Contribution Categories Matrix

IEEE Fellow nominations are based on one or two specific individual technical contributions of the Nominee. Each contribution is characterized by a Contribution Category, which should be selected based on the nature of the contribution and the evidence documenting its extent and impact. The following table summarizes the five Contribution Categories and provides examples of typical evidence for documenting the nature, extent, and impact of such contributions.

Keys to the table:

Contribution Categories and Abbreviations
Research Engineer/Scientist (RE/S)
Technology Innovator (TI)
Technical Leader (TL)
Educator (EDU)
Standards Contributor (STDC)

A green-colored cell implies that contributions in this Category (row) normally are supported by significant evidence from this Domain (column). Such evidence generally will be major/prime to documenting the specific contribution claimed. For this cell, evidence of contribution and evidence of impact appear in the cell below.

A yellow-colored cell implies that contributions in this Category (row) may be supported by evidence from this Domain (column), but such evidence is not normally expected. Evaluation of the significance or impact of contributions in this Category should NOT be penalized by the absence of evidence from this Domain.

A cell with no color implies that contributions in this Category typically do not have evidence from this Domain.

The Contribution Categories Matrix is available to nominators for use in their completion of nomination forms, and to Society/Council evaluators and Fellow Committee judges for use in nomination evaluations. Comments and suggestions regarding the usefulness of this matrix and possible improvements are welcome and may be sent to fellows@ieee.org.

Table 1 – Contribution Categories and Evidence Domains: Documenting the nature, extent, and impact of technical contributions

	Evidence Domains				
	Research Publications	**Peer-Reviewed Materials**	**Designs, Products, Processes, Algorithms, Systems, and Public/Industrial Contributions**	**Patents/Trade Secrets**	**Standards**
Generic Definition/ Examples	Scholarly cited articles, refereed papers in archival journals (not survey papers), edited or authored books, papers in technical reports or other refereed publications.	Tutorials, survey papers, position papers, white papers, articles in popular press, internal reports, books about practice in the field, design review packages, and other documents describing the development/ application of products, systems, facilities, services, or software.	Contributions that demonstrate development of industrial/public systems, deployments, and innovations. Examples include building and habitation, space, utilities infrastructure, social networking, telecommunications, devices, solid state technologies.	Any type of document or legal arrangement protecting Intellectual Property.	Contributions that 1) define the framework, reference, functional or design architectures for a standard or family of standards, 2) demonstrate strong technical skills in leading a standards project or task, 3) demonstrate direct or indirect original technical content in a standard project that is adopted into a published standard or widely accepted specifications.
RE/S	**Contributions in this Category normally have significant evidence from this Domain.** Role of nominee in articles' authorship and impact on: - future research directions or commercialization, - literature (article citations), - technology (patent or standards citations), - society at-large (articles in popular press). Endorsements may provide documentation for proprietary or classified contributions.	**Contributions in this Category may be supported by evidence from this Domain, but such evidence is not normally expected. Significance-impact should NOT be penalized by the absence of evidence from this Domain.**	Contributions in this Category typically do not have evidence from this Domain.	**Contributions in this Category may be supported by evidence from this Domain, but such evidence is not normally expected. Significance-impact should NOT be penalized by the absence of evidence from this Domain.**	Contributions in this Category typically do not have evidence from this Domain.
TI	Contributions in this Category commonly do not have evidence from this Domain.	**Contributions in this Category may be supported by evidence from this Domain, but such evidence is not normally expected. Significance-impact should NOT be penalized by the absence of evidence from this Domain.**	**Contributions in this Category normally have significant evidence from this Domain.** - Individual role of the nominee in the team/initiative (if any) - Technical contribution or innovation, risk involved, performance improvement, economic results, or other advantages - Level of adoption of the technical contribution - Financial impact of the technical contribution, e.g., generated revenues, costs reduction	**Contributions in this Category normally have significant evidence from this Domain.** Evidence of contribution and impact is similar to that of contributions from Designs, Products, Processes, Algorithms, Systems, and Public/Industrial Contributions	**Contributions in this Category may be supported by evidence from this Domain, but such evidence is not normally expected. Significance-impact should NOT be penalized by the absence of evidence from this Domain.**

