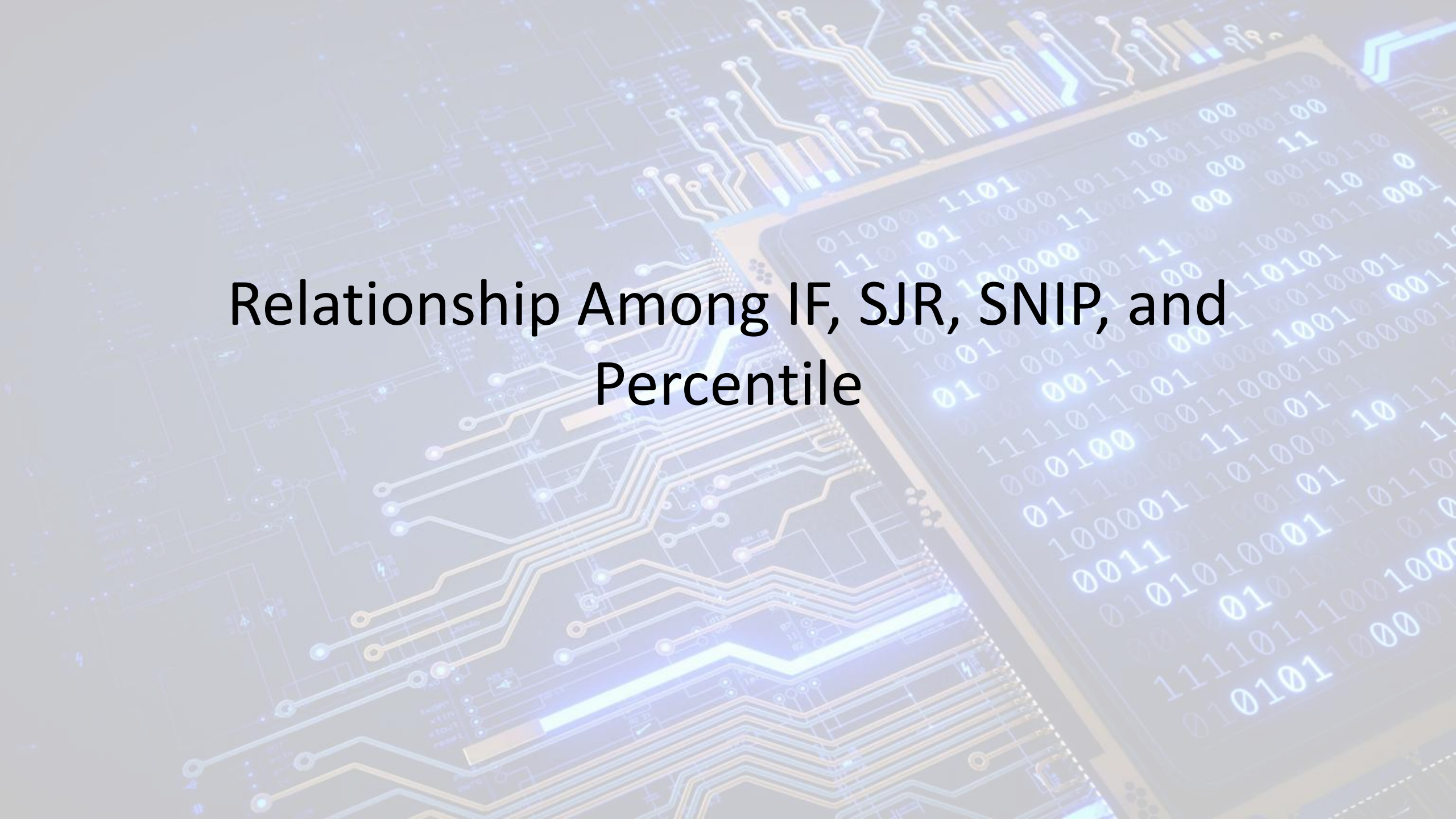
- Ask your supervisor or senior colleagues
- Join academic forums (ResearchGate, Academia.edu)
- Attend conferences and observe journal trends

Final Tips for Journal Selection

- Read author guidelines carefully
- Check acceptance rates (if available)
- Be prepared for revisions and rejection
- Always keep a backup journal option

Summary: Smart Journal Selection

- Define goals, know your audience
- Match your paper to journal scope
- Check indexing, impact, and costs
- Use trusted tools and seek advice



Relationship Among IF, SJR, SNIP, and Percentile

Comparison Table

Metric	Full Name	Source	Purpose	Field Normalized	Prestige Weighted	Typical Use
IF	Impact Factor	Clarivate	Average citations	No	No	WoS journals
SJR	SCImago Journal Rank	Scopus	Prestige & influence	No	Yes	Scopus ranking
SNIP	Source Normalized Impact per Paper	Scopus	Cross-field comparison	Yes	No	Field comparison
Percentile	Journal Percentile Rank	Scopus/WoS	Relative ranking	Within category	Depends	Q1-Q4

How They Are Related

- IF measures citation frequency.
- SJR measures citation prestige.
- SNIP normalizes citation impact across fields.
- Percentile indicates ranking position and determines Q1–Q4.

Quartile Classification

- Q1 : Percentile 75–99
- Q2 : Percentile 50–74
- Q3 : Percentile 25–49
- Q4 : Percentile 0–24



What is Percentile?

Understanding Percentile in Journal Rankings

Definition

- Percentile indicates the position of a journal relative to other journals within the same subject category.
- It shows the percentage of journals that a journal outperforms.

Formula

- Percentile = $((N - R) / N) \times 100$
- N = Total journals in category
- R = Journal rank

Example Calculation

- Total journals = 500
- Journal rank = 25
- Percentile = $((500-25)/500) \times 100 = 95$
- Interpretation: Better than 95% of journals.

Percentile and Quartiles

Percentile	Quartile	Meaning
75–99	Q1	Top 25% journals
50–74	Q2	Upper-middle journals
25–49	Q3	Lower-middle journals
0–24	Q4	Bottom 25% journals

Why Percentile Matters

- Easy to understand journal performance.
- Used to determine Q1–Q4 categories.
- Allows comparison among journals in the same field.
- Complements metrics such as IF, SJR, SNIP, and CiteScore.

Questions and Answers



- Thank you!
- Feel free to ask your questions.