**Towards a consensus regarding the angular momentum controversy**

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I came to Seattle to defend the Canonical version, and I still think it is the clearest and most intuitive, and its operators do what angular momentum operators should do, i.e. generate rotations.
However, I now feel that it is a little bit like scheme dependence in polarized PDFs. People use $MS$, $\overline{MS}$, $AB$ and $JET$. One could argue that the $JET$ scheme is best, but it makes little difference, *provided* people clearly indicate what they are using.
Similarly, I now feel that both Canonical and Belinfante are useful and, most importantly, give you different and complementary information about the spin structure of the nucleon. I am less enthusiastic about the Intermediate versions.

Here is a brief summary of the properties of the various versions.

**Canonical** (Jaffe, Manohar, Leader)

**Pros**: Intuitive. For several fields usually looks like sum of operators for the individual fields. There is a gluon spin term and its longitudinal projection i.e. the gluon helicity, is measured by $\Delta G(x)$. Operators are generators of rotations, as they should be, at least at equal times.
**Cons**: Operators are not gauge invariant, but I claim their physical matrix elements are. A test of this on a lattice by Lin and Liu was inconclusive [see arXiv:1111.5813]. A new test has been proposed.

**Belinfante**(Ji)

**Pros**: Operators are gauge invariant. Expectation values of the operators can be related to GPDs.
**Cons**: No gluon spin term. Operators do not generate rotations.

**Intermediate** ( Chen, Lu, Sun, Wang, Goldman; Wakamatsu; Hatta)

**Pros**: Operators are gauge invariant. There is a gluon spin term. Wakamatsu shows it is measured by $\Delta G(x)$.
**Cons**: Requires splitting the gluon vector potential $A^\mu$ into two pieces $A^\mu_{pure}$ and $A^\mu_{Phys}$ . This splitting is somewhat arbitrary, but Hatta gives an explicit construction. The splitting is either frame-dependent and $A^\mu$ transforms as a 4-vector, or frame-independent and $A^\mu$ does NOT transform as a 4-vector. It is not clear what are the consequences of the latter.