Table 1 – Continued

	Research Publications	Peer-Reviewed Materials	Designs, Products, Processes, Algorithms, Systems, and Public/Industrial Contributions	Patents/Trade Secrets	Standards
TL	Contributions in this Category commonly do not have evidence from this Domain.	**Contributions in this Category may be supported by evidence from this Domain, but such evidence is not normally expected. Significance-impact should NOT be penalized by the absence of evidence from this Domain.**	**Contributions in this Category normally have significant evidence from this Domain.** - Role of the nominee in the technical leadership of a team, company, or industry-wide effort; not solely managerial position. - Technical contribution or innovation, risk involved, performance improvement, economic results, or other advantages - Level of adoption of the technical contribution - Financial impact of the technical contribution, e.g., generated revenues, costs reduction Endorsements may provide documentation for proprietary or classified contributions.	**Contributions in this Category normally have significant evidence from this Domain.** Patents and trade secrets can have impacts similar to those in Designs, Products, Processes, Algorithms, Systems, and Public/Industrial Contributions. In this case, the role of the patent(s) in the contribution impact should be highlighted along with how Technical Leadership is demonstrated.	**Contributions in this Category may be supported by evidence from this Domain, but such evidence is not normally expected. Significance-impact should NOT be penalized by the absence of evidence from this Domain.**
EDU	**Contributions in this Category may be supported by evidence from this Domain, but such evidence is not normally expected. Significance/impact should NOT be penalized by the absence of evidence from this Domain.** However, formal educational research (e.g., pedagogy, assessment, curricula) published in engineering education journals may be strongly supportive. Research publications in other technical areas generally are not evidence of contribution.	**Contributions in this Category normally have significant evidence from this Domain.** Contributions may include widely used pioneering texts, laboratory experiments, papers on engineering education practice. Evidence of impact can include: - Adoption of textbooks, new curricula or courseware, MOOC courses, TED presentations. - Level of outreach to underrepresented populations, and/or regions.	Contributions in this Category commonly do not have evidence from this Domain.	**Contributions in this Category may be supported by evidence from this Domain, but such evidence is not normally expected. Significance/impact should NOT be penalized by the absence of evidence from this Domain.**	Contributions in this Category commonly do not have evidence from this Domain.

Table 1 – Continued

	Research Publications	Peer-Reviewed Materials	Designs, Products, Processes, Algorithms, Systems, and Public/Industrial Contributions	Patents/Trade Secrets	Standards
STDC	Contributions in this Category commonly do not have evidence from this Domain.	Contributions in this Category may be supported by evidence from this Domain, but such evidence is not normally expected. Significance/impact should NOT be penalized by the absence of evidence from this Domain.	Contributions in this Category may be supported by evidence from this Domain, but such evidence is not normally expected. Significance/impact should NOT be penalized by the absence of evidence from this Domain.	Contributions in this Category may be supported by evidence from this Domain, but such evidence is not normally expected. Significance/impact should NOT be penalized by the absence of evidence from this Domain.	**Contributions in this Category normally have significant evidence from this Domain.** Evidence of impact for a Standards Contribution is generally more extensive than evidence in other Contribution Categories. Documentation of the contribution may use IEEE SA Contributor Collection, Internet Engineering Task Force's (IETF's) RFC, and/or other Standards Development Organizations' or alliances' publications certifying individual contributions or working group meeting minutes. Impact includes: 1) Nominee's impact on the standard, as assessed by reference and endorser testimony, related publications and patent activity, IEEE, or other awards with citations to the relevant standard, degree of incorporation of the task or project into a standard, nominee's recognized technical stature in the field and peer-recognized authority in the standard's Working Group. 2) Broader impacts of the standard, which includes functional, scientific, economic, market and societal aspects.